



# ENVIRONMENTAL IMPACT REPORT FOR THE UPPER SAR HCP

## UPPER SANTA ANA RIVER HABITAT CONSERVATION PLAN

**MAY 2021**  
PUBLIC REVIEW DRAFT

**Prepared for:**  
San Bernardino Valley  
Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

**Prepared by:**  
ICF  
525 B Street, Suite 1700  
San Diego, CA 92101



# Contents

<b>Executive Summary .....</b>	<b>ES-1</b>
ES.1 Introduction .....	ES-1
ES.2 Upper SAR HCP Overview .....	ES-2
ES.3 HCP Background and Development.....	ES-4
ES.4 HCP Planning Area and Permit Area .....	ES-5
ES.6 Elements of the Proposed Project .....	ES-9
ES.7 Covered Species .....	ES-18
ES.8 Covered Activities .....	ES-19
ES.9 Relationship Between the Proposed Project and Covered Activities .....	ES-20
ES.10 Summary of Impacts .....	ES-20
ES.11 Project Alternatives .....	ES-72
ES.12 Potential Areas of Controversy/Issues to be Resolved.....	ES-78
ES.13 How to Comment on this Draft EIR.....	ES-78
<b>Chapter 1 Introduction.....</b>	<b>1-1</b>
1.1 Upper SAR HCP Overview .....	1-2
1.1.1 HCP Background and Development.....	1-4
1.1.2 HCP Planning Area and Permit Area .....	1-6
1.2 Relationship Between the Habitat Conservation Plan and EIR – Incorporation by Reference.....	1-7
1.3 Purpose of the EIR.....	1-7
1.3.1 Overview of CEQA EIR Provisions.....	1-7
1.3.2 Focus and Level of Detail .....	1-7
1.3.3 Intended Uses of this EIR .....	1-8
1.4 Related Laws and Regulations .....	1-11
1.5 Permittees’ Responsibilities.....	1-11
1.6 CEQA Environmental Review Process .....	1-12
1.6.1 Public and Agency Involvement During the Environmental Review Process .....	1-12
1.6.2 Known Areas of Controversy and Issues of Concern .....	1-13
1.6.3 Draft EIR .....	1-13
1.7 EIR Document Organization .....	1-15
<b>Chapter 2 Project Description .....</b>	<b>2-1</b>
2.1 Introduction .....	2-1
2.1.1 Plan Location and Setting.....	2-1
2.2 Elements of the Proposed Project .....	2-2



2.2.1 Definition of the Proposed Project .....2-2

2.2.2 Proposed Project Objectives .....2-3

2.2.3 Covered Species .....2-4

2.2.4 Conservation Strategy .....2-6

2.2.5 Covered Activities .....2-18

2.2.6 Level of Analysis of Impacts of Covered Activities .....2-20

2.3 Discretionary Actions/Required Approvals .....2-21

**Chapter 3 Environmental Setting, Impacts, and Mitigation Measures..... 3-1**

Introduction to the Analysis .....3-1

    Environmental Issues Addressed in this EIR .....3-1

Resource Chapter Organization .....3-2

3.1 Aesthetics .....3.1-1

    3.1.1 Environmental Setting .....3.1-1

    3.1.2 Regulatory Framework.....3.1-3

    3.1.3 Impacts and Mitigation .....3.1-6

    3.1.4 Summary of Potential Types of Impacts of Covered Activities .....3.1-11

3.2 Agriculture and Forestry Resources .....3.2-1

    3.2.1 Environmental Setting .....3.2-1

    3.2.2 Regulatory Framework.....3.2-4

    3.2.3 Impacts and Mitigation .....3.2-15

    3.2.4 Summary of Potential Types of Impacts of Covered Activities .....3.2-19

3.3 Air Quality .....3.3-1

    3.3.1 Environmental Setting .....3.3-1

    3.3.2 Regulatory Framework.....3.3-10

    3.3.3 Impacts and Mitigation .....3.3-18

    3.3.4 Summary of Potential Types of Impacts of Covered Activities .....3.3-30

3.4 Biological Resources.....3.4-1

    3.4.1 Environmental Setting .....3.4-1

    3.4.2 Regulatory Framework.....3.4-24

    3.4.3 Impacts and Mitigation .....3.4-38

    3.4.4 Summary of Potential Types of Impacts of Covered Activities .....3.4-91

3.5 Cultural Resources .....3.5-1

    3.5.1 Environmental Setting .....3.5-1

    3.5.2 Regulatory Framework .....3.5-20

    3.5.3 Impacts and Mitigation .....3.5-30

    3.5.4 Summary of Potential Types of Impacts of Covered Activities .....3.5-38

3.6 Geology, Soils, and Paleontological Resources .....3.6-1

3.6.1	Environmental Setting .....	3.6-1
3.6.2	Regulatory Framework.....	3.6-18
3.6.3	Impacts and Mitigation .....	3.6-22
3.6.4	Summary of Potential Types of Impacts of Covered Activities.....	3.6-29
3.7	Greenhouse Gas Emissions and Energy .....	3.7-1
3.7.1	Environmental Setting .....	3.7-3
3.7.2	Regulatory Framework.....	3.7-6
3.7.3	Impacts and Mitigation .....	3.7-12
3.7.4	Summary of Potential Types of Impacts of Covered Activities .....	3.7-22
3.8	Hazards and Hazardous Materials .....	3.8-1
3.8.1	Environmental Setting .....	3.8-1
3.8.2	Regulatory Framework.....	3.8-6
3.8.3	Impacts and Mitigation .....	3.8-13
3.8.4	Summary of Potential Types of Impacts of Covered Activities .....	3.8-20
3.9	Hydrology and Water Quality .....	3.9-1
3.9.1	Environmental Setting .....	3.9-1
3.9.2	Regulatory Framework.....	3.9-19
3.9.3	Impacts and Mitigation .....	3.9-27
3.9.4	Summary of Potential Types of Impacts of Covered Activities .....	3.9-33
3.10	Land Use.....	3.10-1
3.10.1	Environmental Setting .....	3.10-1
3.10.2	Regulatory Framework.....	3.10-7
3.10.3	Impacts and Mitigation .....	3.10-8
3.10.4	Summary of Potential Types of Impacts of Covered Activities .....	3.10-10
3.11	Minerals .....	3.11-1
3.11.1	Environmental Setting .....	3.11-1
3.11.2	Regulatory Framework.....	3.11-2
3.11.3	Impacts and Mitigation .....	3.11-7
3.11.4	Summary of Potential Types of Impacts of Covered Activities .....	3.11-9
3.12	Noise .....	3.12-1
3.12.1	Environmental Setting .....	3.12-5
3.12.2	Regulatory Framework.....	3.12-6
3.12.3	Impacts and Mitigation .....	3.12-9
3.12.4	Summary of Potential Types of Impacts of Covered Activities .....	3.12-17
3.13	Population and Housing.....	3.13-1
3.13.1	Environmental Setting .....	3.13-1
3.13.2	Regulatory Framework.....	3.13-10



- 3.13.3 Impacts and Mitigation .....3.13-13
- 3.13.4 Summary of Potential Types of Impacts of Covered Activities .....3.13-16
- 3.14 Public Services .....3.14-1
  - 3.14.1 Environmental Setting .....3.14-1
  - 3.14.2 Regulatory Framework.....3.14-6
  - 3.14.3 Impacts and Mitigation .....3.14-7
  - 3.14.4 Summary of Potential Types of Impacts of Covered Activities .....3.14-9
- 3.15 Recreation .....3.15-1
  - 3.15.1 Environmental Setting .....3.15-1
  - 3.15.2 Regulatory Framework.....3.15-6
  - 3.15.3 Impacts and Mitigation .....3.15-8
  - 3.15.4 Summary of Potential Types of Impacts of Covered Activities .....3.15-10
- 3.16 Transportation .....3.16-1
  - 3.16.1 Environmental Setting .....3.16-1
  - 3.16.2 Regulatory Framework .....3.16-5
  - 3.16.3 Impacts and Mitigation .....3.16-7
  - 3.16.4 Summary of Potential Types of Impacts of Covered Activities .....3.16-13
- 3.17 Tribal Cultural Resources .....3.17-1
  - 3.17.1 Environmental Setting .....3.17-1
  - 3.17.2 Regulatory Framework .....3.17-1
  - 3.17.3 Impacts and Mitigation .....3.17-2
  - 3.17.4 Summary of Potential Types of Impacts of Covered Activities .....3.17-8
- 3.18 Utilities and Service Systems .....3.18-1
  - 3.18.1 Environmental Setting .....3.18-1
  - 3.18.2 Regulatory Framework.....3.18-5
  - 3.18.3 Impacts and Mitigation .....3.18-11
  - 3.18.4 Summary of Potential Types of Impacts of Covered Activities .....3.18-14
- 3.19 Wildfire.....3.19-1
  - 3.19.1 Environmental Setting .....3.19-1
  - 3.19.2 Regulatory Framework.....3.19-9
  - 3.19.3 Impacts and Mitigation .....3.19-14
  - 3.19.4 Summary of Potential Types of Impacts of Covered Activities .....3.19-18
- Chapter 4 Cumulative Impacts ..... 4-1**
  - 4.1 Cumulative Impacts ..... 4-1
  - 4.2 Approach to Cumulative Impacts Analysis.....4-1
  - 4.3 Activities Included in the Cumulative Impacts Analysis.....4-2
    - 4.3.1 Management of State and Federal Lands .....4-3

4.3.2 Implementation of Habitat Conservation Plans in the Planning Area .....4-7

4.3.3 Capital Improvement Programs Buildout .....4-8

4.3.4 Local Agency General Plan Buildout .....4-11

4.3.5 Southern California Association of Governments, Regional Transportation  
Plan/Sustainable Communities Strategy Implementation .....4-12

4.3.6 Other Development Projects in the Planning Area .....4-13

4.3.7 Economic Factors in the Region .....4-14

4.3.8 Environmental Factors .....4-15

4.4 Cumulative Impacts Analysis.....4-16

4.4.1 Aesthetics .....4-16

4.4.2 Agricultural and Forestry Resources .....4-17

4.4.3 Air Quality .....4-18

4.4.4 Biological Resources.....4-18

4.4.5 Cultural Resources .....4-24

4.4.6 Geology and Paleontological Resources .....4-25

4.4.7 Greenhouse Gas Emissions and Energy .....4-26

4.4.8 Hazards and Hazardous Materials .....4-27

4.4.9 Hydrology .....4-28

4.4.10 Land Use .....4-30

4.4.11 Minerals .....4-30

4.4.12 Noise .....4-30

4.4.13 Population and Housing .....4-31

4.4.14 Public Services.....4-31

4.4.15 Recreation .....4-32

4.4.16 Transportation .....4-32

4.4.17 Tribal Cultural Resources .....4-33

4.4.18 Utilities and Service Systems .....4-34

4.4.19 Wildfire.....4-34

4.5 Cumulative Impacts Analysis Summary .....4-36

**Chapter 5 Statutorily Required Sections ..... 5-1**

5.1 Growth Inducing Impacts.....5-1

5.2 Significant Irreversible Environmental Changes .....5-2

5.3 Significant and Unavoidable Impacts.....5-2

**Chapter 6 Alternatives Analysis..... 6-1**

6.1 Project Objectives .....6-1

6.2 Significant Impacts .....6-2

6.2.1 Air Quality .....6-2



6.2.2	Biological Resources.....	6-3
6.2.3	Cultural Resources .....	6-3
6.2.4	Geology, Soils, and Paleontological Resources .....	6-4
6.2.5	Hazards and Hazardous Materials .....	6-4
6.2.6	Hydrology and Water Quality .....	6-4
6.2.7	Noise .....	6-4
6.2.8	Tribal Cultural Resources .....	6-4
6.3	Methodology and Screening Criteria .....	6-5
6.4	Alternatives Development and Screening Process .....	6-5
6.4.1	Evolution of the Proposed HCP.....	6-5
6.4.2	HCP Alternatives Selection.....	6-6
6.4.3	Screening of Alternatives .....	6-6
6.4.4	Alternatives Considered But Eliminated from Further Consideration.....	6-7
6.4.5	Alternatives Carried Forward for Analysis in this EIR.....	6-12
6.5	Alternatives Impact Analysis.....	6-16
6.5.1	Approach to Analyzing Alternatives.....	6-16
6.5.2	Summary Comparison of Alternatives .....	6-16
6.5.3	Alternative 1: No Project.....	6-19
6.5.4	Alternative 2: Phase 1 Covered Activities Only Alternative .....	6-26
6.5.5	Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative .....	6-34
6.5.6	Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative.....	6-42
6.6	Environmentally Superior Alternative .....	6-50
<b>Chapter 7 Report Preparation and Persons Consulted .....</b>		<b>7-1</b>
7.1	Lead Agency .....	7-1
7.1.1	San Bernardino Valley Municipal Water District .....	7-1
7.2	Consultants .....	7-1
7.2.1	ICF – Environmental Impact Report.....	7-1
7.2.2	Cox, Castle & Nicholson LLP.....	7-2
<b>Chapter 8 References and Consultations .....</b>		<b>8-1</b>
8.1	Executive Summary.....	8-1
8.2	Chapter 1, Introduction.....	8-1
8.3	Chapter 2, Project Description.....	8-1
8.4	Chapter 3, Environmental Setting, Impacts, and Mitigation Measures.....	8-1
8.4.1	Section 3.1, Aesthetics .....	8-1
8.4.2	Section 3.2, Agricultural and Forestry Resources .....	8-2
8.4.3	Section 3.3, Air Quality.....	8-3
8.4.4	Section 3.4, Biological Resources.....	8-5

8.4.5 Section 3.5, Cultural Resources.....8-7

8.4.6 Section 3.6, Geology, Soils, and Paleontological Resources .....8-11

8.4.7 Section 3.7, Greenhouse Gas Emissions and Energy .....8-13

8.4.8 Section 3.8, Hazards and Hazardous Materials.....8-14

8.4.9 Section 3.9, Hydrology and Water Quality.....8-15

8.4.10 Section 3.10, Land Use .....8-16

8.4.11 Section 3.11, Minerals.....8-17

8.4.12 Section 3.12, Noise.....8-17

8.4.13 Section 3.13, Population and Housing .....8-18

8.4.14 Section 3.14, Public Services .....8-19

8.4.15 Section 3.15, Recreation .....8-21

8.4.16 Section 3.16, Transportation.....8-22

8.4.17 Section 3.17, Tribal Cultural Resources .....8-23

8.4.18 Section 3.18, Utilities and Service Systems.....8-23

8.4.19 Section 3.19, Wildfire.....8-24

8.5 Chapter 4, Cumulative Impacts.....8-26

8.6 Chapter 5, Statutorily Required Sections.....8-31

8.7 Chapter 6, Alternatives Analysis .....8-31

8.8 Chapter 7, Report Preparation and Persons Consulted .....8-31

- Appendix A Notice of Preparation and Comments Received**
- Appendix B Regional and Local Regulations**
- Appendix C Covered Activities Programmatic Environmental Evaluation**



## Tables

---

<b>Table</b>	<b>Page</b>
ES-1 Covered Species .....	ES-18
ES-2 Summary of Impacts and Mitigation Measures.....	ES-22
ES-3 Comparison of Alternatives Impacts.....	ES-76
2-1 Covered Species .....	2-4
2-2 Approximate Phasing of HCP Preserve System Assembly and Habitat Improvement Projects .....	2-14
2-3 Covered Activity Types.....	2-19
2-4 Summary of Federal, State, and Local Permits and Approval Decisions for the Proposed Project.....	2-21
3-1 Impact Mechanisms.....	3-5
3.1-1 Scenic Elements in the Planning Area.....	3.1-2
3.1-2 Construction and Operation of Covered Activities and Their Relevance to Aesthetics .....	3.1-11
3.2-1 Farmland of Importance within the Planning Area (acres).....	3.2-3
3.2-2 Important Farmland Category Definitions.....	3.2-9
3.2-3 Summary of Important Farmland Potentially Affected by the Proposed Project in the HCP Preserve System .....	3.2-16
3.2-4 Construction and Operation of Covered Activities and Their Relevance to Agriculture and Forestry Resources.....	3.2-20
3.3-1 Ambient Air Quality Monitoring Data from the Fontana-Arrow Highway Station (2015–2017).....	3.3-5
3.3-2 Ambient Air Quality Monitoring Data from the San Bernardino-4 <sup>th</sup> Street Station (2015–2017).....	3.3-6
3.3-3 Ambient Air Quality Monitoring Data from the Riverside-Rubidoux Station (2016– 2018) .....	3.3-8
3.3-4 Federal and State Attainment Status of the Planning Area in San Bernardino and Riverside Counties .....	3.3-9
3.3-5 Federal and State Ambient Air Quality Standards .....	3.3-10
3.3-6 SCAQMD Regional Air Quality Significance Thresholds (maximum pounds per day) .....	3.3-19

3.3-7 MDAQMD Air Quality Significance Thresholds ..... 3.3-19

3.3-8 SCAQMD Localized Significance Thresholds for SRAs #23 and #33 (pounds per day) ..... 3.3-21

3.3-9 Regional Criteria Pollutant Emissions from Construction Activities (pounds per day)..... 3.3-26

3.3-10 Localized Criteria Pollutant Emissions from Construction Activities (pounds per day)..... 3.3-26

3.3-11 Regional Criteria Pollutant Emissions from Management and Maintenance Activities  
(pounds per day) ..... 3.3-27

3.3-12 Localized Criteria Pollutant Emissions from Management and Maintenance Activities  
(pounds per day) ..... 3.3-27

3.3-13 Construction and Operation of Covered Activities and Their Relevance to Air Quality ..... 3.3-30

3.4-1 Vegetation Community and Land Cover Types in the Planning Area ..... 3.4-4

3.4-2 Special-Status Plant Species Potentially Occurring in the Planning Area ..... 3.4-15

3.4-3 Special-Status Wildlife Species Potentially Occurring in the Planning Area ..... 3.4-19

3.4-4 Critical Habitat for Covered Species in the Planning Area ..... 3.4-24

3.4-5 WRC MSHCP Conservation Areas within the Upper SAR HCP Planning Area ..... 3.4-34

3.4-6 Impacts on Natural Vegetation Communities and Land Cover Types ..... 3.4-43

3.4-7 Estimated Impacts on Covered Species Modeled Habitat and Designated Critical  
Habitat ..... 3.4-44

3.4-8 HCP Conservation Strategy to Offset Estimated Covered Activity Impacts..... 3.4-51

3.4-9 Impacts on Riparian Vegetation Communities and Land Cover Types ..... 3.4-72

3.4-10 Impacts on Wetlands and Other Waters ..... 3.4-74

3.4-11 Covered Activities Occurring within WRC MSHCP Conservation Areas..... 3.4-81

3.4-12 Construction and Operation of Covered Activities and Their Relevance to Biological  
Resources ..... 3.4-91

3.5-1 Cultural Resources Listed on the National Register of Historic Places by County ..... 3.5-14

3.5-2 Cultural Resources Listed as a California Historical Landmark by County ..... 3.5-19

3.5-3 Construction and Operation of Covered Activities Relevant to Cultural Resources ..... 3.5-38

3.6-1 Geologic Units Present in the Planning Area ..... 3.6-2

3.6-2 Primary Faults within 25 Miles of the Planning Area..... 3.6-3

3.6-3 Geologic Units and Paleontological Sensitivity in the Planning Area ..... 3.6-17



3.6-4 Construction and Operation of Covered Activities and Their Relevance to Geology, Soils, and Paleontological Resources ..... 3.6-30

3.7-1 Lifetimes and Global Warming Potentials of Key Greenhouse Gases ..... 3.7-2

3.7-2 Global, National, State, and Local Greenhouse Gas Emissions (metric tons per year) ..... 3.7-5

3.7-3 Electricity Consumption by County for 2018 ..... 3.7-6

3.7-4 Gas Consumption by County for 2018 ..... 3.7-6

3.7-5 GHG Emissions from Construction Activities (metric tons per year) ..... 3.7-17

3.7-6 Estimated Annual Management, Monitoring, and Maintenance-Related GHG Emissions (metric tons per year) ..... 3.7-18

3.7-7 Estimated Annual Amortized Construction and Operations- and Maintenance-Related GHG Emissions (metric tons per year) ..... 3.7-18

3.7-8 Construction and Operation of Covered Activities and Their Relevance to Greenhouse Gas Emissions and Energy Consumption ..... 3.7-22

3.8-1 Construction and Operation of Covered Activities and Their Relevance to Hazardous Materials ..... 3.8-21

3.9-1 Mean Annual Flow for the Upper Santa Ana River and Major Tributaries ..... 3.9-7

3.9-2 Categorization of Streams by Channel Pattern in the Planning Area ..... 3.9-12

3.9-3 CWA Section 303(d) Impairments for Surface Waters in the Planning Area ..... 3.9-13

3.9-4 Construction and Operation of Covered Activities and Their Relevance to Hydrology and Water Quality Resources ..... 3.9-34

3.10-1 Generalized Land Use in the Planning Area ..... 3.10-2

3.10-2 Protected Lands in the Planning Area ..... 3.10-7

3.10-3 Construction and Operation of Covered Activities and Their Relevance to Land Use ..... 3.10-11

3.11-1 Mineral Resource Classifications by County in the Planning Area ..... 3.11-1

3.11-2 Construction and Operation of Covered Activities and Their Relevance to Mineral Resources ..... 3.11-10

3.12-1 Definition of Sound Measurements ..... 3.12-1

3.12-2 Typical A-Weighted Sound Levels ..... 3.12-2

3.12-3 Vibration Source Levels for Construction Equipment ..... 3.12-3

3.12-4 Guideline Criteria for Vibration Annoyance Potential ..... 3.12-4

3.12-5 Guideline Criteria for Vibration Damage Potential ..... 3.12-4

3.12-6 Approximate Average Ldn Noise Levels for Various Locations..... 3.12-5

3.12-7 Noise Standards for Stationary Noise Sources ..... 3.12-7

3.12-8 County of Riverside Land Use Compatibility For Community Noise Exposure Level  
(Ldn or CNEL, dBA) ..... 3.12-8

3.12-9 County of Riverside Stationary Source Land Use Noise Standards..... 3.12-9

3.12-10 Typical Construction Equipment Noise Levels ..... 3.12-11

3.12-11 Construction and Operation of Covered Activities and Their Relevance to Noise ..... 3.12-17

3.13-1 Population and Area within Cities in the Planning Area ..... 3.13-3

3.13-2 Population and Growth Estimates for 2008–2035 for Jurisdictions in the Planning  
Area ..... 3.13-4

3.13-3 Ethnicity by County ..... 3.13-5

3.13-4 Population by Age and Sex by County ..... 3.13-6

3.13-5 Housing Data for Jurisdictions in the Planning Area 2018 American Community  
Survey 5-Year Data..... 3.13-6

3.13-6 Housing Growth Estimates for 2008–2035 Number of Households for Jurisdictions in  
the Planning Area..... 3.13-7

3.13-7 Total Number of Sheltered and Unsheltered in the Planning Area in San Bernardino  
County in 2019 ..... 3.13-9

3.13-8 Total Number of Sheltered and Unsheltered in the Planning Area in Riverside County  
in 2019 ..... 3.13-10

3.13-9 Construction and Operation of Covered Activities and Their Relevance to Population  
and Housing ..... 3.13-16

3.14-1 School Districts in the Planning Area by County ..... 3.14-5

3.14-2 Construction and Operation of Covered Activities and Their Relevance to Public  
Services ..... 3.14-10

3.15-1 Designated National and State Resources within the Planning Area ..... 3.15-5

3.15-2 Construction and Operation of Covered Activities and Their Relevance to  
Recreational Resources..... 3.15-10

3.16-1 Construction and Operation of Covered Activities and Their Relevance to  
Transportation ..... 3.16-14

3.17-1 Construction and Operation of Covered Activities Relevant to Tribal Cultural  
Resources ..... 3.17-9

3.18-1 Construction and Operation of Covered Activities and Their Relevance to Utilities and Service Systems..... 3.18-15

3.19-1 Number of Fires by Cause, by County..... 3.19-2

3.19-2 Covered Activities Relevant to Wildfire ..... 3.19-18

4-1 Estimated Impacts on Covered Species Modeled Habitat and Designated Critical Habitat from the Covered Activities ..... 4-19

6-1 Alternatives Considered But Rejected Following Stakeholder Engagement and HCP Preparation ..... 6-7

6-2 Alternatives Selected for Further Analysis During Stakeholder Engagement and HCP Preparation ..... 6-12

6-3 Comparison of Alternatives Impacts..... 6-17

## Figures

---

<b>Figure</b>	<b>Page</b>
ES-1 Regional Location Map .....	ES-3
ES-2 Planning Area .....	ES-7
ES-3 Permit Area .....	ES-8
1-1 Regional Location Map .....	1-3
1-2 Habitat Conservation Plan Planning Process Timeline .....	1-4
1-3 Upper Santa Ana River Program Components.....	1-6
1-4 Planning Area .....	1-9
1-5 Permit Area .....	1-10
2-1 Upper Santa Ana River HCP Preserve System.....	2-9
3.2-1 Important Farmland.....	3.2-5
3.2-2 Williamson Act Agricultural Preserves.....	3.2-6
3.2-3 Forest Lands .....	3.2-7
3.4-1 Vegetation Communities and Land Cover Types in the Planning Area .....	3.4-7
3.4-2 Critical Habitat in the Planning Area.....	3.4-25
3.4-3 Habitat Conservation Plans within the Planning Area .....	3.4-35
3.4-4 Potential Upper SAR HCP Covered Activity Conflicts within the Western Riverside County HCPs.....	3.4-80
3.4-5 Potential Upper SAR HCP Covered Activity Conflicts within the Stephens' Kangaroo Rat HCP .....	3.4-85
3.4-6 Potential Upper SAR HCP Covered Activity Conflicts within the Wash Plan HCP.....	3.4-87
3.4-7 Potential Upper SAR HCP Covered Activity Conflicts within the West Valley HCP.....	3.4-89
3.6-1 Regional Faults .....	3.6-7
3.6-2 Soils with Shrink/Swell Potential in the Planning Area.....	3.6-13
3.6-3 Soils with Susceptibility to Water Erosion in the Planning Area.....	3.6-14
3.6-4 Soils with Susceptibility to Wind Erosion in the Planning Area .....	3.6-15
3.7-1 California Energy Consumption Estimates, 2018.....	3.7-4



3.9-1 Watersheds and Sub-Watersheds in the Planning Area ..... 3.9-3

3.9-2 Channel Patterns in the Planning Area ..... 3.9-9

3.9-3 FEMA Flood Zones within the Planning Area..... 3.9-17

3.10-1 Existing Land Use in the Planning Area ..... 3.10-3

3.10-2 Generalized Land Ownership in the Planning Area ..... 3.10-4

3.10-3 Protected Lands in the Planning Area..... 3.10-5

3.11-1 Mineral Resource Zones ..... 3.11-3

3.13-1 Homeless Encampments Along the Santa Ana River and Tributaries ..... 3.13-2

3.15-1 Recreational Resources..... 3.15-3

3.16-1 Major Freeways and Roadways in the Planning Area..... 3.16-3

3.19-1 Fire Hazard Severity Zones - Local Responsibility Area (LRA) ..... 3.19-5

3.19-2 Fire Hazard Severity Zones - State Responsibility Area (SRA)..... 3.19-6

3.19-3 Federal Responsibility Area (FRA)..... 3.19-7

4-1 Cumulative Managed Lands in the Planning Area ..... 4-5

4-2 Cumulative Programs, Projects, and Jurisdictions in the Planning Area ..... 4-6

## Acronyms and Abbreviations

Acronym	Definition
°C	degree Celsius
°F	degrees Fahrenheit
µg/m <sup>3</sup>	microgram per cubic meter
AB	Assembly Bill
Accord	Seven Oaks Accord
Alliance	Upper Santa Ana River Sustainable Resources Alliance
Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
AMM	avoidance and minimization measure
AMP	Archaeological Monitoring Plan
AQMP	Air Quality Management Plan
BAU	business as usual
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	best management practice
BTAC	Basin Technical Advisory Committee
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy Standards
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CalRecycle	California Department of Resources Recycling and Recovery
Cal OSHA	California Division of Occupational Safety and Health
CAMMP	Comprehensive Adaptive Management and Monitoring Program
CAP	climate action plan
CARB	California Air Resources Board
Carl Moyer Program	Carl Moyer Memorial Air Quality Standards Attainment Program
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCR	California Code of Regulations

Acronym	Definition
CDFW	California Department of Fish and Wildlife
CEHC	California Essential Habitat Connectivity Project
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH <sub>4</sub>	methane
CIP	capital improvement program
CNEL	community noise equivalent level
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
Conservation District	San Bernardino Valley Water Conservation District
Construction General Permit	General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities
CP	Cultural Resources Preservation
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dBA	A-weighted decibel
dB	decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
East Valley	East Valley Water District
ECA	Essential Connectivity Area
EIR	environmental impact report
EO	executive order

Acronym	Definition
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FRA	Federal responsibility area
GDE	groundwater-dependent ecosystem
GHG	greenhouse gas
GIS	geographic information system
GWh	gigawatt hours
GWP	global warming potential
HCP	habitat conservation plan
HFC	hydrofluorocarbons
Hot Spots Act	Air Toxics Hot Spots Information and Assessment Act of 1987
I-	Interstate
IEUA	Inland Empire Utilities Agency
in/sec	inch per second
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
ITP	incidental take permit
Lake Mathews MSHCP	Lake Mathews Multiple Species Habitat Conservation Plan
LCFS	Low Carbon Fuel Standard
$L_{dn}$	day-night average sound level
$L_{eq}$	equivalent sound level
$L_{max}$	maximum sound level
$L_{min}$	minimum sound level
LID	Low-Impact Development
LRA	local responsibility area
LST	localized significance threshold
MBTA	Migratory Bird Treaty Act

Acronym	Definition
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
Metropolitan	Metropolitan Water District of Southern California
MJHMP	Multi-Jurisdictional Hazard Mitigation Plan
MJLHMP	Multi-Jurisdictional Local Hazard Mitigation Plan
mpg	miles per gallon
MOA	memorandum of agreement
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MRZ	mineral resource zone
N <sub>2</sub> O	nitrous oxide
NAAQS	national ambient air quality standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administrative
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NCCP	Natural Communities Conservation Planning
NO	nitric oxide
NO <sub>2</sub>	nitrogen dioxide
NOP	Notice of Preparation
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O&M	operation and maintenance
OCWD	Orange County Water District
OPR	State Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls
PUP	preserve unit plan



Acronym	Definition
PQP	Public/Quasi-Public
PRC	Public Resources Code
Porter Cologne Act	Porter Cologne Water Quality Control Act
PM <sub>10</sub>	particulate matter 10 microns or less in diameter
PM <sub>2.5</sub>	particulate matter 2.5 microns or less in diameter
ppm	part per million
PPV	peak particle velocity
PUP	preserve unit plan
RCDWR	Riverside County Department of Waste Resources
RCHCA	Riverside County Habitat Conservation Agency
RCRA	Resource Conservation and Recovery Act of 1976
ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RPU	Riverside Public Utilities
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SARCCUP	Santa Ana River Conservation and Conjunctive Use Program
SB	Senate Bill
SBBA	San Bernardino Basin Area
SBCHP	San Bernardino County Homeless Partnership
SBKR	San Bernardino kangaroo rat
SBVRUWMP	San Bernardino Valley Regional Urban Water Management Plan
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SKR	Stephens' kangaroo rat
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan

Acronym	Definition
SLCP	Short-Lived Climate Pollutant
SO <sub>2</sub>	sulfur dioxide
SMARA	Surface Mining and Reclamation Act of 1975
SMBMI	San Manuel Band of Mission Indians
SR-	State Route
SRA	State responsibility area
SRA	Source Receptor Area
State Water Board	State Water Resources Control Board
SVP	Society of Vertebrate Paleontology
SWRCB	State Water Resources Control Board
SWMP	Stormwater Management Plan
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminant
Tanner Act	Toxic Air Contaminant Identification and Control Act
TCR	tribal cultural resource
Tributaries EIR	Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR
Upper SAR HCP	Upper Santa Ana River Habitat Conservation Plan
U.S.	United States
USACE	U.S. Army Corps of Engineers
USARW	upper Santa Ana River watershed
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
Valley District	San Bernardino Valley Municipal Water District
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
Wash Plan	Santa Ana River Wash HCP
Wash Plan HCP	Santa Ana River Wash Plan Habitat Conservation Plan
Water Department	City of San Bernardino Municipal Water Department
WDR	waste discharge requirement
West Valley	West Valley Water District
West Valley HCP	West Valley Habitat Conservation Plan

---

Acronym	Definition
Western	Western Municipal Water District of Riverside County
Western Judgment	Western-San Bernardino Judgment
WRCRCA	Western Riverside County Regional Conservation Authority
WRC MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
WQMP	Water Quality Management Plan
WUI	Wildland Urban Interface

## ES.1 Introduction

This environmental impact report (EIR) evaluates the impacts associated with issuing endangered species permits and implementing the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP or Proposed Project). The Upper SAR HCP is a regional, species conservation plan that provides a habitat conservation and restoration framework to improve conditions for plant and animal species in San Bernardino and Riverside Counties. The Upper SAR HCP provides analysis and background information to inform decisions to issue endangered species permits for species that may be affected by specified projects in a specified permit area. It provides conservation measures, to be implemented within a habitat preserve system, to offset adverse effects on species and their habitats. The proposed conservation framework would help streamline endangered species permitting for specific agency and other projects and provides a comprehensive conservation approach to benefit threatened and endangered species in the Upper Santa Ana River watershed.

The following public agencies are applying for Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) permits from the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). Southern California Edison (SCE) is a private entity applying for separate permits.

- Rialto Utility Authority
- East Valley Water District
- Inland Empire Utilities Agency
- Metropolitan Water District of Southern California
- Orange County Water District
- Riverside Public Utilities
- San Bernardino Valley Conservation Trust
- San Bernardino Municipal Water Department
- San Bernardino Valley Municipal Water District
- San Bernardino Valley Water Conservation District
- Upper Santa Ana River Sustainable Resources Alliance
- West Valley Water District
- Western Municipal Water District of Riverside County

These public entities (Permittee Agencies) and SCE are referred to collectively as the Permittees. The Permittees are applying for incidental take permits (ITPs) from USFWS pursuant to Section 10(a)(1)(B) of the FESA. The same entities are also applying for CESA Section 2081(b) permit(s) from CDFW. The CESA ITP will be a Section 2081 Multi-Project ITP, or other ITP(s) as deemed

appropriate by CDFW. The permits would authorize take of certain State and Federally listed species (i.e., Covered Species) during the course of otherwise lawful activities (i.e., Covered Activities) as detailed in the Upper SAR HCP and described in Chapter 2, *Project Description*. To fulfill an application requirement for these permits, the Permittees have collaboratively prepared the Upper SAR HCP, which will support issuance of ITPs and 2081(b) permits, which would expire 50 years from the date it is signed by CDFW, or under an alternate timeframe identified by CDFW.

This EIR is prepared in accordance with the California Environmental Quality Act of 1970, Public Resource Code §21000 et seq., as amended (CEQA) and the Guidelines for Implementation of the California Environmental Quality Act, California Code of Regulations, Title 14, §15000 et seq. (State CEQA Guidelines). As required by §15121 of the State CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable project alternatives.

As the CEQA lead agency, the San Bernardino Valley Municipal Water District (Valley District) will consider the information in this EIR, the Upper SAR HCP, and other relevant information prior to certifying this EIR and approving the Proposed Project. The Proposed Project evaluated in this EIR is specifically defined in Chapter 2, Section 2.2.1, *Definition of the Proposed Project*, and generally includes issuance of ITPs for Covered Activities and implementation of the Upper SAR HCP.

CDFW is a responsible agency with permit authority over the Proposed Project and a trustee agency. A responsible agency under CEQA is a State or local public agency other than the CEQA lead agency that has discretionary approval over the project, and a trustee agency is a State agency that has jurisdiction by law over natural resources affected by a project that are held in trust for the people of California. USFWS will be the Federal lead agency under the National Environmental Policy Act of 1969 (NEPA) and will prepare a NEPA document separately for the Upper SAR HCP to support its permit decision.

## ES.2 Upper SAR HCP Overview

The Upper SAR HCP has been collaboratively prepared by Valley District and other Permittees to meet the requirements of Section 10 of the FESA and USFWS's HCP Handbook for a specified planning area, generally within San Bernardino and Riverside Counties (see Figure ES-1 and Section ES.4, *HCP Planning Area and Permit Area*). The HCP provides many valuable benefits to the region by providing a mechanism and approach to collaboratively address endangered species issues on a regional scale and with long-term funding assurances. The conservation approach is designed to anticipate, prevent, and resolve potential conflicts over current and future resource needs through the HCP planning and implementation process. This includes development of strategies to meet minimum in-stream flow requirements to protect native aquatic species and riparian communities in the Santa Ana River, creative solutions to be implemented for tributary habitat restoration/rehabilitation and long-term protection, conservation and management of the natural resources and species of the Upper Santa Ana River watershed. These actions, as detailed in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP and summarized in Chapter 2, *Project Description*, are intended to be implemented to benefit and reduce incidental take of Covered Species in a way that ensures long-term ecological value to the region. This regional conservation approach is intended to help avoid project-by-project incidental take approval for the specified Covered Activities, which can be costly and time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation.

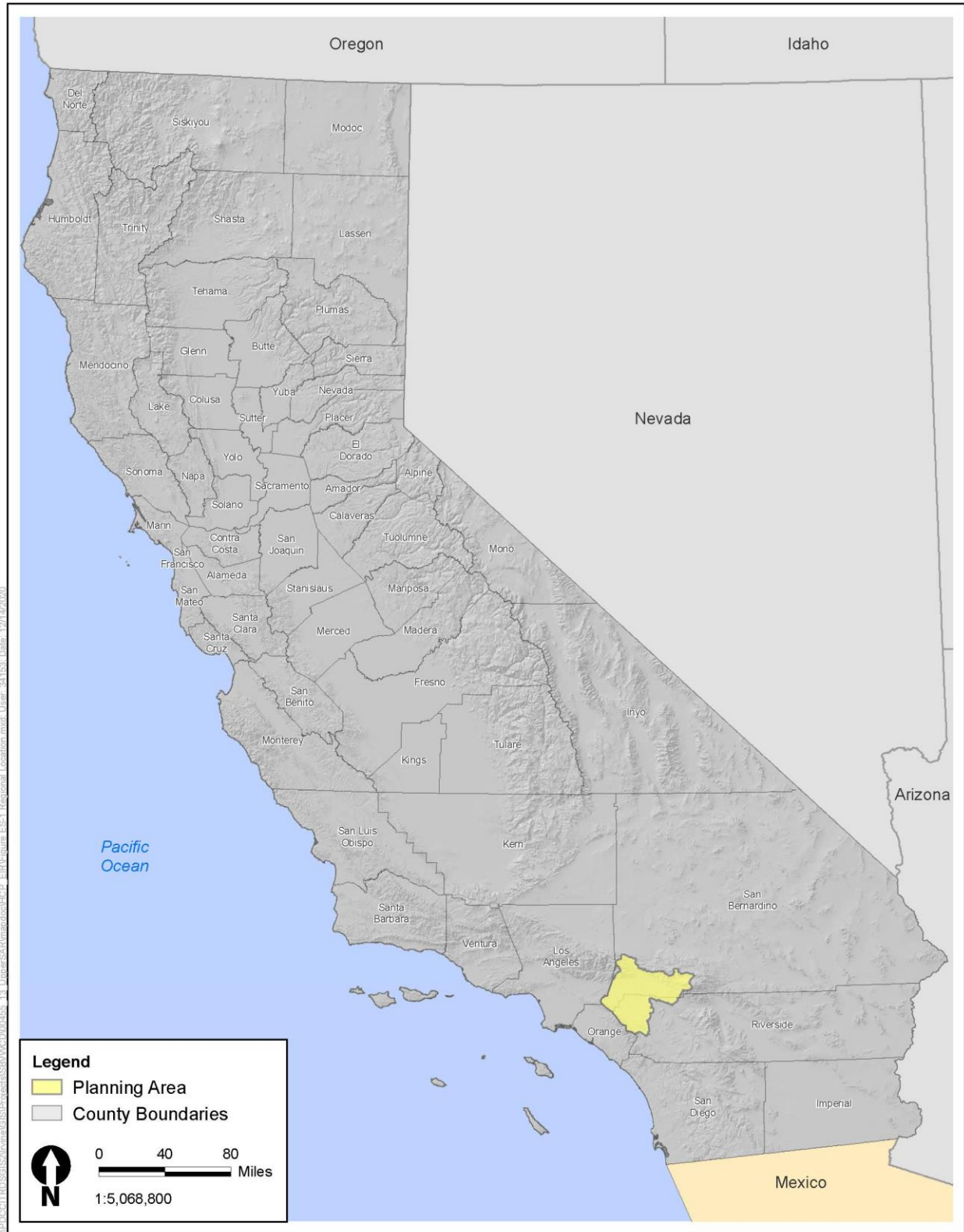


Figure ES-1. Regional Location Map

## ES.3 HCP Background and Development

The Santa Ana River watershed is the largest coastal stream system in Southern California and has been the subject of many important water use and water rights agreements, judicial orders, judgments, and accords dating back to the early twentieth century.

The Upper Santa Ana River is home to dozens of water districts, flood control districts, and other, local water management agencies with an interest in the sound management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. Many of these entities have participated in integrated regional watershed management coordination efforts in the Upper Santa Ana River since the 1960s. Recent cooperative planning initiatives among the water districts and stakeholders have resulted in a comprehensive vision for sustainable stewardship and watershed management (e.g., One Water, One Watershed 2.0 Plan finalized in 2014). However, several considerable challenges remain in the Upper Santa Ana River watershed, including ongoing modification of the Santa Ana River hydrogeomorphology, reduction of river flow, alteration of natural habitats, and the long-term effects of these changes on the functional ecology and native species of the watershed. These ongoing watershed effects are the result of continuing population growth, increased water demand, reductions in imported water supplies, and effects of climate change.

The Upper SAR HCP was initiated to help resolve some of these watershed challenges coordinated with regional water and other infrastructure projects. Because of the tremendous public value associated with improving regional water supply reliability and flood protection, the Permittees are proposing long-term commitments to native resources by agreeing to conserve, monitor, and manage Covered Species and their habitats in perpetuity. In exchange, the Permittees would receive assurances that USFWS would not require additional land, water, or other natural resources beyond the level agreed upon in the HCP as long as the Permittees are honoring the terms and conditions of the permit.

A key to developing a regional conservation approach has been a highly collaborative and transparent process involving Federal, State, and local agencies and stakeholder groups. The Santa Ana HCP Team includes the Permittees (the Permittee Agencies and SCE); Federal, State, and local agencies; and interested members of the public. During the planning process, the team met on a regular basis and were kept up to date via the HCP website (<http://www.uppersarhcp.com/>). The foundation of the HCP was developed by the Biological Technical Advisory Committee and the Hydrologic Technical Advisory Committee. The Biological Technical Advisory Committee helped to identify the Covered Species; provided conceptual species model input; and identified threats, natural drivers, and conservation targets for the Covered Species that helped develop biological goals and objectives. The Hydrologic Technical Advisory Committee provided input for the hydrological modeling conducted for the Upper Santa Ana River and its tributary system. A hydraulic model was used to estimate the effects on aquatic habitats in terms of low-flow habitat suitability and high-flow sediment transport. This modeling created the foundation for quantifying existing hydrologic conditions and future conditions with implementation of the Covered Activities on the Upper Santa Ana River and its tributaries.

Implementing the Upper SAR HCP will be accomplished through the Upper Santa Ana River Sustainable Resources Alliance (Alliance). The Alliance will be responsible for implementing the conservation strategy, directing regulatory compliance, and conserving water and species habitat to



facilitate timely approval and reliability of water supply projects. The ultimate goal of the Alliance is to maintain a sustainable watershed for water resources and species resources, of which the Upper SAR HCP is a substantial part. The Upper SAR HCP and other watershed sustainability components overseen by the Alliance will bring together a variety of organizations, agencies, and the public to create a forum for collaborative problem-solving to meet diverse needs and missions that include the protection of endangered species and timely approval and reliability of water supply projects.

The Upper Santa River geography is also home to another independent HCP. The Upper Santa Ana River Wash HCP (Wash Plan) was permitted in July 2020 and includes several of the same participating water agencies and similar Covered Activities in a 4,892-acre permit area. While these two HCPs have similarities and are in the same general planning area, the Wash Plan and its approvals are independent of the Upper SAR HCP.

## ES.4 HCP Planning Area and Permit Area

The HCP Planning Area is in San Bernardino and Riverside Counties, California, and encompasses approximately 862,966 acres (see Figure ES-2). The Planning Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water resource agency boundaries extend beyond the Santa Ana River watershed or where the Planning Area is mostly constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Planning Area because conservation activities and the Covered Activities under the HCP are not planned therein.

The area covered by the proposed ITPs, which falls within but does not include the entire Planning Area, is referred to as the Permit Area. The Upper SAR HCP Permit Area is the geographic area where the impacts of the Covered Activities are expected to occur and is depicted as the ownership, easements, and areas of operation and maintenance (O&M) where all Covered Activities are located within natural habitats. The Permit Area also includes the HCP Preserve System so that the ITPs cover the potential take associated with habitat mitigation, management, and monitoring. While a number of mitigation areas are already known (e.g., tributary restoration/rehabilitation sites), others will be identified during HCP implementation. If the HCP Preserve System is expanded in the future, the Permit Area will also include any new areas of the HCP Preserve System. Figure ES-3 depicts the Permit Area based on mapping of the Covered Activities and the currently proposed HCP Preserve System.

## ES.5 Proposed Project Objectives

CEQA requires an EIR to contain a statement of the objectives of the project, including the underlying purpose of the project (State CEQA Guidelines §15124 (b)). The goal, or underlying purpose, of the Proposed Project is to streamline permitting for Covered Activities by protecting, and restoring the habitats needed for Covered Species to offset the effects of water supply management activities in the HCP Planning Area. To meet this goal, the Upper SAR HCP includes a Conservation Strategy that will conserve and protect the long-term ecological health and resilience of Covered Species and other non-listed native species within the HCP Preserve System.

In addition to this overarching goal, the Proposed Project would achieve the following, specific project objectives.

- Provide Federal ITPs that facilitate the ability of the Permittee Agencies to construct new facilities and/or operate and maintain facilities associated with their mission.
- Establish the HCP Preserve System.
- Maintain, enhance, or establish metapopulations of Covered Species within the HCP Preserve System.
- Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.
- Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

To achieve these objectives, the Upper SAR HCP describes avoidance and/or minimization of impacts, mitigation measures to ensure habitat conservation strategies, compatible joint uses of lands, and land use restrictions.

The following HCP objectives will support the HCP goals:

- Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.
- Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.
- Maintain and successfully enhance existing and new Santa Ana sucker habitats.
- Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.
- Implement successful conservation measures to promote the recovery of Covered Species.
- Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.



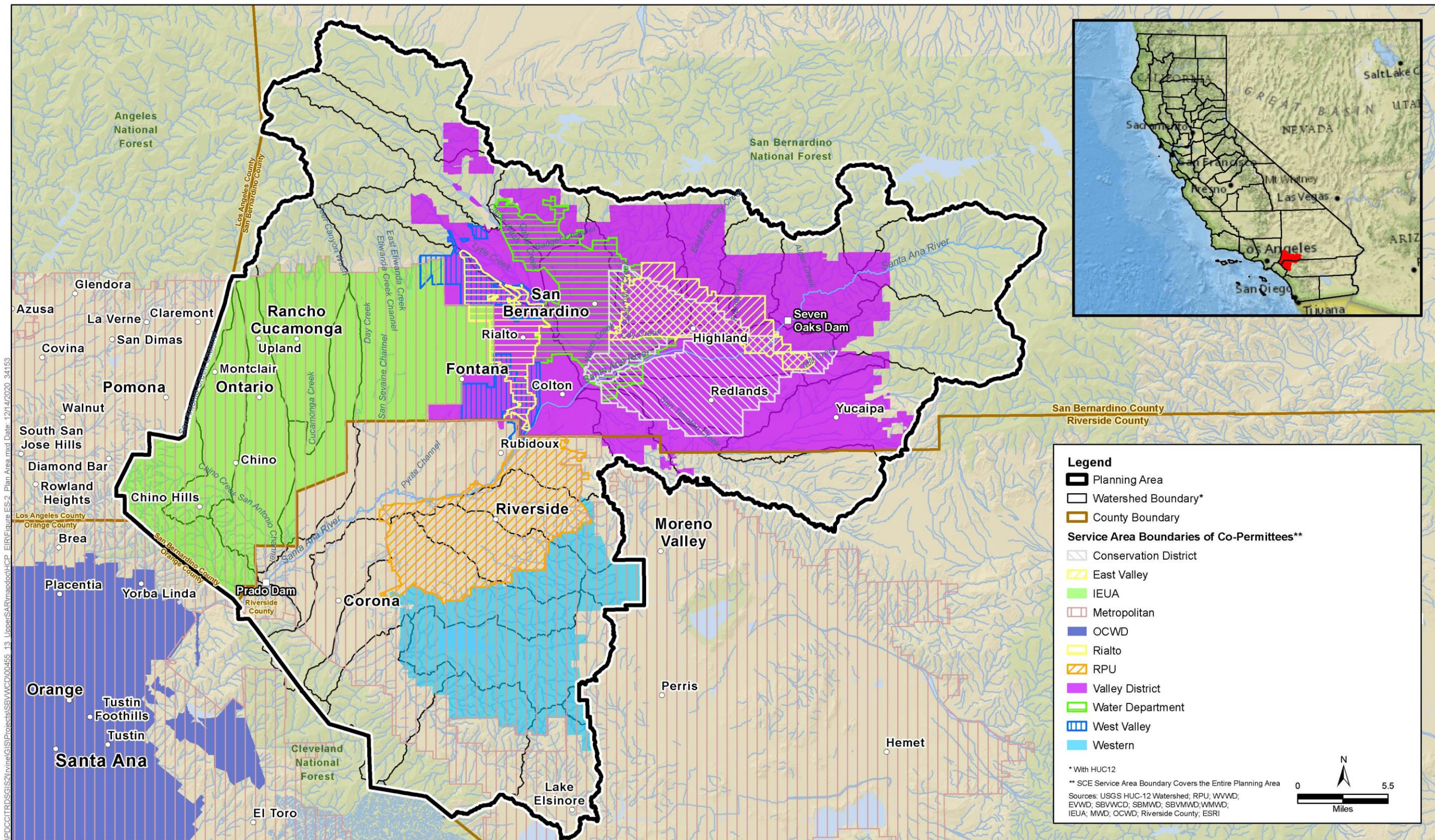


Figure ES-2. Planning Area



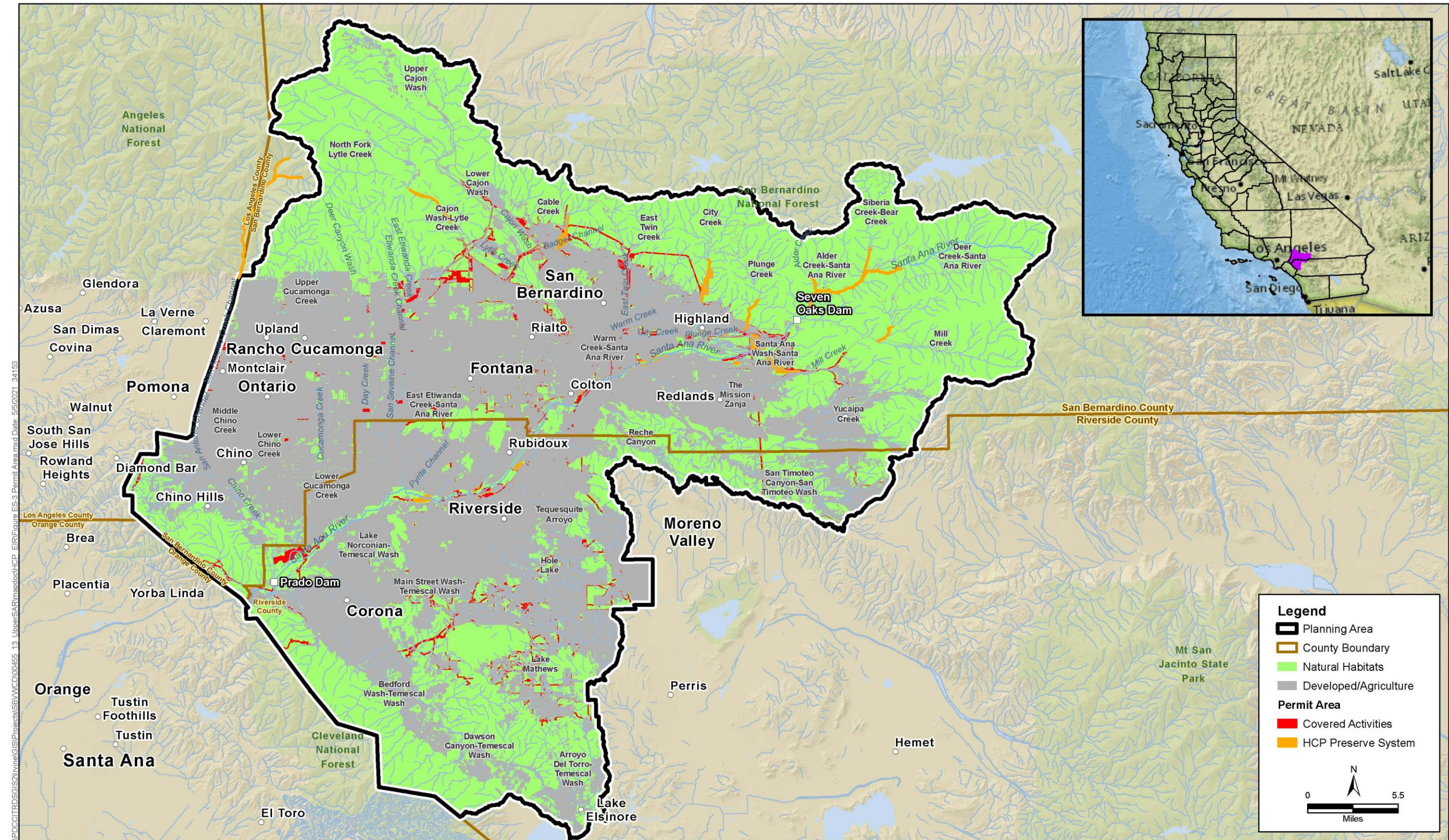


Figure ES-3. Permit Area



## ES.6 Elements of the Proposed Project

This section provides a definition of the Proposed Project that was used to focus the analyses and significance conclusions; project goals and objectives used to develop the Proposed Project and alternatives to the Proposed Project (Chapter 6, *Alternatives Analysis*); and summaries of the Covered Species, Conservation Strategy, and Covered Activities. Please refer to the Upper SAR HCP for detailed descriptions.

### ES.6.1 Definition of the Proposed Project

The Upper SAR HCP is a regional, comprehensive program that would provide a framework to protect, enhance, and restore the habitat for specifically identified plant and animal species (Covered Species), while streamlining permitting for Covered Activities. The term Proposed Project, as used in this EIR, for CEQA purposes, is defined as the adoption and implementation of the Upper SAR HCP and associated ITPs for Permittees. Therefore, the Proposed Project evaluated in this EIR is focused on the potential direct and indirect impacts that could result from the implementation of conservation actions and the issuance of ITPs for Covered Activities.

For biological resources and hydrology, the Proposed Project impacts address the net effect of implementing the conservation actions in context with the Covered Species habitat impacts. The Proposed Project is specifically designed to offset (minimize and mitigate) Covered Activity habitat and streamflow impacts on Covered Species.

The analyses presented in this EIR are focused on the direct and indirect impacts that may result from implementing the Proposed Project, which include the following major elements:

- Issuance of permits for the incidental take of 20 of the 22 Covered Species.
- Conservation and restoration activities within an HCP Preserve System to be established and managed for Covered Species habitat.
- Additional actions to improve aquatic, riparian, and alluvial scrub habitats, as well as additional sensitive habitats throughout the Upper Santa Ana River watershed (i.e., not necessarily within the HCP Preserve System).
- Species-specific conservation measures that also include the re-establishment of native fish species, through processes of captive headstarting and translocation, to create additional resilience to extinction by establishing redundant populations in the Upper Santa Ana River watershed mountain tributary streams.
- Upper SAR HCP Preserve System management and monitoring, including habitat improvement, the control of nonnative species (flora and fauna), Covered Species captive headstarting and translocation activities, species surveys and research, additional vegetation management to reduce fire potential, site cleanup, preserve patrols, and others.

### ES.6.2 Conservation Strategy

The Proposed Project's Conservation Strategy, described in detail in Chapter 5 of the Upper SAR HCP, is designed to avoid, minimize, and mitigate impacts on Covered Species to the maximum

extent practicable. The strategy was designed to meet the regulatory requirements of both the Federal and State Endangered Species Acts (FESA and CESA, respectively) and to streamline compliance with other applicable State and Federal environmental laws and regulations. The Conservation Strategy defines biological goals and objectives, and describes the implementation of conservation actions in relation to achieving these goals.

The following sections summarize the elements of the Conservation Strategy, which include mitigation based on the biological needs of the Covered Species and, when fully implemented, will meet the biological goals and objectives of the Proposed Project. This HCP mitigation will also offset the impacts of Covered Activities to the maximum extent practicable.

### **Biological Goals and Objectives (Section 5.3 of the Upper SAR HCP)**

Biological goals are broad, guiding principles based on the conservation needs of the Covered Species. The following biological goals will be accomplished within the HCP Preserve System.

- **Goal 1:** Conserve Covered Species and manage their habitats to contribute to the recovery of listed species or those that may become listed under the FESA.
- **Goal 2:** Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- **Goal 3:** Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.
- **Goal 4:** Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

The following biological objectives will support the HCP goals:

- **Objective 1:** Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.
- **Objective 2:** Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.
- **Objective 3:** Maintain and successfully enhance existing and new Santa Ana sucker habitats.
- **Objective 4:** Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.
- **Objective 5:** Implement successful conservation measures to promote the recovery of Covered Species.
- **Objective 6:** Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.

Species-specific objectives and species-specific conservation actions are presented for each Covered Species in Section 5.9, *Species-Specific Conservation Strategies*, of the Upper SAR HCP to achieve the HCP-level goals and objectives.

## HCP Preserve System (Section 5.4 of the Upper SAR HCP)

The HCP Preserve System includes a network of conservation lands selected for their existing biological resource values and restoration potential. Over the 50-year permit term for the Upper SAR HCP, the HCP Preserve System would provide a means for protecting, restoring, managing, and monitoring the natural communities and habitats that support the recovery of the Covered Species.

The HCP Implementing Entity will be the Alliance, which will be established by the Upper SAR HCP joint exercise of powers authority. The Alliance will be responsible for implementing the HCP and all conservation actions described in the Conservation Strategy for the permanent conservation of a minimum of approximately 1,349 acres within the HCP Preserve System, and assisting the other Permittee Agencies in complying with the conditions of the HCP ITPs in connection with their Covered Activities.

The HCP Preserve System will be assembled through a combination of property acquisitions, and/or establishment of conservation easements. Habitat improvement will occur on land within the HCP Preserve System and will be managed and monitored through the Comprehensive Adaptive Management and Monitoring Program (CAMMP) to be implemented by the Alliance.

### Phasing

Upper SAR HCP implementation has been separated into phases to ensure that the conservation actions and associated mitigation are able to stay ahead of the impacts of Covered Activities. Covered Activities are also anticipated to occur in different phases during implementation of the HCP. These HCP phases are as follows:

- **Phase 1**—0 to 5 years from permit issuance
- **Phase 2**—6 to 10 years from permit issuance
- **Phase 3**—11 to 15 years from permit issuance
- **Phase 4**—16 years from permit issuance to end of permit term

Approximately 80.9 acres (6%) of the HCP Preserve System will be dedicated for conservation and under active habitat management prior to HCP Implementation. Approximately 825.9 acres (61%) of the HCP Preserve System will be dedicated for conservation during Phase 1 of the permit duration, with the remaining 442.1 acres (33%) dedicated in Phase 2. Additionally, approximately 2,441.5 acres of ground-disturbing impacts are anticipated for Covered Activities across all phases. Approximately 1,182.0 acres (48%) will be affected during Phase 1, 908.7 acres (37%) during Phase 2, 198.6 acres (8%) during Phase 3, and 152.2 acres (6%) during Phase 4 of HCP implementation.

The HCP Preserve System is included within the HCP Permit Area, and the ITPs cover the potential impacts associated with habitat improvement, management, research, and monitoring associated with the Conservation Strategy. The HCP Preserve System is divided into five main preserve units: Santa Ana River Preserve Unit, Alluvial Fan Preserve Unit A, Alluvial Fan Preserve Unit B, and Santa Ana Sucker Translocation Preserve Units A and B. All conserved lands planned for within the HCP Preserve System will become an important component of the network of preserved lands that includes other HCPs and Natural Community Conservation Plans (e.g., the Upper Santa Ana River Wash HCP, Western Riverside County Multiple Species Habitat Conservation Plan), open space parks and wildlife areas (e.g., county parks and CDFW lands), and other public lands (e.g., United States Forest Service and Bureau of Land Management lands).

Various habitat management, maintenance, and monitoring activities in the HCP Preserve System will also be implemented during the permit term to meet the biological goals and objectives of the Conservation Strategy.

### **Up-Front and Stay-Ahead Provisions**

The HCP's Up-Front and Stay-Ahead Provisions require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. The Alliance will ensure that HCP implementation is in compliance with the Up-Front and Stay-Ahead Provisions by monitoring and tracking the establishment and management of the HCP Preserve System along with tracking of Covered Activity impacts. To ensure that mitigation is "In-Step" and ahead of impacts (i.e., similar or superior Covered Species habitat is being acquired, restored, and managed, compared to that affected by Covered Activities), the Up-Front and Stay-Ahead Provisions will track mitigation and impacts by vegetation type. Compliance with and status of the Up-Front and Stay-Ahead Provisions will be implemented through the consistency review process for Covered Activities and via the submission of annual reports.

### **Mitigation Reserve Program (Mitigation Accounting)**

The Alliance will establish a Mitigation Reserve Program to account for and track the development of conservation values (e.g., species, waters, and/or habitat values) as well as account for the use of these values to offset future permit requirements for Covered Activities. The purpose of the Mitigation Reserve Program is to establish a common understanding and legal framework for the conservation values created by HCP conservation actions, and to establish a transparent mechanism for tracking those values (creation and use) over time. In this way the Mitigation Reserve Program will be used to inform and track regulatory compliance of the Covered Activities, including species and aquatic resource mitigation.

The Mitigation Reserve Program will provide accounting to establish and track all conservation values as they are established (e.g., through acquisitions, conservation easements, and restoration/rehabilitation) and used (i.e., dedicated to offset a specific project's impacts) and maintain records on the management of those resources over time. As Covered Activities are implemented under the HCP, the impacts on species and aquatic resources will be monitored, tracked, and debited from the Mitigation Reserve Program for an efficient and transparent process for using conservation values.

The Mitigation Reserve Program will include development of legal agreements, where relevant, that will formalize the conservation values created by establishment of Conservation Areas within the HCP Preserve System as recognized by the environmental regulatory agencies (U.S. Army Corps of Engineers, CDFW, Regional Water Quality Control Board, and USFWS).

### **Conservation Areas**

Habitat improvement projects are being pursued in all five of the HCP Preserve Units. There are 20 Conservation Areas that have been identified to date as potential mitigation sites for the HCP (Figures 5-2 through 5-5 of the Upper SAR HCP). These areas were identified because they have suitable habitat or could be restored to support habitat for Covered Species. Some locations also support presumed extant occurrences of Covered Species. Additionally, these areas were selected because they were adjacent to, or in close proximity to, other protected areas of habitat in the



network of protected lands in the Upper SAR HCP. Therefore, they have high potential for sustaining Covered Species on habitat to be conserved and managed under the HCP.

Throughout the HCP the acreages of habitat contained in the Preserve System are quantified by natural vegetation community type and by acres of suitable habitat based on species habitat suitability models (see individual species tables in Section 5.9 of the HCP). However, the acres of potential restoration are based on early restoration designs for many of the sites, and/or based on the judgment of restoration experts with respect to the restoration potential of each site. These acres represent the potential amount of suitable habitat that could be restored on each site, and will serve as a general restoration target for each site.

Because habitat improvement may involve some type of land disturbance or habitat manipulation to create, restore, or rehabilitate conditions for Covered Species, these projects are also considered Covered Activities. Implementation of each restoration project may result in greater or lesser acreages of individual Covered Species habitat depending on the final restoration site design and restoration site performance. Future restoration projects will continue to be developed and implemented over time to ensure that the HCP is able to achieve and maintain its biological goals and objectives.

Approximately 80.9 acres of the HCP Preserve System will be dedicated for conservation and under active habitat management prior to HCP Implementation. Additionally, approximately 825.9 acres of habitat in Conservation Areas will be acquired or have easements established under Phase 1 of the HCP (much of which will have already been achieved by the time of HCP permit issuance). Another 442.1 acres are identified for Phase 2. Because the acquisition and/or establishment of easements is dependent on willing sellers it is possible that not all of these 20 Conservation Areas will become a part of the HCP Preserve System. Similarly, other potential Conservation Areas with suitable habitat for Covered Species may become available in the future and could be added to the HCP Preserve System.

Total habitat acreage for the up-front provisions, two phases, and 20 Conservation Areas includes riparian habitat (208.3 acres), wetlands (39.0 acres), permanent water (37.8 acres), alluvial fan sage scrub (509.4), dry channel/shrublands (51.4 acres), other shrublands (314.3 acres), grasslands (152.5 acres), woodlands (21.0 acres), and rock outcrops (15.2 acres), for a total natural habitat area of 1,348.8 acres. Any Conservation Areas currently identified for acquisition and/or easements or identified in the future will require wildlife agencies' concurrence before becoming part of the HCP Preserve System and the conservation value(s) assigned to the HCP. All areas that become a part of the HCP Preserve System will be monitored and adaptively managed according to the Comprehensive Adaptive Management and Monitoring Program of the HCP.

Restoration projects are divided into the HCP Preserve Unit within which they are located.

The Santa Ana River Preserve Unit includes multiple tributary stream restoration/rehabilitation projects that will be constructed predominantly prior to HCP finalization and during Phase 1 at the following tributary restoration project areas: Anza Creek and Old Ranch Creek, Lower Hole Creek, Hidden Valley Creek, Hidden Valley Ponds, Evans Lake Drain, and Sunnyslope Creek. The focus of these projects is to restore tributary streams and the adjacent riparian and/or upland buffer habitat to create and/or rehabilitate existing habitat for Santa Ana sucker and/or other aquatic and riparian Covered Species. These projects include the creation of new channels, restoration or rehabilitation of existing channels, expansion or creation of floodplains, control of nonnative invasive vegetation,

and limiting of human disturbance. The Upper SAR HCP also identifies specific restoration actions in portions of existing creeks.

In addition to restoration/rehabilitation of the tributaries and their adjacent riparian buffers, the HCP Conservation Strategy includes restoration/rehabilitation of the adjacent and associated riparian floodplain habitats. Restoration/rehabilitation of these areas are proposed to occur predominantly during Phase 2 and include Hidden Valley Creek and Hidden Valley Ponds. These projects would restore/rehabilitate the broader riparian floodplain beyond the riparian buffer associated with the tributary stream restoration projects discussed above.

Restoration/rehabilitation projects within Alluvial Fan Preserve Unit A will focus on the improvement of habitat for alluvial scrub species including San Bernardino kangaroo rat (SBKR) and Santa Ana River woolly-star. Restoration and/or rehabilitation of the Redlands Airport, San Bernardino Avenue, and Weaver sites will commence prior to HCP finalization. The Enhanced Recharge Basins and Santa Ana Refugia sites will commence in Phase 1. The Drainage A Woolly-Star site (or alternate location of similar acreage and restoration potential) is planned for Phase 2.

Restoration/rehabilitation projects within Alluvial Fan Preserve Unit B will also focus on the improvement of habitat for alluvial scrub species. One project has been identified to date within this Preserve Unit, but other locations are being actively pursued. Habitat improvement of the Devil Creek site will occur during Phase 1 of HCP Implementation. Conservation activities will include the rehabilitation of alluvial fan scrub habitat and adjacent habitat for the benefit of Covered Species.

Habitat improvement within Santa Ana Sucker Translocation Units A and B will focus on aquatic and riparian Covered Species. The City Creek site has been identified to occur in Phase 2 of HCP Implementation. Habitat improvement actions within the lower foothill portion of the creek will provide species benefits and reduce the propensity of wildfire ignitions.

## **Hydrologic Manipulation and Substrate Management (Section 5.5 of the Upper SAR HCP)**

The goal of this habitat management action is to create a minimum of six nodes of habitat created by installing a series of structures within the stream flow of the mainstem Santa Ana River to increase flow velocity and increase localized sediment transport of fine sediment (scour) in order to create and maintain suitable microhabitats for native fishes. The expectation is that these structures (made of natural materials) will increase the total amount of suitable habitat available to Santa Ana sucker, including riffles, small scour pools, and exposed patches of coarse substrate. Strategically placing the microhabitat creation structures downstream of the San Bernardino/Colton Rapid Infiltration and Extraction Facility discharge location between occupied reaches will create “steppingstone” nodes of habitat to connect occupied areas and the new mainstem tributary restoration/rehabilitation sites and facilitate movement of native fishes between newly created habitat and currently occupied areas. Where appropriate, structures made of natural materials such as boulders, large cobble, and large woody debris will be used to manipulate the flow and path of the river to increase and maintain habitat suitability for Santa Ana sucker. Structures could also include stream diversion features that would be an engineered structure to serve multiple purposes, at minimum to include water diversion and sediment exclusion, and may include a weir, boulder clusters, large woody debris, groin, etc.

This conservation measure will include actions to improve stream habitat including Santa Ana River mainstem microhabitat creation with natural instream structures, coarse substrate management

and rehabilitation, Santa Ana River flow and path manipulation, water flow and temperature improvement in Rialto Channel with groundwater pumped from wells, and flow improvement in Tequesquite Creek from a recycled water pipeline.

### **Captive Headstarting and Translocation (Section 5.6 of the Upper SAR HCP)**

Two conservation programs are underway that are supported in part by the Upper SAR HCP, including for Santa Ana sucker and mountain yellow-legged frog. A Translocation Plan will be developed for the Santa Ana sucker and will serve as a framework for evaluating potential translocation sites, translocating Santa Ana sucker to those sites should they be found suitable, and monitoring the new population, with the ultimate goal of creating and maintaining persistent and reproducing (viable) populations that are resilient to natural disturbance and anthropogenic changes. No translocation plan is proposed for the mountain yellow-legged frog; however, the Upper SAR HCP will continue to support the San Diego Zoo Institute for Conservation Research (renamed the San Diego Zoo Wildlife Alliance) captive headstarting and reintroduction program, and the U.S. Geological Survey's conservation efforts for this species.

### **Species and Habitat Research (Section 5.7 of the Upper SAR HCP)**

This conservation measure includes conducting research and additional surveys and analysis for these key species: Santa Ana sucker, mountain yellow-legged frog, western spadefoot, Santa Ana speckled dace, and southwestern pond turtle.

- Santa Ana sucker population genetics research and management will involve characterizing the current status of the genetic health of the Santa Ana River population and compare this with historic collections of Santa Ana sucker to inform how genetic health and diversity of this population has changed. Additionally, the information collected will help guide the translocation program (which may include captive headstarting in the future) that will ultimately provide fish for reestablishment efforts in portions of the species' historic range within the Santa Ana River watershed.
- Mountain yellow-legged frog surveys will collect data on demographics, distribution, and population size as well as disease, water quality, habitat parameters, and site disturbances.
- Western spadefoot surveys will identify breeding sites and evaluate occupancy of spadefoot at these sites over time.
- Santa Ana speckled dace surveys will be completed to fill in gaps in information on presence/absence, demographics, and remaining suitable habitat. Genetic samples will be collected for future genetic analysis and to help develop a threat assessment at locations where surveys take place.
- Western pond turtle surveys are needed to establish presence/absence, demographics, and remaining suitable habitat. The survey and threat analysis will include reconnaissance surveys; trapping surveys; removal of nonnative aquatic species; and compilation of all survey results into a report.

### **Conservation Bank Credits (Section 5.8 of the Upper SAR HCP)**

The Lytle Creek Conservation Bank and Cajon Creek Conservation Bank are in the alluvial floodplain and active channel of Lytle Creek and Cajon Creek, respectively, near the confluence of Lytle and

Cajon Creeks (north of Interstate 210 and west of Interstate 215). Both banks have habitat conservation values available to mitigate impacts on SBKR and Santa Ana River woolly-star.

Mitigation to offset impacts on Covered Species (and their habitat) from Covered Activities within Alluvial Fan Preserve Unit B will be satisfied by land acquisition, habitat uplift (restoration or rehabilitation), and management of lands within this same Preserve Unit. Mitigation lands are actively being pursued for acquisition into the HCP Preserve System; however, if additional mitigation is needed above and beyond these actions, then conservation/mitigation credits in the Lytle Creek or Cajon Creek Conservation Banks may be used.

### **Species-Specific Conservation Strategies (Section 5.9 of the Upper SAR HCP)**

The Upper SAR HCP includes specific habitat conservation, improvement, management, monitoring, avoidance and minimization measures (AMMs), and other actions for each Covered Species. The species-specific conservation strategies are the heart of the HCP Conservation Strategy. Each species-specific conservation strategy is described in terms of the conservation objectives and conservation actions developed specifically for that species. The strategy describes the species-specific AMMs to be implemented in addition to the general AMMs for the Upper SAR HCP. Specific instream flow management measures are included to benefit Santa Ana sucker and arroyo chub. Captive headstarting and translocation of Santa Ana sucker is also planned for higher elevation streams to create additional resilience by establishing redundant populations in upper watershed tributaries. Streams considered for translocation sites include the Santa Ana River upstream of Seven Oaks Dam, and City, Plunge, Hemlock, Mill, Bear, and Lytle Creeks. San Antonio Creek may also be considered for translocation. Translocation activities for mountain yellow-legged frog is also being supported by the Upper SAR HCP Conservation Strategy.

### **Fully Avoided Species (Section 5.10 of the Upper SAR HCP)**

The Delhi Sands flower-loving fly and arroyo toad are included in the Upper SAR HCP because they are species that overlap with known or modeled habitat areas; however, all impacts will be avoided by implementing both the general measures to avoid adverse impacts described in the Upper SAR HCP and the species-specific measures. The measures will be employed to avoid all impacts on the Delhi Sands flower-loving fly and arroyo toad by implementation of Covered Activities, and the Upper SAR HCP does not provide incidental take coverage for either species. If the proposed activity does not have the potential to directly or indirectly result in adverse affects on these two species, including temporary or permanent impacts on their habitat, no additional mitigation or AMMs would be required for this species.

### **Measures to Avoid and Minimize Take (Section 5.11 of the Upper SAR HCP)**

As required by the FESA (Section 10 (a)(2)(A)(ii)), the Upper SAR HCP includes measures with a primary focus of avoiding or minimizing impacts on the Covered Species (i.e., death of or injury to species) and effects on habitat that may be affected by Covered Activities. These measures to avoid and minimize impacts are designed to achieve the following objectives:

- Provide avoidance of Covered Species during implementation of Covered Activities throughout the Planning Area.
- Prevent impacts on individuals from Covered Activities as prohibited by law.

- Minimize adverse effects on Covered Species and their habitats where conservation actions will take place.

The Upper SAR HCP describes the best management practices (BMPs) and general AMMs that apply overall to Covered Species and Covered Activities, as well as species-specific AMMs, including the timing of species habitat surveys, preconstruction surveys, and construction monitoring relative to impacts (Chapter 5, Section 5.11, and Appendix G, *Covered Activity AMMs*, of the HCP). For long-term projects and projects that are phased, the frequency and timing of surveys relative to impacts should also be phased such that surveys and monitoring (if required) will be conducted prior to each construction phase if the entire Project Area is not continuously disturbed between phases.

As described in the HCP, it is the responsibility of Permittees to design and implement their projects in compliance with these measures and of the Alliance to provide adequate conservation to provide for the HCP Stay-Ahead Strategy. AMMs may be revised over the course of the permit duration based on results of implementation through the CAMMP and in accordance with the Upper SAR HCP. However, even with these AMMs, sub-lethal (e.g., harm) impacts on Covered Species may still occur.

### **Comprehensive Adaptive Management and Maintenance Program (Section 5.12 of the Upper SAR HCP)**

The CAMMP is an all-encompassing adaptive management and monitoring program for the entire HCP Preserve System. The CAMMP applies guidance and directives to the five preserve unit plans (PUPs) of the HCP Preserve System, focusing on the specific habitat types, Covered Species, and management issues prevalent in each unit. Both the CAMMP and the PUPs will require periodic updating as significant new information and tools become available; however, the PUPs will require more frequent updating to integrate the adaptive management results and reprioritize management needs. The CAMMP and PUPs will be maintained as “living” documents, greatly simplifying the update process.

The Alliance will be responsible for the preparation of the CAMMP and of PUPs as well as an HCP annual report. Additionally, the Alliance will implement the CAMMP and will be responsible for ensuring that success criteria are being met within the HCP Preserve System through conservation actions that contribute to the HCP’s Conservation Strategy. The overarching objective of the CAMMP is to ensure that the Conservation Strategy and the biological goals and objectives of the Proposed Project are being achieved. Additional objectives of the CAMMP include the following.

1. Provide an organizational framework and decision-making process using the results of monitoring, targeted studies, and other data to adjust management actions.
2. Document the baseline condition of biological resources in the HCP Preserve System using existing data and the results of ongoing field surveys.
3. Develop conceptual models for vegetation communities and Covered Species that can be used as the basis for collecting information, verifying hypotheses, and designing and changing management practices.
4. Incorporate hypothesis testing and experimental management, including targeted studies to address key uncertainties and to improve management and monitoring efforts.
5. Develop and implement scientifically valid monitoring protocols at multiple levels to ensure that data collected will inform management and integrate with other monitoring efforts.

6. Ensure that monitoring data are collected, analyzed, stored, and organized so the data are accessible to the Permittee Agencies, regulatory agencies, scientists, and, as appropriate, the public.

## ES.7 Covered Species

The HCP addresses both Federally and State-listed threatened and endangered species, as listed in Table ES-1. Although the primary intent of the Proposed Project is to provide mitigation for effects on Covered Species, it would also contribute to the overall protection of native biological diversity, habitat for native species, natural communities, and local ecosystems. This broad scope would conserve a wide range of natural resources, including native species that are common and those that are rare.

As listed in Table ES-1, 20 species are covered by the Proposed Project, 9 listed and 11 non-listed species, and there are 2 additional fully avoided species that are listed but that will be fully avoided by impacts from Covered Activities. The incidental take authorization under Section 10 of the FESA will apply to the wildlife species. Impacts on listed plant species are not prohibited under the FESA or authorized under a Section 10(a)(1)(B) permit. However, the two plant species conserved by the Proposed Project are listed in the 10(a)(1)(B) permit in recognition of the conservation measures and benefits provided for them under the Upper SAR HCP such that the Permittees will receive assurances pursuant to the USFWS “No Surprises” Rule. Similarly, the unlisted Covered Species will also receive assurances under the “No Surprises” rule should they become listed in the future. In addition to Covered Species for which incidental take authorization is requested, two species are fully avoided species: Delhi Sands flower-loving fly and arroyo toad. The AMMs included in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP are expected to reduce any adverse effects on these species so that any adverse effects from Covered Activities would not rise to the level of take.

State authorization for incidental take of other wildlife species that may be State-listed in the future may be sought through the amendment process and in accordance with the applicable provisions of the California Fish and Game Code. Although CDFW will not approve the Upper SAR HCP, its conservation strategies are intended to satisfy the requirements of the CESA and support the issuance of the ITP(s). Species for which incidental take authorization will be requested under the CESA are indicated as State-listed species in Table ES-1.

**Table ES-1. Covered Species**

Common Name	Scientific Name	Status	
		Federal	State
<i>Covered Species</i>			
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	Endangered	Endangered
Santa Ana River woolly-star	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Endangered	Endangered
Santa Ana sucker	<i>Catostomus santaanae</i>	Threatened	None
Arroyo chub	<i>Gila orcuttii</i>	None	SSC
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	None	SSC
Mountain yellow-legged frog (Southern California DPS)	<i>Rana muscosa</i>	Endangered	Endangered
Western spadefoot	<i>Spea hammondi</i>	None	SSC

Common Name	Scientific Name	Status	
		Federal	State
California glossy snake	<i>Arizona elegans occidentalis</i>	None	SSC
South coast garter snake	<i>Thamnophis sirtalis</i> sp.	None	SSC
Western pond turtle	<i>Emys pallida</i>	None	SSC
Tricolored blackbird	<i>Agelaius tricolor</i>	None	Threatened
Burrowing owl	<i>Athene cunicularia</i>	None	SSC
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	None	SSC
Yellow-breasted chat	<i>Icteria virens</i>	None	SSC
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Threatened	Endangered
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered
Coastal California gnatcatcher	<i>Polioptila californica</i>	Threatened	SSC
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	Endangered
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	None	SSC
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	Endangered	Candidate
<i>Fully Avoided Species<sup>a</sup></i>			
Delhi Sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	Endangered	None
Arroyo toad	<i>Anaxyrus californicus</i>	Endangered	None

<sup>a</sup> Implementation of avoidance measures as described in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP would prevent the take of these species.

DPS = Distinct Population Segment; SSC = California Department of Fish and Wildlife Species of Special Concern

## ES.8 Covered Activities

*Covered Activities*, as used in the Upper SAR HCP and this EIR, are the activities with the potential to result in impacts on Covered Species for which the Permittees are applying for incidental take coverage. Covered activities include water reuse, groundwater recharge, wells and water conveyance infrastructure, solar energy development, and routine O&M activities implemented by the Permittees. Covered Activities also include habitat improvement, management and monitoring activities proposed in the Upper SAR HCP to offset the Covered Species habitat impacts of other Covered Activities that are projected to occur in the Permit Area during the 50-year permit term and to support the goal of the HCP Preserve System. Activities related to SCE's O&M of diversion structures associated with hydroelectric facilities where potential future Covered Species fish populations may be established through translocation as part of the HCP Conservation Strategy are also Covered Activities. The focus of construction impacts for the Proposed Project involves habitat improvement, management and monitoring activities to support the goals of the HCP Preserve System. A detailed description of the Covered Activities is provided in Chapter 2, *Covered Activities*, of the Upper SAR HCP including the size and location of the affected area, frequency of activity, and the type and intensity of impact.

Most actions undertaken directly by a Permittee would comply with and be covered by the Upper SAR HCP and its related permits by complying with the conditions of approval (conditions on Covered Activities) and with other relevant requirements. Mandatory conditions on the Covered

Activities are necessary to meet State and Federal permit issuance criteria, to help meet the regional conservation goals and to assist Permittees in meeting their funding obligations.

The Permittees are seeking a 50-year ITP, which would accommodate the expected schedule for construction of projects in the Permit Area and ongoing associated O&M. The permit term for the ITP for SCE will be independent of that of the other Permittees' ITP. SCE operates and maintains hydroelectric facilities in accordance with three 30-year licenses issued by the Federal Energy Regulatory Commission in 2003, and the SCE ITP permit term may be established to coincide with the Federal Energy Regulatory Commission relicensing cycles.

Upper SAR HCP implementation has been separated into phases to ensure that the conservation actions and associated mitigation are able to stay ahead of the impacts of Covered Activities. The HCP conservation actions and mitigation as well as Covered Activity implementation are grouped into four phases: Phase 1 (years 0–5), Phase 2 (years 6–10), Phase 3 (years 11–15) and Phase 4 (years >15).

## ES.9 Relationship Between the Proposed Project and Covered Activities

The Proposed Project is the focus of the analyses in this EIR and is intended to support the decision to authorize ITPs for impacts on Covered Species potentially resulting from implementation of Covered Activities. As described in Chapter 1, the implementation of the individual Covered Activities will be separate actions, carried out by the Permittees, each requiring independent environmental review and analysis, and separate and independent approval (Section 1.3.3, *Intended Uses of this EIR*). Potential environmental effects of the Covered Activities are discussed in this EIR for informational purposes and to provide context for the Proposed Project and alternatives analyses. This Proposed Project is not intended to provide incidental take authorization or any other approval for activities not identified as Covered Activities.

Issuance of permits by USFWS and CDFW (the Wildlife Agencies) would provide compliance with the FESA and CESA for Covered Species. Approval of the proposed HCP would not confer or imply approval to implement the Covered Activities. All Covered Activities would be subject to the approval authority of one or more of the Permittees with jurisdiction over such projects, and the Alliance. Future Covered Activity environmental analyses may use portions of this EIR to support project-specific findings as described in Chapter 1, Section 1.3.3, *Intended Uses of this EIR*.

## ES.10 Summary of Impacts

Table ES-2 presents a summary of the impacts and mitigation measures identified for the Proposed Project. The complete impact statements and mitigation measures are presented in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*. The level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate sections of Chapter 3. Significant impacts are those adverse environmental impacts that meet or exceed the significance thresholds; less-than-significant impacts would not exceed the thresholds.



Table ES-2 indicates the measures that will avoid, minimize, or otherwise reduce significant impacts to a less-than-significant level. As stated in Chapter 1, *Introduction*, this Draft EIR evaluates the impacts of the Proposed Project. The analysis in Chapter 3 provides conclusion statements and mitigation, as applicable. However, for Table ES-2, the impact summary includes the worst-case level of impact and specific project impacts have been noted accordingly.

**Table ES-2. Summary of Impacts and Mitigation Measures**

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Aesthetics			
<p><b>Impact AES-1: Have a substantial adverse effect on a scenic vista.</b> Construction and operations activities could be visible in scenic vista views. However, Proposed Project activities would be temporary and public views of these sites post-construction would include views of restored native habitat with infrequent maintenance activities. Because potential effects on scenic vistas would be temporary, and implementing the Upper SAR HCP would result in improvements to Covered Species habitat, the potential for substantial adverse effects on scenic vistas from construction, management, and operational activities is extremely low. Furthermore, habitat improvement would likely result in beneficial impacts such as the restoration of degraded riparian habitat to increase habitat value for native fish, wildlife, and plant species. In addition, Conservation Areas would increase the amount of native vegetative communities that attract wildlife, thus helping to improve the visual quality and visual diversity of the restoration area.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway.</b> For Conservation Areas, temporary changes to the visual environment could also result from vegetation removal that could be noticeable to travelers along these routes, especially as restoration work is in process and vegetation growth is pending. Construction activities could occur over several years but would be dispersed across the large Planning Area. However, Conservation Areas would be in a transitional state over a period of one to several years, until plant species mature and</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>vegetation recolonizes the sites. In addition, restored sites would increase the amount of native vegetative communities that attract wildlife, thus helping to improve the visual quality and visual diversity of the Conservation Area. Post-construction, changes associated with restoration activities would not affect the visual quality within scenic highway corridors and would not result in significant impacts. Management and maintenance activities would be short term and maintain the visual character of the sites, and would not act to further change the visual quality or character of the sites or surrounding visual landscape during operations.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact AES-3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings, including scenic vistas? (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.</b> Even though the Proposed Project could result in temporary impacts due to construction and maintenance of Conservation Areas within the Planning Area, the Proposed Project would not have a substantial adverse effect on visual character and quality due to the short-term nature of Proposed Project improvements and the activities being dispersed across a large Permit Area over the entire 50-year Permit term. In the long term, construction, maintenance, and management activities of the Proposed Project, specifically at Conservation Areas, would improve visual character and quality and scenic vistas by improving site conditions as compared to the existing condition. The Proposed Project would not substantially degrade the existing setting associated with the restoration and/or rehabilitation of Conservation Areas, and the visual</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>quality of sites may be improved with Proposed Project implementation. Furthermore, the Proposed Project would not conflict with applicable zoning and other regulations governing scenic quality, as enhancements are being proposed.</p>	No impact	No mitigation is required.	No impact
<p><b>Impact AES-4: Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.</b> The Proposed Project would not install any lighting, nor would the Proposed Project require construction lighting because all work would be conducted during daylight hours. Furthermore, no glare would be produced because there would be no reflective surfaces proposed as part of the Proposed Project.</p>	No impact	No mitigation is required.	No impact
Agricultural and Forestry Resources			
<p><b>Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.</b> The Proposed Project would result in the conversion of less than 0.1 acre of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance that is within the HCP Preserve System through habitat improvement (restoration and/or rehabilitation) and conservation.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact AG-2: Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract.</b> As no Williamson Act lands occur in the HCP Preserve System, there would be no impact related to a conflict with a Williamson Act contract. However, implementation of the Proposed Project could have an impact on lands zoned for agricultural use. The Proposed Project could result in the conversion of some land</p>	No impact	No mitigation is required.	No impact

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>currently zoned for agricultural uses to non-agricultural uses. However, the Proposed Project’s Conservation Strategy was developed with the intent of allowing habitat improvement and preservation to occur without precluding existing agricultural uses. Under the Proposed Project, lands currently zoned for agriculture may be purchased through conservation easement or in fee title, or donated in lieu of payment, for conservation purposes. Preservation of lands under an easement within areas zoned for agricultural use would not conflict with the permitted uses of agriculturally zoned lands.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact AG-3: 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)).</b>                      There are no active timberland operations within the Permit Area. The Proposed Project would not require rezoning of forest lands and would include permanent protection of forest land for Covered Species conservation and habitat improvement.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use.</b>                      Implementation of the Proposed Project could result in the conservation of forest land; no conversion of forest land to non-forest use would occur. Approximately 145 acres of forest land could be affected by implementation of the Proposed Project; however, these areas would be within the Conservation Areas of the HCP Preserve System and would not be lost or converted to other uses.</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>agricultural use or conversion of forest land to non-forest use.</b> The Proposed Project could result in other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use; however, no conflict with, or loss or conversion of, forest land to non-forest use is anticipated. The Proposed Project could result in the acquisition of lands that could be located adjacent to farmland and could potentially result in indirect conversion of those adjacent farmlands if restrictions on adjacent farmlands affected the commercial viability of agricultural operations. The Proposed Project would not restrict existing agricultural uses on adjacent properties, nor would it prohibit or restrict activities essential to irrigation, pest control, equipment operation, cultivation, or the raising of farm animals on adjacent properties.</p>			
Air Quality			
<p><b>Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.</b> Emissions from the Proposed Project are expected to be similar to those of other restoration projects associated with the preserve area and could exceed thresholds adopted by the South Coast Air Quality Management District (SCAQMD) and Mojave Desert Air Quality Management District (MDAQMD) and cause or contribute to a violation of ambient air quality standards, which may delay regional attainment goals. Although implementation of mitigation would reduce emissions, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable. Accordingly, the Proposed Project may not be consistent with applicable SCAQMD, MDAQMD and Southern California Association of Governments thresholds, rules, and policies.</p>	<p>Significant and unavoidable</p>	<p><b>AQ-1: Apply Dust Control Measures During Construction</b>                      Grading can generate fugitive dust, including PM<sub>10</sub> and PM<sub>2.5</sub>. Proposed Project activities that involve site grading, excavation, or substantial material movement, likely associated with restoration, shall implement the following dust control measures during construction, as applicable, in compliance with applicable air district rules and regulations, including SCAQMD Rules 403, 474, and 1401–1472 and MDAQMD Rules 403.2 and 404.</p> <ul style="list-style-type: none"> <li>• Water the grading areas a minimum of twice daily to minimize fugitive dust.</li> <li>• Stabilize graded areas as quickly as possible to minimize fugitive dust.</li> <li>• Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.</li> </ul>	<p>Significant and unavoidable</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>● Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.</li> <li>● Remove any visible track-out into traveled public streets within 30 minutes of occurrence.</li> <li>● Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.</li> <li>● Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.</li> <li>● Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.</li> <li>● Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 miles per hour.</li> <li>● Cover/water onsite stockpiles of excavated material.</li> <li>● Enforce a 15-mile-per-hour speed limit on unpaved surfaces.</li> <li>● On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather.</li> <li>● Hydroseed, landscape, or develop as quickly as possible all disturbed areas and as directed by the applicable air district.</li> <li>● Limit the daily grading volumes/area.</li> </ul>	
		<p><b>AQ-2: Reduce Equipment and Vehicle Exhaust Emissions During Construction and Operation</b></p> <p>Construction of restoration projects may require equipment such as bulldozers, graders, loaders, scrapers, backhoes, and heavy trucks. Management and maintenance activities include periodic vegetation management, vector control consistent with avoidance and minimization measures, facility painting and upkeep,</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable Federal or State ambient air quality standard.</b> Implementation of mitigation would reduce emissions associated with the Proposed Project.</p>	<p>Significant and unavoidable</p>	<p>and excavations; and require haul trucks and some off-road equipment, such as backhoes or chainsaws. Habitat improvement activities shall be conducted utilizing clean-diesel, alternative fuel or other engine controls to reduce equipment and vehicle exhaust emissions during construction. Furthermore, the following control measures, as applicable, shall be implemented to reduce equipment and exhaust related emissions.</p> <ul style="list-style-type: none"> <li>• Require equipment to be maintained in good tune and to reduce excessive idling time.</li> <li>• Utilize alternative fuels, such as compressed natural gas, renewable diesel, and diesel.</li> <li>• Require the use of equipment that meets EPA Tier 4 or higher (as promulgated) emission standards.</li> <li>• Require older equipment be retrofitted with advanced engine controls, such as diesel particulate filters, selective catalytic reduction, or cooled exhaust gas recirculation.</li> </ul> <p><b>AQ-3: Evaluate Feasibility of Offsets After All Feasible Mitigation Has Been Applied for Proposed Project Activities</b></p> <p>Should impacts remain significant following the implementation of all feasible onsite mitigation (as described under Mitigation Measures AQ-1 and AQ-2), further evaluation of the feasibility of offsets as a project-specific mitigation measure shall be done by the Permittees. Offsets may include procurements through local air district incentive programs.</p> <p>Mitigation Measures AQ-1, AQ-2, and AQ-3</p>	<p>Significant and unavoidable</p>



Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>However, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable. As such, emissions levels from the Proposed Project are anticipated to contribute a significant level of air pollution such that regional and local air quality would be degraded.</p>	<p>Significant and unavoidable</p>	<p>Mitigation Measures AQ-2 and AQ-3</p>	<p>Significant and unavoidable</p>
<p><b>Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations.</b> Construction of the Proposed Project is not anticipated to result in localized violations of the health-protective State or Federal Ambient Air Quality Standards, and, as such, would not expose sensitive receptors to significant pollutant concentrations or health effects. However, management and maintenance activities could potentially result in health risks exceeding thresholds and expose sensitive receptors to significant pollutant concentrations or health effects. Implementation of mitigation would reduce emissions and associated health risks during management and maintenance activities. However, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable.</p>	<p>Significant and unavoidable</p>	<p>Mitigation Measures AQ-2 and AQ-3</p>	<p>Significant and unavoidable</p>
<p><b>Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</b> The Conservation Area sites are composed of primarily well-aerated sandy and gravel soils. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions. Accordingly, construction activities would not result in nuisance odors. Maintenance activities may result in minor equipment-based odors, but these would occur</p>	<p>Less than significant</p>	<p>No mitigation is required.</p>	<p>Less than significant</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
infrequently throughout the year and would dissipate rapidly.			
Biological Resources			
<p><b>Impact BIO-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive, or Special-Status Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service: Impacts on Group 1 HCP Covered Species and Habitat due to Implementation of HCP.</b></p> <p>Impacts on Group 1 Covered Species from implementation of the Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) would be beneficial. Impacts on Group 1 Covered Species from implementation of Restoration Activities would be reduced to less-than-significant levels with implementation of Conservation Strategy AMMs.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact BIO-2: 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: Impacts on Group 2 HCP Covered Species and Habitat due to Implementation of HCP.</b></p> <p>Impacts on Group 2 Covered Species from implementation of Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) would be beneficial. Impacts on Group 2 Covered Species from implementation of Restoration Activities would be reduced to less-than-significant levels with implementation of Conservation Strategy AMMs.</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Impact BIO-3: 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: Impacts on Group 3 HCP Covered Species and Habitat due to Implementation of HCP.</b>                      Restoration activities associated with the Conservation Strategy are anticipated to benefit aquatic habitat for Santa Ana sucker through quality enhancements compared with existing conditions. Furthermore, AMMs for Santa Ana sucker will be implemented, and the HCP’s Up-Front and Stay-Ahead Provisions will require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. However, given the threatened status of the species and consideration of the species current limited distribution within the Santa Ana River, for the purposes of this CEQA analysis, the potential impact on Santa Ana sucker is conservatively found to be significant and unavoidable. The EIR reaches this conclusion because, although the Conservation Strategy is designed and expected to result in a net beneficial effect on Santa Ana Sucker, it cannot be concluded with complete confidence that all of the proposed conservation measures (e.g., translocation) will necessarily achieve their intended result.</p>	<p>Significant and unavoidable</p>	<p>No mitigation is available.</p>	
<p><b>Impact BIO-4: 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</b></p>	<p>Significant</p>	<p><b>BIO-1: Conduct Pre-activity Surveys to Document the Presence of Non-Covered Special-Status Plant Populations</b>                      The Alliance shall retain a qualified botanist to document the presence or absence of non-covered special-status plant species within the Preserves. Surveys for non-</p>	<p>Less than significant</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Wildlife Service: Impacts on Non-HCP Covered Species and Habitat.</b> The net effect of the issuance of the ITPs and implementation of the HCP conservation measures would be an overall beneficial effect on non-covered special-status plant and wildlife species during the Permit Term. Ground-disturbing activities associated with habitat improvement activities within the Preserve System could result in the injury or death of non-covered special-status wildlife species. However, implementation of AMMs and mitigation measures would reduce impacts to less-than-significant levels.</p>		<p>covered special-status plant would be conducted prior to the commencement of restoration activities to determine the presence, location, and extent of any populations of non-covered special-status plant species. If non-covered special-status plants are found, the population would be incorporated into the project or restoration design to avoid, to the extent feasible, direct or indirect impacts on those species. Special-status plant populations near habitat improvement activities shall be protected by installing environmentally sensitive area fencing around the populations.</p> <p><b>BIO-2: Conduct Pre-activity Surveys to Document the Presence of Non-Covered Special-Status Amphibians and Reptiles</b></p> <p>Prior to conducting any ground-disturbing activities associated with the habitat improvement, the Alliance shall conduct pre-activity surveys for special-status amphibian and reptile species. If special-status species are observed within areas that will be disturbed, they will be encouraged to move out of those areas or will be captured and relocated to suitable habitat outside of disturbance areas. A qualified biologist shall be present during ground-disturbing activities to ensure that special-status amphibian and reptile species are not adversely affected.</p> <p><b>BIO-3. Conduct Pre-activity Surveys to Document the Presence of Bat Maternity and Hibernation Roosts</b></p> <p>Prior to ground-disturbing activities associated with habitat improvement activities (including vegetation removal) within suitable habitat for bat species, the Alliance shall retain a qualified biologist to conduct a bat roost assessment to determine whether bat maternity roosts or hibernation roosts are likely to occur. Any locations identified as suitable bat roosting habitat shall be subject to additional nighttime surveys during the</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>summer months (i.e., June–August) to determine roosting. Surveys will be conducted using a combination of visual inspection, exit counts, and acoustic surveys. If no maternity or hibernation roosts are detected, no further mitigation is required. If bats are found using vegetation subject to potential impacts, the species of bat(s) and number of bats will be determined.</p> <p>If impacts on maternity roosts or hibernation roosts are likely, the following mitigation options are available:</p> <ul style="list-style-type: none"> <li>● Habitat improvement activities involving vegetation removal shall occur in September through early November, after the breeding season and before the bat hibernation season. Furthermore, trees identified as suitable bat roost sites shall be removed using a two-step process that occurs over a 2-day period. On day one, branches and limbs that do not contain crevices or cavities shall be removed using hand tools or chainsaws. On day two, the remainder of the tree may be removed.</li> <li>● A qualified biologist shall conduct a survey to determine presence of bats within maternity or hibernation roosts. If no roosting bats are found, no further mitigation is required. If bats are detected, a 50-foot exclusion zone shall be established around the occupied roost until roosting activities have ceased. The identified two-step process will be implemented where trees need to be removed/affected.</li> </ul> <p><b>BIO-4: Conduct Pre-activity Surveys to Document Presence of San Diego Desert Woodrats</b></p> <p>Within suitable habitat for the San Diego desert woodrat, the Alliance shall retain a qualified biologist to conduct surveys for San Diego desert woodrat not more than 30 days prior to the start of ground-disturbing activities</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>(including vegetation removal). All San Diego desert woodrat nests shall be mapped and flagged for avoidance. Graphics depicting the location of all San Diego desert woodrat nests shall be provided to the Alliance to determine if those nests would be affected by habitat improvement activities. Any San Diego desert woodrat nests that cannot be avoided shall be relocated according to the following procedures.</p> <ul style="list-style-type: none"> <li>Each active nest shall be disturbed by the qualified biologist to the degree that San Diego desert woodrats leave the nest and seek refuge elsewhere. After the nests have been disturbed, the nest sticks shall be removed from the impact areas and placed outside of areas planned for impacts. Nests shall be dismantled during the non-breeding season (between October 1 and December 31), if possible. If a litter of young is found or suspected, nest material shall be replaced and the nest left alone for 2–3 weeks; after this time, the nest will be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling.</li> </ul> <p><b>BIO-5: Conduct Pre-activity Surveys to Document the Presence of American Badger</b></p> <p>Within suitable habitat for the American badger, the Alliance shall retain a qualified biologist to conduct focused preconstruction surveys for potential American badger dens within areas where ground-disturbing activities will occur no more than 2 weeks prior to the initiation of those ground-disturbing activities (including vegetation removal) associated with habitat improvement activities. If no potential American badger dens are present, no further mitigation is required. If potential dens are within disturbance areas, the following measures shall be required to avoid impacts on American badgers:</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Impact BIO-5: 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.</b>                      Implementation of the Proposed Project would have significant impacts on riparian habitats from the permanent loss of riparian woodlands. However, the net effect of the Proposed Project will be an overall beneficial effect on riparian woodlands because the Proposed Project would require the establishment of the HCP Preserve System, which would conserve 208.3 acres of new riparian woodlands and restore and enhance 216 acres of additional riparian woodlands. Additionally, implementing AMMs in the Conservation Strategy, general BMPs, and a Stormwater Pollution Prevention Plan (SWPPP) and erosion control plan would also</p>	<p>Less than significant</p>	<p>No mitigation is required.</p>	<p>Less than significant</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>reduce direct and indirect effects. Together, the preservation and improvement of riparian woodlands and implementation of Conservation Strategy AMMs would reduce these impacts to less-than-significant levels.</p>			
<p><b>Impact BIO-6: Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means.</b>                      Implementation of the Proposed Project could have significant impacts from the permanent loss of wetlands and other waters. However, the net effect of the Proposed Project will be an overall beneficial effect on wetlands and other waters because the Proposed Project would require the establishment of the HCP Preserve System, which would conserve 39.0 acres of new wetland habitats and 37.8 acres of permanent water and improve 54 acres of additional wetlands. Additionally, implementing AMMs in the Conservation Strategy, general BMPs, and a SWPPP and erosion control plan would also reduce direct and indirect effects. Together, the preservation and restoration of wetlands and implementation of Conservation Strategy AMMs would reduce these impacts to less-than-significant levels.</p>	<p>Less than significant</p>	<p>No mitigation is required.</p>	<p>Less than significant</p>
<p><b>Impact BIO-7: 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.</b> The net effect of the Proposed Project would be an overall beneficial effect on Covered Species and other special-status species because the Proposed Project would require the establishment of the HCP Preserve System, which would prioritize the conservation and long-term management of a landscape</p>	<p>Beneficial</p>	<p>No mitigation is required.</p>	<p>Beneficial</p>



Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>of natural land cover types that will create, restore and/or rehabilitate, to the greatest extent practicable, migration corridors for Covered Species or other special-status species. The conserved lands planned for inclusion in the HCP Preserve System would generally be continuous with existing open spaces and protected areas within the Plan Area, thus enhancing their benefits for wildlife movement.</p>		<p>No mitigation is required.</p>	<p>Beneficial</p>
<p><b>Impact BIO-8: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</b> The net effect of the Proposed Project will be an overall beneficial effect on Covered Species, other special-status species, and natural vegetation because the Proposed Project would require the establishment of the HCP Preserve System as well as AMMs and compliance with applicable local tree policies and/or ordinances.</p>	<p>Beneficial</p>	<p>No mitigation is required.</p>	<p>Beneficial</p>
<p><b>Impact BIO-9: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan.</b> Because the specific details are not known at this time for some activities, the exact impacts on Conservation Areas for the WRC MSHCP/NCCP, Upper Santa Ana River Wash HCP, SKR HCP, Lake Mathews HCP, and West Valley HCP resulting from construction and O&amp;M activities cannot be predicted. Quantitative analysis of the exact areas, acreages, and protected resources under the HCPs that could be affected by each activity will be performed at a project-by-project level basis during the independent environmental review process. Implementation of the Covered Activities, including the Conservation Strategy, could have significant impacts related to temporary and permanent loss of areas within established HCPs. However, the net effect of the Proposed Project (issuance</p>	<p>Less than significant</p>	<p><b>BIO-6: Conduct Impact Analysis to Ensure that Activities Do Not Conflict with the Provisions, Goals, and Objectives of Other HCPs within the Permit Area</b>                      Permittees with Covered Activities proposed in other HCPs within the Permit Area (i.e., Wash Plan HCP, Lake Mathews MSHCP, WRC MSHCP, SKR HCP, West Valley HCP) shall conduct an impact analysis as part of the environmental review process on a project-by-project basis prior to implementation. Should an activity impact any designated conservation lands under one of these HCPs, then a mitigation plan will be developed to ensure no net loss of HCP conservation lands. Compensation for the permanent loss of conservation lands would be accomplished through the acquisition of replacement lands at a minimum 1:1 ratio. These lands will provide equivalent or greater habitat value and be located adjacent to the existing HCP conservation lands.</p>	<p>Less than significant</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>of the ITPs and implementation of the HCP conservation measures) would be an overall beneficial effect on Covered Species and other special-status species through the establishment of the HCP Preserve System. Additionally, implementation of AMMs under the Conservation Strategy as well as Mitigation Measures BIO-6 and BIO-7 would reduce the impacts to less-than-significant levels with mitigation.</p>		<p>Restoration of temporary impact areas on HCP conservation lands will be accomplished through on-site restoration of those temporarily affected areas, including the development of a Habitat Mitigation and Monitoring Plan. The mitigation plan would be developed in consultation with the applicable HCP reserve managers and policy authorities (i.e., WRCRCA, Lake Mathews Reserve Management Committee, RCHCA, Conservation District, Riverside Land Conservancy), USFWS, and CDFW to ensure that the activity does not conflict with the provisions, goals, and objectives of the HCP and that the mitigation plan will offset any losses and is biologically equivalent.</p> <p><b>BIO-7: Comply with Policies, Goals, Objectives, and Conservation Measures of Other HCPs Located within the Permit Area</b></p> <p>Any activity that occurs within the boundaries of another HCP located within the Permit Area (i.e., Wash Plan HCP, Lake Mathews MSHCP, WRC MSHCP, SKR HCP, West Valley HCP) shall comply and be consistent with the policies, goals, objectives, and conservation measures of that plan to the maximum extent feasible.</p>	
Cultural Resources			
<p><b>Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.</b> The Proposed Project would result in a less-than-significant impact on historical resources because the potential for construction and management and maintenance activities to affect a historic structure in the Permit Area is low.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.</b> Proposed Project impacts in the Permit Area could potentially be significant</p>	Less than significant	<p><b>CR-1: Establish Environmentally Sensitive Areas</b></p> <p>Avoidance is the preferred method of treatment for archaeological sites. Preservation in place of archaeological materials maintains the critical</p>	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>because ground-disturbing construction activities could demolish or damage unknown or unrecorded archaeological resources resulting in a substantial adverse change to their significance. Such demolition, damage, or relocation could result in an adverse change to their significance, which would be a significant impact. There is a strong likelihood that additional unrecorded NRHP- or CRHR-eligible archaeological resources exist within the Permit Area. Until the lands have been completely inventoried and the resources located and evaluated for their potential NRHP and CRHR eligibility, it must be assumed that archaeological resources may be present and that they may be eligible for inclusion in the NRHP and CRHR.</p>		<p>relationship between artifacts and their archaeological context. Additionally, should sacred objects or objects of religious importance to Native American groups be identified, preservation in place avoids conflicts with traditional values of groups who ascribe meaning to these resources. Impacts on unevaluated and/or eligible cultural resources that could be affected in the Permit Area by conservation and restoration activities, and HCP Preserve System management and monitoring activities can be avoided through establishing fencing around cultural resources with a buffer and delineating these locations as Environmentally Sensitive Areas (ESAs). Worker training should include language to the effect that ESAs must be avoided and cannot be entered on foot or with heavy equipment. Signage indicating the fenced area is an ESA is recommended.</p> <p><b>CR-2: Retain a Qualified Archaeologist</b>                      All conservation and restoration and any HCP Preserve System management and monitoring activity that involves ground disturbance in the Permit Area shall require that a qualified archaeologist, defined as a person who meets the Secretary of the Interior’s Professional Qualifications Standards for an archaeologist, carry out all mitigation measures related to archaeological resources to determine project-specific archaeological resources impacts. The qualified person shall work under the direction of a qualified Principal Investigator.</p> <p><b>CR-3: Conduct Archaeological Assessment</b>                      An archaeological assessment shall be prepared for all ground-disturbing activities related to conservation and restoration and HCP Preserve System management and monitoring activities in the Permit Area to ensure that construction would not result in significant impacts on</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>archaeological resources. This assessment will outline the following.</p> <ul style="list-style-type: none"> <li>● Environmental and cultural background for the Permit Area</li> <li>● Previously identified archaeological resources and studies within the construction area</li> <li>● Archaeological sensitivity for buried archaeological sites</li> <li>● Determination of whether further work is necessary (i.e., treatment plan or archaeological monitoring)</li> <li>● Unanticipated Discovery protocol</li> </ul> <p><b>CR-4: Provide Archaeological and Native American Monitoring</b></p> <p>As a standard measure for construction of any project activity in the Permit Area, if avoidance is not feasible for any impact involving project activities, and project-related ground disturbance is anticipated to occur at archaeological sites identified above, an archaeologist shall be present to monitor the activity. If ground-disturbing activities are to proceed at prehistoric archaeological sites, a Native American monitor shall be retained in addition to an archaeological monitor. Prior to the commencement of fieldwork, an Archaeological Monitoring Plan (AMP) shall be developed to guide archaeological monitoring work during ground-disturbing activities. The AMP shall detail and emphasize training for construction workers and qualifications necessary for archaeological monitors. The AMP shall also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP shall include roles and responsibilities for cultural resources staff and contact information for the Archaeological Principal Investigator,</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>archaeological and Native American monitors, and appropriate management staff.</p> <p>The AMP shall detail monitoring procedures, discovery protocols, general procedures for documenting and recovering archaeological materials, artifact identification, repository institution identification, associated repository fees, guidelines for preparing the archaeological monitoring, and mitigation final report. The AMP shall also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present. The AMP shall require attendance at a preconstruction meeting led by a Qualified Principal Investigator/Project Archaeologist. The Qualified Principal Investigator/Project Archaeologist will explain the likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (who to call, construction diversion away from the find, etc.). The AMP shall include an example proposed letter regarding donating salvaged materials to an appropriate museum curation facility, an example daily monitoring report form, and all other pertinent archaeological resources recordation and analysis forms.</p> <p>The Native American monitor should be affiliated with a local Native American tribe. If project-related ground-disturbing activities in archaeologically sensitive areas are performed simultaneously in more than one location, and these activities are performed at a distance greater than 300 feet apart, an archaeological monitor shall be present at each location. At a minimum, the archaeological monitor will meet the Society for California Archaeology professional qualification standards for an archaeological crew leader, and will work under the direction of an individual that meets the</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>Secretary of the Interior’s Standards and Guidelines for Archaeology and the Society for California professional qualification standards for a Principal Investigator.</p> <p>The archaeological monitor will have the authority to temporarily pause excavations, as needed, to examine potential archaeological discoveries, and to discuss these discoveries and mitigation measures with the Principal Investigator. In the event of an unanticipated discovery of archaeological resources or human remains, the archaeological monitor will follow the unanticipated discovery protocols described below.</p> <p><b>CR-5: Temporarily Halt Construction Activities for any Unanticipated Discoveries</b></p> <p>As a standard measure for construction of any project activities, if an isolated artifact or archaeological deposit is discovered during construction that requires salvaging, the qualified archaeologist shall have the authority to temporarily halt construction activities within 50 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system device. If the find is prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest and concern regarding the project shall be undertaken.</p> <p>If the discovery is determined to be not eligible for inclusion in the NRHP or CRHR in consultation with the lead agency, work will be permitted to continue in the area. If, in consultation with the lead agency, a discovery is determined to be significant, a mitigation plan shall be prepared and carried out in accordance with State and Federal guidelines. If the resource cannot be avoided, a data recovery plan shall be developed to ensure collection of sufficient information to address archaeological and historical research questions, with results presented in a technical report describing field</p>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>methods, materials collected, and conclusions. The qualified archaeologist shall treat recovered items in accordance with current professional standards by properly proveniencing, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior’s Standards as promulgated in 36 CFR 79.</p> <p>To reduce potential impacts on archaeological resources, all proposed grading and excavating for the Proposed Project in the area of potential archaeological sensitivity shall be monitored by a qualified archaeologist(s), who meets the Secretary of the Interior’s Professional Qualifications Standards as promulgated in 36 CFR 61, and a Native American cultural monitor (for prehistoric sites or sites of Native American origin). The following conditions shall apply to excavation work at archaeological sites identified.</p> <ol style="list-style-type: none"> <li>1. The Qualified Archaeologist shall participate in a preconstruction meeting to inform all personnel of the potential for historical archaeological materials to be encountered during ground-disturbing activities.</li> <li>2. If an isolated artifact or historic period deposit is discovered that requires salvaging, the qualified archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system device, and until a Qualified Archaeologist Principal Investigator makes a determination regarding the significance of the resource.</li> <li>3. If a potentially eligible Native American archaeological resource is discovered, the qualified archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find</li> </ol>	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>until a Qualified Archaeologist Principal Investigator makes a determination regarding the significance of the resource.</p>	
		<p>4. The Principal Investigator will notify the lead agency to discuss the significance determination and shall also submit a letter indicating whether additional mitigation is required. If the resource is determined to be not significant, the Principal Investigator shall submit a letter to the lead agency indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.</p>	
		<p>5. If the resource is determined to be significant, the Principal Investigator shall submit an Archaeological Data Recovery Plan that has been reviewed by the Native American consultant/monitor, and obtain written approval from the lead agency to complete data recovery. Impacts on significant resources must be mitigated before ground-disturbing activities in the area of discovery will be allowed to resume.</p>	
		<p>6. The qualified archaeologist shall treat recovered items in accordance with current professional standards by properly determining provenance, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior’s Standards, as promulgated in 36 CFR 79.</p>	
		<p>7. Within 60 days after completion of the ground-disturbing activity, the qualified archaeologist shall prepare and submit a final report to the lead agency for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting</p>	



Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries.</b> Proposed Project impacts in the Permit Area could potentially be significant because ground-disturbing construction activities could unearth, expose, or disturb unknown or unrecorded human remains. Monitoring, management, and maintenance activities under the Proposed Project that could affect unanticipated human remains include installation and maintenance access control features (e.g., gates, barriers, and fences), and vegetation management using sheep grazing, manual labor, or prescribed burning. There is also a potential for ground disturbance from construction equipment use to affect human remains.</p>	Significant	<p>to the extent feasible each item’s class, material, function, and origin.</p> <p><b>CR-6: Human Remains and Associated or Unassociated Funerary Objects</b></p> <p>As a standard measure for construction of any restoration project in the Permit Area, if human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <ol style="list-style-type: none"> <li>1. The county coroner (for either Riverside or San Bernardino County) has been informed and has determined that investigation of the cause of death is required; and</li> <li>2. If the remains are of Native American origin:               <ol style="list-style-type: none"> <li>a. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98; or</li> <li>b. The NAHC was unable to identify a descendent or the descendent failed to make a recommendation within 24 hours after being notified by the commission.</li> </ol> </li> </ol> <p>According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that excavation be stopped in the vicinity of the discovered human remains until the coroner can determine whether the remains are those of a Native American.</p>	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Geology, Soils, and Paleontological Resources			
<p><b>Impact GEO-1: Directly or indirectly cause potential substantial adverse effects including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42); (ii) strong seismic ground shaking; (iii) seismic-related ground failure including liquefaction; (iv) landslides.</b> Under the Proposed Project, geology and soils impacts could result from conservation and restoration actions needed to implement the Conservation Strategy. Disturbance of soils and geologic conditions could occur when construction equipment is used that exposes soils for habitat improvement, maintenance, and management. However, management, monitoring, and maintenance activities that could disturb soils and create unstable geologic conditions would occur intermittently and infrequently for habitat management and maintenance. Habitat restoration and construction of in-stream structures may occur more regularly or require the use of more equipment. Impacts related to the risk of loss, injury, or death involving geologic hazards would be less than significant because of the relatively minor nature of Proposed Project construction and the low potential for hazards being encountered during habitat improvement projects.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact GEO-2: Result in substantial soil erosion or the loss of topsoil.</b> Under the Proposed Project, construction, habitat improvement, and monitoring, management, and maintenance activities could be located in areas where the soil has not been previously</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>disturbed, depending on soil resources present, and there is potential for loss of topsoil associated with ground-disturbing activities. The impact on topsoil resources in areas of previously undisturbed topsoil would be reduced through topsoil salvage BMPs included in the HCP.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.</b> unstable soils exist in the Permit Area. Under the Proposed Project construction, habitat improvement, and monitoring, management, and maintenance activities would involve actions that could destabilize the ground by placing new loads on soils that are vulnerable to hydroconsolidation or through construction dewatering that could result in localized subsidence. However, only minor structures are proposed as part of the Proposed Project, and they would utilize mostly natural materials in natural settings to enhance habitats, which are not anticipated to cause or exacerbate unstable soils in the Permit Area. The Proposed Project could be subjected to geologic hazards, such as strong ground shaking during an earthquake. However, the Proposed Project would not cause or exacerbate geologic hazards. In addition, Proposed Project implementation would be required to comply with geologic hazard and construction design standards, which reduces the potential for soil hydroconsolidation, subsidence, or collapse. Because of the minor nature of habitat improvement activities and other actions and application of standard geologic hazard and design measures at construction sites, soil stability impacts associated with the Proposed Project would be less than significant.</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Impact GEO-4: 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.</b> Some soils in the Planning Area are moderately to highly expansive. However, Proposed Project construction, habitat improvement, monitoring, management, and maintenance activities needed for the Conservation Strategy are not anticipated to involve structures that could exacerbate expansive soils by placing rigid structures on soils that undergo expansion and contraction when soil moisture content varies. In addition, the Proposed Project would be required to comply with requirements to reduce the potential for effects from expansive soils and adhere to all established design standards.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact GEO-5: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.</b> Geologic units known to contain fossils occur in the Permit Area. Under the Proposed Project, construction, habitat improvement, monitoring, management, and maintenance activities could disturb significant paleontological resources, particularly during activities that involve grading and excavation associated with habitat improvement and management. Such ground-disturbing activities could disturb previously undisturbed geologic units with high paleontological sensitivity, which could be exposed at ground surface or occur below ground surface but within the depth disturbed by construction. Depending on where conservation construction activities occur in the Permit Area, impacts on significant paleontological resources could be potentially significant because some portions of the Permit Area have high sensitivity for paleontological resources that could be disturbed by Proposed Project activities.</p>	Significant	<p><b>GEO-1: Monitor for Discovery of Paleontological Resources and Prepare and Follow a Recovery Plan for Found Resources</b></p> <p>Before the start of any excavation in high-sensitivity sites, the Permittees for the Proposed Project shall retain a Qualified Paleontologist, as defined by the SVP, who is experienced in teaching non-specialists. The Qualified Paleontologist shall train construction personnel who are involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils that are likely to be seen during ground disturbance, and proper notification procedures should fossils be encountered. Procedures to be conveyed to workers include halting ground disturbance within 50 feet of any potential fossil find and notifying a Qualified Paleontologist, who will evaluate the significance of the find.</p> <p>The Qualified Paleontologist shall also make periodic visits during earthmoving in high-sensitivity sites to</p>	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		<p>verify that workers are following the established procedures.</p> <p>If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work near the find and notify the Permittees for the Proposed Project. Ground-disturbing work in the affected areas will remain stopped or be diverted to allow recovery of fossil remains in a timely manner. The Permittees shall retain a Qualified Paleontologist to evaluate the resource and prepare a recovery plan in accordance with SVP guidelines (SVP 2010). The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the Permittees to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. The Permittees shall be responsible for ensuring that the Qualified Paleontologist’s recommendations regarding treatment and reporting are implemented.</p>	
Greenhouse Gas Emissions and Energy			
<p><b>Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</b> Construction and management and maintenance activities implemented by the Proposed Project are not anticipated to result in GHG emissions exceeding adopted thresholds. As such, the Proposed Project would not generate GHG emissions that would result in a significant impact.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of</b></p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>reducing the emissions of greenhouse gases.</b> Most GHG emissions generated by the Proposed Project would be short term and would cease once construction is complete. Management, monitoring, and maintenance activities for the Proposed Project in the Permit Area would be long term, but emissions from minor amounts of equipment and vehicles would be generally be limited and infrequent. Declining emission factors associated with vehicles, equipment, and energy would further reduce emissions intensities over time. As the Proposed Project is not anticipated to result in substantial GHG emissions or impede attainment of State or local reduction targets, this impact would be less than significant, and no mitigation is required.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.</b> The Proposed Project may result in a commitment of energy resources in the form of diesel fuel, gasoline, and electricity during construction and operation. However, the Proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of energy with compliance with local general plan policies and plans. Energy consumption during construction and operation would not substantially contribute to an increase in energy consumption or be any different than any other similar restoration, maintenance, or management project, and therefore would not substantially affect local and regional energy supplies or result in wasteful or inefficient use of energy.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact ENG-2: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.</b> The Proposed Project may be affected by the Scoping Plan and CAP measures related to fuel and clean vehicle</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>standards because activities would involve the use of equipment required for construction and maintenance and monitoring activities. These measures would lead to cleaner vehicles and equipment for the Proposed Project activities and thus lower GHG emissions and energy use. Accordingly, the Proposed Project would not conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs or renewable energy or energy efficiencies.</p>			
Hazardous Materials			
<p><b>Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.</b> The transport, use, and disposal of hazardous materials related to impacts from construction of restoration sites and their management and maintenance would result in less-than-significant impacts.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.</b> Implementation of the Proposed Project would result in less-than-significant impacts related to hazardous materials and no mitigation would be required.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.</b> There are approximately two schools within 0.25 mile of a proposed Conservation Area. As such, it is possible that a nearby school could be affected by a specific relatively short-term construction activity in the Permit Area, such as grading, or the release</p>	Significant	<p><b>HAZ-1: Conduct a Database Review and Retain a Hazardous Materials Specialist</b>                      For any activities that would involve ground-disturbing projects within the Permit Area, where substantial amounts of onsite soil or groundwater would be disturbed, such as trenching and excavation, the National Priorities List, Cal/EPA Cortese List, the DTSC EnviroStor database, and the State Water Resources Control Board</p>	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>of fuel, solvents, chemicals, and oils for the operation of construction equipment. The use of such materials would be compliant with applicable regulations intended to prevent the spill or release of hazardous materials. In addition, these potential effects would be addressed by a number of AMMs. Monitoring, management, and maintenance activity procedures would require the use of hazardous materials such as oil and fuel. If these activities were to occur on a property with a historical or ongoing release of hazardous material to the environment, the ground disturbance could expose contamination to the public or the environment within 0.25 mile of a school.</p>		<p>GeoTracker database shall be reviewed by the Permittees prior to commencement of construction. If sites with releases or contamination are discovered during this process, the services of a qualified environmental professional specializing in contamination characterization and remediation shall be retained, and the recommendations from the qualified environmental professional as described in Mitigation Measure HAZ-2 shall be followed.</p> <p><b>HAZ-2: Prepare a Soil Investigation and/or Soil Management Plan</b></p> <p>If sites with releases or contamination are discovered or identified, and the activities would include substantial ground-disturbing activities, a soil investigation shall be conducted by a qualified environmental professional. If contaminated soils are identified, and if deemed necessary by the qualified environmental professional, a soil management plan shall be prepared to address the nature of the onsite contamination and the proper remediation and disposal process, including disposal of contaminated soils in compliance with regulations. Likewise, if contaminated groundwater is identified prior to or during construction, and the project would expose contaminated groundwater to the public or the environment, a groundwater investigation shall be conducted by a qualified environmental professional. If deemed necessary by the qualified environmental professional, a groundwater management plan shall be prepared to address the potential spread of contaminated groundwater.</p>	
<p><b>Impact HAZ-4: 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.</b> The Proposed Project</p>	<p>Significant</p>	<p>Implement Mitigation Measures HAZ-1 and HAZ-2.</p>	<p>Less than significant</p>



Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>would result in a potentially significant impact related to exposure of the public or the environment to contaminated materials as a result of being located on a site on the Cortese List. However, the potential impact would be reduced by the implementation of mitigation measures by screening out potentially contaminated sites, or sites with active hazardous waste facilities, and ensuring the proper characterization and necessary remediation by a qualified environmental professional.</p>	No impact	No mitigation is required.	No impact
<p><b>Impact HAZ-5: For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 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.</b> Construction activities are generally temporary and do not include features that would conflict with the operations of an airport and result in a safety hazard to the general public. The Proposed Project would not include elevated features that could interfere with navigable airspace. No residences are proposed as part of the Proposed Project, so the Proposed Project would not result in a safety hazard for people residing in the Proposed Project area. Site preparation, planting, and maintenance and monitoring activities would have no effect on air traffic patterns. . Therefore, the Proposed Project would not result in a change in air traffic patterns or result in a safety hazard or excessive noise for people working in the Project area.</p>	No impact	No mitigation is required.	No impact
<p><b>Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.</b> None of the habitat improvement, management, maintenance, or monitoring activities would involve modifications to facilities that are critical to emergency response, such as</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>police, fire, and hospital facilities, and the Proposed Project would not impede access to these facilities in an emergency. The Proposed Project would be required to comply with State and Federal regulations related to emergency response, as well as local land use policies, and emergency response plans.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.</b> The risk of the Proposed Project resulting in wildfire is discussed in <i>Impact WF-2</i> and <i>Impact WF-3</i> in Section 3.19, <i>Wildfire</i>. As noted in the assessment of such impacts, the risk is low, and implementation of AMM-24 and AMM-25, which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk.</p>	Less than significant	No mitigation is required.	Less than significant
Hydrology and Water Quality			
<p><b>Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.</b> Because restoration/rehabilitation actions proposed under the Conservation Strategy are intended to improve habitat for Covered Species it is anticipated that the long-term effect of implementing the Proposed Project would be to improve water quality conditions in the Santa Ana River and its tributaries compared to existing conditions because watershed conditions would generally be improved over the permit term. Habitat improvement activities associated with the Proposed Project will include conservation actions to support the reestablishment, restoration, rehabilitation, and long-term management of biological and aquatic resource quantity, quality, and function. These activities are intended to help support and protect listed Covered</p>	Significant and unavoidable	No mitigation is available.	Significant and unavoidable

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>Species in the Permit Area by improving habitat value and function. Routine operations, monitoring, and habitat maintenance activities, including bank stabilization and storm-damage repair, would ultimately improve surface water quality. Bank stabilization would also minimize the potential for erosion and sedimentation in nearby storm drains or surface waters. Even with the proposed stream and habitat improvements in the Upper Santa Ana River, which could potentially have positive effects, reducing streamflow by substantial amounts in some cases would likely result in effects on temperature and potentially water quality constituent concentrations. These potential effects could be partially offset by implementing standard construction-site stormwater BMPs to minimize degradation of water quality associated with erosion, stormwater runoff, or construction-related pollutants as required by AMMs. However, even with implementation of these standard construction measures, surface water quality impacts would likely continue to be significant due to the reduction in flow in the Santa Ana River, and no additional feasible mitigation measures are available to reduce this impact.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.</b> Conservation and habitat improvement activities (restoration and/or rehabilitation) needed to implement the Conservation Strategy would likely have a positive effect on groundwater recharge, supplies, and management conditions in certain creeks in the Permit Area. Creek restoration/rehabilitation at tributary sites would maintain groundwater levels to minimize downwelling and contribute to surface flows, and manage surface water, groundwater, and hydrologic</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>processes to maintain or improve suitable habitat for Covered Species in the watershed. Rehabilitated and restored (including re-established) habitats would allow natural groundwater recharge and infiltration of precipitation into the groundwater basins. Implementation of creek rehabilitation and restoration by the Proposed Project would improve groundwater recharge in the affected creeks. Within the context of the potential groundwater management in the Permit Area, the overall effect of implementing the Proposed Project on groundwater resources would be less than significant because the effect of conservation, rehabilitation, and restoration would be improvements in multiple groundwater basins.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would, (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite; (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.</b> Stream restoration/ rehabilitation would improve habitat for Covered Species in a manner that would reduce the potential for excessive erosion and siltation and would serve to restore and rehabilitate habitats. For example, creek restoration/ rehabilitation at tributary sites could result in improved drainage patterns in streams compared to existing conditions. Restoration/rehabilitation activities would remove dams and channels to restore alluvial processes;</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>create or maintain alluvial or well-drained upland deposits; ensure adequate in-stream flows and groundwater levels; and remove obstructions, such as levees and clear-out culverts, as needed to retain stream flow, allow river-channel meandering, and reduce sedimentation. Ultimately, creek restoration would rehabilitate and restore suitable habitat characteristics and improve drainage patterns within the Permit Area. Long-term monitoring and management activities would maintain or improve existing habitat conditions to improve habitat functions and values through the adaptive management process. The overall effect of implementing the Proposed Project would be to improve hydrological function in some of the restored streams for Covered Species. Some of these drainages would be altered, but the Proposed Project would likely reduce erosion and siltation because of the proposed restoration and rehabilitation actions. Flooding or the capacity of channels to contain floods would not be appreciably changed compared to existing conditions because the Proposed Project would not change watershed precipitation and hydrology conditions.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.</b> The Proposed Project is not located in a tsunami or seiche zone where the potential for release of pollutants from inundation exists. Some risk exists that pollutants could be released during flood flow events because of construction activities. Because construction activities would be temporary, construction activities would typically not occur during flood flow events and standard construction safety standards would be incorporated into project designs, the potential for release of pollutants during a flood event is considered to be low. Once the Proposed Project conservation elements</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>such as stream restoration/rehabilitation and Covered Species specific measures are implemented, those that would occur in or near streams would be designed to withstand and function in a variety of stream flows, include storm flood flows.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.</b> The Proposed Project would include the implementation of conservation measures to restore and rehabilitate habitats in the Permit Area that comply with water quality requirements of the Santa Ana Water Quality Control Plan. The Proposed Project would provide conservation measures that would minimize and mitigate incidental take of Covered Species by maintaining and improving existing habitat conditions and the function of natural communities. The Proposed Project would not implement actions that could adversely affect beneficial uses in the watershed. Although implementing the conservation measures under the Proposed Project would not conflict with water quality control plans, issuing ITPs for the Covered Activities could facilitate Covered Activities that collectively have the potential to affect water quality related to streamflow reductions. However, each Covered Activity would be subject to Federal, State, and local water quality protection requirements and specific water project-level water quality analyses to meet CEQA and other permit requirements. Commonly practiced BMPs would be implemented to control construction site runoff and reduce the discharge of pollutants to storm drain systems from stormwater and other nonpoint-source runoff.</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Land Use			
<p><b>Impact LU-1: Physically divide an established community.</b> The Proposed Project would not physically divide an established community because the proposed improvements consist of the creation, re-establishment, restoration, and/or rehabilitation of degraded aquatic, riparian, or upland habitat within and adjacent to channels. While some areas of the Proposed Project are adjacent to or near established residential communities, no new urban development is proposed as part of the Proposed Project. The sites would remain as undeveloped, natural, open spaces with only minimal other construction that would support habitat improvement, management, and monitoring, as well as managed recreation and education functions.</p>	No impact	No mitigation is required.	No impact
<p><b>Impact LU-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.</b> Under the Proposed Project, disturbance to adjacent land uses could result from construction, maintenance, and management activities associated with Proposed Project activities, including habitat improvement, management, and monitoring in the Permit Area. The conservation program for the Proposed Project is designed to avoid, minimize, and mitigate environmental impacts from project activities to the maximum extent practicable. The Proposed Project would be consistent with local general and specific plans and other existing applicable HCPs.</p>	No impact	No mitigation is required.	No impact
Minerals			
<p><b>Impact MR-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.</b> Implementation of the Proposed Project would not result in the</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>disturbance of any known mineral resource that would be of value to the region and the residents of the state, the loss of availability of a known mineral resource is not likely to occur.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact MR-2: Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.</b> As project sites would remain as undeveloped, natural, open spaces with only minimal other development, the loss of availability of a locally important mining recovery site as designated by a local land use plan would not occur.</p>	Less than significant	No mitigation is required.	Less than significant
Noise			
<p><b>Impact NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</b> Because the conservation activities would occur mainly in open space or relatively rural areas, the potential for noise from construction equipment to affect sensitive receptors is relatively low. However, it is possible that a sensitive receptor (e.g., home, park, school) could be located near a specific relatively short-term noise-generating conservation activity, such as grading, and could be exposed to excessive temporary noise. Because there is uncertainty about the duration and intensity of noise levels that could be generated at specific sites, the potential exists for temporary noise levels to be generated that could affect sensitive land uses in portions of the Permit Area. Although these noise effects would likely be temporary and infrequent, when they occur, they could result in significant noise impacts that could</p>	Significant	<p><b>NOI-1: Practices to Reduce Proposed Project Noise from Heavy Equipment</b></p> <p>The Proposed Project shall utilize best practices for noise abatement, where feasible and appropriate, to reduce noise levels from habitat improvement construction equipment used within 500 feet of a noise-sensitive land use. These measures may also apply to management and maintenance activities if these activities could generate substantial noise in the vicinity of noise-sensitive receptors. Measures to reduce noise at the nearest noise-sensitive land use could include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Locating construction equipment as far as feasible from adjacent or nearby noise-sensitive receptors and orienting or shielding equipment to protect sensitive uses to the greatest extent feasible</li> <li>• Requiring that all construction equipment powered by gasoline or diesel engines have sound control devices that are at least as effective as those originally provided by the manufacturer and that all equipment</li> </ul>	Less than significant



Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>exceed ambient noise levels and applicable local noise standards.</p>		<p>be operated and maintained to minimize noise generation</p> <ul style="list-style-type: none"> <li>• Prohibiting the idling of inactive construction equipment for prolonged periods (i.e., more than 2 minutes)</li> <li>• Prohibiting or limiting gasoline or diesel engines from having unmuffled exhaust systems, as feasible</li> <li>• Ensuring that equipment and trucks used for project habitat improvement incorporate the best available noise control techniques (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds), wherever feasible</li> <li>• Locating stationary noise sources, such as temporary generators or pumps, as far from nearby receptors as possible, and potentially muffling and enclosing them within temporary enclosures and shielding by barriers (which can reduce construction noise by as much as 5 dB)</li> <li>• Completing the noisiest construction activities during times of least disturbance to surrounding residents and occupants, as feasible</li> <li>• Using smaller and quieter mechanical equipment for vegetation management during maintenance activities</li> <li>• Limiting noise-generating maintenance activities to daytime hours, when noise is typically considered less disruptive</li> <li>• Staging equipment necessary for maintenance activities as far as possible from nearby noise-sensitive land uses</li> </ul>	
<p><b>Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels.</b> Many of the conservation activities could involve the use of construction equipment such as loaders, excavators, and</p>	<p>Less than significant</p>	<p>No mitigation is required.</p>	<p>Less than significant</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>graders that could generate groundborne vibration and noise. Some groundborne vibration effects could also occur from equipment used for maintenance activities but to a lesser extent than for habitat improvement and stream modification activities. However, construction equipment used for the conservation activities in the preserve would not be expected to result in damage-related impacts.</p>		No mitigation is required.	
<p><b>Impact NOI-3: 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.</b> Individuals working on habitat improvement, management, monitoring, or maintenance for the Proposed Project, including but not limited to the establishment of the HCP Preserve Area, would not be expected to be exposed to excessive noise from airstrip activity because, although there are some private airstrips in the vicinity of the Permit Area, the HCP Preserve System would not be established within or directly adjacent to an airport such that airport operations would negatively affect individuals working in the preserve (either during construction or for maintenance and management of sites during operation).</p>	Less than significant	No mitigation is required.	Less than significant
Population and Housing			
<p><b>Impact POP-1: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).</b> The Proposed Project would not include any projects such as residential development or roadways that would directly increase</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>population growth by providing new housing and access in the Permit Area. Although some of the projects may need full-time workers on site, these activities would not represent a substantial unplanned increase in jobs and thus would not result in a significant indirect increase in unplanned population in the Permit Area.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.</b> The areas within the Permit Area on which conservation activities could occur are mostly open space or relatively rural areas. However, the Permit Area does include public open space areas that are populated with homeless individuals living in temporary encampments. Relocation of transient individuals, removal of homeless encampments, and cleanup of remaining refuse would be coordinated and conducted among the counties and/or cities prior to implementation of habitat improvement activities and during long-term management of the Conservation Areas, should encampments become re-established. As such, the Proposed Project would result in a less-than-significant impact.</p>	Less than significant	No mitigation is required.	Less than significant
Public Services			
<p><b>Impact PS-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, other public facilities.</b> The Proposed Project would not require the physical construction of</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p>new public facilities that would result in impacts on the environment. Some benefits would result with the reduction of incidences of crime and arson through reduction in use of the Conservation Areas as homeless encampments.</p>			
Recreation			
<p><b>Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.</b> The HCP’s Conservation Strategy and conservation measures, including construction of habitat improvement projects, would not increase population in the Permit Area resulting in no increased use of existing neighborhood and regional parks or other recreational facilities. The Proposed Project is not expected to create additional increases in the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Instead the Proposed Project would improve existing recreational facilities.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact REC-2: 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.</b> The Proposed Project is not anticipated to increase the need for new or expanded recreational facilities because implementing the Conservation Strategy would not create greater demand for recreational facilities. Therefore, the Proposed Project would not result in adverse impacts on the environment associated with recreation facility expansion and is expected to result in net improvements to recreational resources.</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Transportation			
<p><b>Impact TRAN-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.</b> The Proposed Project would not involve alterations to the existing traffic or circulation system in the Planning Area or nearby communities. Construction associated with habitat improvement activities may temporarily interfere with the nearby bike paths or trails, such as the Santa Ana River Trail Bike Path, adjacent to many of the Conservation Areas. Following completion of construction associated with habitat improvement activities, any potential increases to the traffic volume in the surrounding areas would be limited to trips taken by vehicles to remove trash and nonnative plant material, and to conduct monitoring and management activities. As there would be no additional population growth or traffic generation due to a change or expansion in land uses at Conservation Areas, no conflicts in the circulation system would occur.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact TRAN-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).</b> Construction associated with the habitat improvement actions is not expected to result in a noticeable increase in traffic volumes. Construction activities associated with habitat restoration actions that involve heavy equipment to be used for longer periods of time at conservation sites could result in a temporary increase in vehicle trips. However, the majority of activities under the Proposed Project would be located away from high-density residential and commercial areas, and the short-term duration of habitat improvement construction activities would not typically generate a substantial amount of traffic. Overall, construction associated with habitat</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
improvement actions and long-term maintenance, management, and monitoring activities under the Proposed Project are not expected to result in substantial increases in VMT.			
<p><b>Impact TRAN-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).</b> The Proposed Project would not involve alterations to the existing traffic or circulation system in the project area or nearby communities. As such, impacts regarding safety hazards would not be anticipated. The Proposed Project would not include design features or introduce incompatible uses that would affect roadways and is therefore not expected to result in substantially increased hazards.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact TRAN-4: Result in inadequate emergency access.</b> Vehicle trips associated with construction of the restoration projects would be staggered and would not all occur in the same place or time period. Construction and operational activities are not expected to result in inadequate emergency access and no changes to local roadways would occur. As such, it is not anticipated that there would be conflicts with emergency access providers, and inadequate emergency access would not result.</p>	Less than significant	No mitigation is required.	Less than significant
Tribal Cultural Resources			
<p><b>Impact TCR-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (a) listed or eligible for</b></p>	Significant and unavoidable	<p><b>TCR-1: Protect Tribal Cultural Resources</b> Ground-disturbing activities will avoid damage to any TCR (PRC Section 21084.3(a)) in the Permit Area that is encountered during individual surveys performed for the Project activities during construction, when feasible. Protective measures to protect TCRs include, but are not limited to, the following:</p>	Significant and unavoidable

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); (b) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</b> The Planning Area contains over 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, several of which would be considered TCRs. Because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment to affect TCRs is relatively high.</p>		<ul style="list-style-type: none"> <li>• Further consultation with appropriate tribes to determine appropriate protection for the resource, which could include measures such as avoidance and preservation of the resource in place, including planning and construction avoidance and planning greenspace or other open space to incorporate the resource with culturally appropriate protection, and management criteria, such as planting a barrier of poison oak or erecting exclusionary fencing.</li> <li>• Treating the resource with culturally appropriate dignity taking into account tribal cultural values and meaning of the resource.</li> </ul>	
Utilities and Service Systems			
<p><b>Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects</b> Existing or proposed wastewater, storm drainage, or other utility infrastructure facilities would generally not be located in the vicinity of the Proposed Project because of the relatively remote locations in the Preserve System and in or near streams or creeks. The Proposed Project would not require relocation of facilities, would not create new</p>	<p>Less than significant</p>	<p>No mitigation is required.</p>	<p>Less than significant</p>

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
demand for utility infrastructure, and proposes habitat improvement and conservation activities that could be designed to accommodate utility facility expansion in the area, if necessary.	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact UTIL-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.</b> The Proposed Project does not include residential or other projects that could generate substantial amounts of new water demand in existing services areas. The potential impact of the Proposed Project on available water supplies would be less than significant because the actions would not directly or indirectly generate substantial demands for water supplies.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact UTIL-3: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.</b> Water would be used for habitat improvement and management activities and for the undeveloped, natural, and open spaces that would support the habitat restoration and/or rehabilitation function of the Proposed Project. However, the Proposed Project is not anticipated to generate substantial amounts of wastewater. Specifically, the Proposed Project does not include residential or other projects that could generate substantial amounts of new wastewater in the Preserve System. The Proposed Project would not result in any increase in demand, and would not interfere with the wastewater treatment providers' ability to meet existing or projected demand.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact UTIL-4: Generate solid waste in excess of State or local standards, or in excess of the capacity</b></p>	Less than significant	No mitigation is required.	Less than significant



Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.</b> Disposal of solid waste produced during construction would be short term and minimal. There are landfills within the Planning Area that are permitted to dispose of construction and demolition debris. The Proposed Project is not anticipated to conflict with local solid waste standards or to impair reduction goals.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact UTIL-5: Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste.</b> Implementation of the Proposed Project would allow for management, monitoring, and maintenance activities, which could produce solid waste related to habitat improvement construction debris, municipal waste from onsite workers, and any other construction- or operation-generated waste. The Proposed Project would be in compliance with the applicable local and State regulatory framework for the reduction of solid waste.</p>	Less than significant	No mitigation is required.	Less than significant
<b>Wildfire</b>			
<p><b>Impact WF-1: Substantially impair an adopted emergency response plan or emergency evacuation plan.</b> The Permit Area encompasses several jurisdictions with coordinated emergency response strategies. None of the habitat improvement, management, maintenance, or monitoring activities would involve modifications to facilities that are critical to emergency response, such as police, fire, and hospital facilities, and the Proposed Project would not impede access to these facilities in an emergency. Compliance with applicable regulations, policies, and guidelines would reduce impacts related to any interference with emergency response and evacuation plans.</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
<p><b>Impact WF-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.</b> Construction activities are expected to follow fire-management goals and policies set forth by local and regional plans, policies, and regulations. Limited structures would be built in the Permit Area and would include flow manipulation structures made of natural materials such as boulders, large cobble, and large woody debris. Therefore, no structures would be damaged or destroyed during a wildland fire. Activities implemented as part of the Conservation Strategy would include activities to decrease wildfire risk. The Proposed Project would also streamline permitting for Covered Activities, which would increase reliable water supplies that could be used to fight fires. Although the potential remains for some activities to be located in high fire hazard areas that could exacerbate wildfire risks of, and thereby expose nearby receptors to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, implementation of AMMs would address this risk.</p>	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact WF-3: 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.</b> All access points, storage, and staging areas during construction associated with habitat improvement activities would be located in a manner that has the least impact on native vegetation as well as vehicular and pedestrian traffic. An irrigation system (e.g., a groundwater well) may be required to enhance the survivorship of newly installed native plants and</p>	Less than significant	No mitigation is required.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
seed. Implementation of AMMs would require incorporation of fire risk reducing measures into Covered Activities.	Less than significant	No mitigation is required.	Less than significant
<p><b>Impact WF-4: 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.</b> The risk of the Proposed Project resulting in wildfire is discussed in <i>Impact WF-2</i> and <i>Impact WF-3</i>. As noted, the risk is low, and implementation of AMMs, which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk. Therefore, the Proposed Project would not increase post-fire risk.</p>	Less than significant	No mitigation is required.	Less than significant

## ES.10.1 Significant and Unavoidable Impacts

As required by §15126.2 (b) of the State CEQA Guidelines, an EIR must identify any significant environmental effects that cannot be avoided if the proposed project is implemented. After conducting environmental analyses for each of the environmental issues identified in Appendix G of the State CEQA Guidelines, it was determined that the Proposed Project would result in significant and unavoidable adverse environmental impacts related to air quality, biological resources, cultural resources, hydrology and water quality, and tribal cultural resources.

## ES.11 Project Alternatives

According to the State CEQA Guidelines, an EIR must describe a reasonable range of alternatives to a project that could feasibly attain most of the basic project objectives, and would avoid or substantially lessen the project's significant environmental effects. This alternatives analysis summarizes the alternatives screening process conducted to identify feasible alternatives that meet project objectives. As required by CEQA, this analysis first considers which alternatives can meet most of the basic project objectives, and then to what extent those remaining alternatives can avoid or reduce the environmental impacts associated with the Proposed Project.

### ES.11.1 Description of Project Alternatives

Four alternatives were selected for the alternatives analysis, discussed in greater detail in Section 6.4.5, *Alternatives Carried Forward for Analysis in this EIR*. The goal for evaluating these alternatives is to identify alternatives that would avoid or lessen the significant environmental effects of the Proposed Project (evaluated in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*), while attaining most of the project objectives. The following sections provide a general description of each alternative, its ability to meet the project objectives, and a qualitative discussion of its comparative environmental impacts. As provided in §15126.6(d) of the State CEQA Guidelines, the significant effects of these alternatives are identified in less detail than the analysis of the Proposed Project.

#### Alternative 1: No Project (No Action) Alternative

An analysis of the No Project Alternative is required under State CEQA Guidelines §15126.6(e). According to §15126.6(e)(2) of the State CEQA Guidelines, the “no project” analysis must discuss “what is reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” The No Project Alternative would include the future circumstances without the Proposed Project (HCP Preserve System for the Upper SAR HCP and Section 10 ITP issued jointly to the Permittees for future implementation of the proposed Covered Activities) and would also include predictable actions by persons or entities if the Proposed Project did not occur.

Under the No Project Alternative, Section 10 permit(s) would not be issued by USFWS for take of the proposed Covered Species through the Upper SAR HCP, and there would be no implementation of the watershed-scale, coordinated Conservation Strategy as is committed to by the Permittees for the Proposed Project. However, that is not to say that the individual water supply projects proposed by the various water agencies would not occur; rather, the Permittees would pursue project-by-project

ITPs from USFWS and CDFW for the take of listed species pursuant to the FESA and CESA associated with implementation of Covered Activities. Conservation would also be negotiated on a project-by-project basis with each Wildlife Agency in order to appropriately offset the impacts of each individual project. There would be no regional approach to developing holistic conservation measures that provide long-term species and ecosystem benefits. Covered Activities could be implemented individually, but without the proposed Upper SAR HCP ITP and the regulatory assurances that go along with it. Typical activities that would occur under the No Project Alternative, but on a project-by-project basis, are described in Section 2.2, *Elements of the Proposed Project*, and Section 2.2.5, *Covered Activities*, as they essentially include the same list of proposed future water infrastructure projects; however, a more difficult and lengthy permitting process would likely occur if conducted individually and without any assurances that permits would be granted for any Covered Activities.

Impacts on species could occur under the No Project Alternative, including construction or expansion of water infrastructure or water facilities, etc., if most or all Covered Activities were implemented. However, the Permittees would need to seek ITPs through single-project HCPs (Section 10 of FESA) or through Section 7 consultation with USFWS. Due to the difficulty in securing permits for all Covered Activities individually, it is also possible that some Covered Activities would be too costly to permit and fewer Covered Activities would be implemented, resulting in less development under the No Project Alternative than would occur under the Proposed Project.

While the impacts could be less than those of the Proposed Project if Permittees are not able to obtain take permits individually, there would also be less strategic conservation and less assurances for coordinated implementation of conservation measures. These added uncertainties adversely affect the ability of the Permittees to achieve their public mission to capture and store local water supply, which then makes the region more reliant on imported water from Northern California.

Another potential consequence of the No Project Alternative is the loss of the Upper SAR HCP as a regulatory mechanism to provide ITP coverage for Santa Ana sucker translocation activities and other conservation measures, including the establishment of the HCP Preserve System. To date, no other mechanism has been identified that could provide long-term coverage to entities downstream of translocated populations, such as SCE. The translocations would occur on U.S. Forest Service lands, which are not eligible for special assurances from USFWS, such as a Safe Harbor Agreement. USFWS has stated that establishment of new populations in the upper watershed is a requirement for the recovery of Santa Ana sucker. The Upper SAR HCP has the unique ability to enable this effort by providing long-term regulatory assurances to parties who are concerned about increased regulatory burdens due to the reintroduction of a listed species near their facilities.

## **Alternative 2: Phase 1 Covered Activities Only Alternative**

This alternative would provide ITP coverage for only those high priority, near-term Covered Activities that are identified in Phase 1 (Years 0–5) of the Upper SAR HCP. Implementation of the Phase 1 Covered Activities would include construction and operation of fewer Covered Activities than are identified in Table 2-2 and fully described in Chapter 2 of the Upper SAR HCP.

This alternative would also only implement the Phase 1 Conservation Actions because mitigation is directly tied to impacts. While preservation and habitat improvement activities would occur during Phase 1, in proportion to Phase I impacts, the remainder of the proposed HCP Preserve System and Tributaries Restoration/Rehabilitation projects would not be implemented as part of the HCP

regional Conservation Strategy. The full suite of mitigation lands and Conservation Actions is needed in order to attain a sustainable preserve system that incorporates the many habitat needs of species, including habitat for breeding, foraging, and connectivity. Potential impacts on biological resources could be substantially reduced if only Phase I projects are implemented; however, it is likely that future projects would be pursued individually by Permittees on a project-by-project basis because they are key to long-term reliability of the regional water supply. If pursued independently, future development of Covered Activities identified in Phases 2 through 4 of the Upper SAR HCP would likely result in a more difficult and lengthy permitting process. There would also be no assurances that permits would be issued for any of these Covered Activities. Conservation would also be negotiated on a project-by-project basis with each Wildlife Agency in order to appropriately offset the impacts of each individual project. Therefore, there would likely not be the regional approach to developing holistic conservation measures that provide long-term species and ecosystem benefits.

### **Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative**

This alternative would assume that water reuse and recycling projects that are most impactful to the Santa Ana sucker would not have permit coverage through the Upper SAR HCP, and this alternative would result in less baseflow reduction and reduced impacts on aquatic habitat in the Santa Ana River. Covered Activities that reduce baseflow have the most potential impact on Santa Ana sucker and other aquatic habitat, and therefore also require the greatest amount and diversity of conservation measures to offset their impacts. Covered Activities that reduce baseflow create the need for a more extensive Santa Ana sucker conservation measures, such as captive breeding and Tributaries Restoration/Rehabilitation, Translocation, microhabitat enhancements, or predator control program, in order to counterbalance the reduction of depth and velocity of flow in the Santa Ana River. Recycled water projects that would reduce baseflow would include water reuse projects like the San Bernardino Municipal Water Department Recycled Water Project (WD.1) and the Rialto Wastewater Diversion and Reuse Project (Rial.1). With this alternative, the Upper SAR HCP would not include these Covered Activities, and permit coverage for those water infrastructure projects would not be provided.

While the reduced impacts on base flow in this alternative could likely eliminate the need for the Santa Ana Sucker Translocation project, the Tributaries Restoration/Rehabilitation project, and many other enhancements in the Santa Ana River, there is an argument to be made that these measures to improve the long-term viability of the Santa Ana sucker population are needed now, regardless of Covered Activity implementation. Even with the current level of water in the Santa Ana River, the Santa Ana sucker population is under constant threat from rapid changes in instream flow, lack of high quality habitat, no redundancy of other populations centers in the river system, and therefore frequent threat of extirpation.

Conservation measures such as translocation is an integral part of the proposed Upper SAR HCP Conservation Strategy and the USFWS Recovery Plan for Santa Ana sucker. These measures provide long-term assurances to the Santa Ana sucker population, increase resiliency of the species, and distribute risk to its longevity by redistributing the currently limited population to areas where it has historically thrived, away from the stressors of the urbanized river system. Loss of a funding source and regulatory mechanism (as is provided by the full HCP) to provide long-term Conservation Actions would make the overall recovery of Santa Ana sucker more difficult if not impossible. Because this alternative would result in fewer projects and impacts on mainstem river and the Santa Ana sucker, it would also result in less conservation or mitigation obligations for Santa

Ana sucker. With this alternative, it is likely that many Santa Ana sucker recovery goals would not be achieved or would not be implemented in a coordinated, watershed-scale manner.

#### **Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative**

Like the other alternatives proposed in this analysis, this alternative would involve implementation of fewer Covered Activities, specifically stormflow diversion projects, that are included in the Upper SAR HCP. This alternative would not include projects that divert storm flow into new or expanded recharge basins, nor would it include activities to operate and maintain new diversion structures or activities related to construction of new recharge basins and associated diversions. These projects could include Mill Creek Diversion Project (CD.1, Phase 1), Santa Ana Levee and Cuttle Weir Diversion (CD.2, Phase 1), and the Active Recharge Project (VD.2).

The elimination of these new stormflow diversion projects would eliminate the associated additional impacts on SBKR in the alluvial fan sage scrub where most of these projects are proposed. The anticipated impacts from these new water capture projects create the need for a SBKR habitat conservation, habitat improvement, and long-term protection as offsetting mitigation for these projects. Long-term conservation values that would be created through the conservation activities are far higher than the habitat values that would be affected. These Covered Activities are intentionally sited in locations where the SBKR habitat is degraded and likely occupied in low abundance, if at all. In exchange, the Permittees are committing to acquiring high-value, occupied habitat (or habitat that can be restored/rehabilitated to occupied) and restoring and rehabilitating habitat such that it provides breeding, foraging, and refugia values for SBKR. If these Covered Activities are eliminated from the HCP as a part of this alternative, then these conservation measures for SBKR would not be required as mitigation.

Without the proposed conservation measures for SBKR, USFWS recovery goals would likely not be achieved by the HCP, and further threats to the species would persist. Loss of a funding source and regulatory mechanism like the Upper SAR HCP to provide long-term Conservation Actions would make the overall recovery of SBKR more difficult, if not impossible. While this alternative would involve fewer Covered Activities, it would result in fewer impacts in low-quality SBKR habitat and, therefore, also result in reduced high-quality conservation measures for SBKR. Similar to the No Project Alternative, Permittees could still pursue many of the same future activities by seeking individual ITPs for each of these Covered Activities. However, future development associated with these Covered Activities would likely result in a more difficult and lengthy permitting process. There would also be no assurances that permits would be granted for any of these Covered Activities.

### **ES.11.2 Environmentally Superior Alternative**

Table ES-2 includes a summary comparison of the Proposed Project and its alternatives.

**Table ES-3. Comparison of Alternatives Impacts**

<b>Environmental Issue Area</b>	<b>Proposed Project</b>	<b>Alternative 1: No Project</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 2: Phase 1 Covered Activities Only</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative</b> <i>Impact/Comparison to Proposed Project</i>
Aesthetics	LTS	LTS/GREATER	LTS/GREATER	LTS/GREATER	LTS/GREATER
Agriculture and Forestry Resources	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Air Quality	SU	LTS/REDUCED	SU/REDUCED	SU/REDUCED	SU/REDUCED
Biological Resources	SU	Significant with Conservation Measures but Reduced Impact Compared to the Proposed Project with Fewer Benefits	Significant with Conservation Measures but Reduced Impact Compared to the Proposed Project with Fewer Benefits	Less than Significant with Conservation Measures and Reduced Impact Specifically on Santa Ana Sucker Compared to the Proposed Project with Fewer Benefits	Significant with Conservation Measures and Reduced Impact Specifically on San Bernardino Kangaroo Rat Compared to the Proposed Project with Fewer Benefits
Cultural Resources	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Geology, Soils, and Paleontological Resources	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Greenhouse Gas Emissions/Energy	LTS	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED
Hazards and Hazardous Materials	LTS	LTS/REDUCED	LTS w/MM/GREATER	LTS w/MM/GREATER	LTS w/MM/GREATER
Hydrology and Water Quality	SU	LTS/GREATER	SU/GREATER	LTS/REDUCED	SU/GREATER
Land Use	NI	NI/SIMILAR	NI/SIMILAR	NI/SIMILAR	NI/SIMILAR
Mineral Resources	LTS	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED
Noise and Vibration	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Population and Housing	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Public Services	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Recreation	LTS	LTS/GREATER	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR



<b>Environmental Issue Area</b>	<b>Proposed Project</b>	<b>Alternative 1: No Project</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 2: Phase 1 Covered Activities Only</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative</b> <i>Impact/Comparison to Proposed Project</i>
Transportation	LTS	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED
Tribal Cultural Resources	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Utilities and Service Systems	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Wildfire	LTS	LT/SIMILAR	LTS/GREATER	LTS/GREATER	LTS/GREATER
Cumulative Impacts	SU	LTS/REDUCED	SU/REDUCED	SU/REDUCED	SU/REDUCED

NI = No Impact; LTS = Less than Significant; LTS w/MM = Less than Significant with Mitigation; SU = Significant and Unavoidable

## ES.12 Potential Areas of Controversy/Issues to be Resolved

Pursuant to State CEQA Guidelines §15123(b)(2), a lead agency is required to include in the EIR areas of controversy raised by agencies and the public during the public scoping process. Issues of concern and issue areas include Santa Ana sucker, cultural and tribal resources, biological resources, water resources availability, air quality, greenhouse gases, cumulative effects, recreational uses and activities within the Santa Ana River area, public access, impacts on existing infrastructure projects, long-term restoration success, property acquisition impacts, timing of implementation and maintenance of activities, alternatives, and homeless encampments.

## ES.13 How to Comment on this Draft EIR

In accordance with State CEQA Guidelines §15105, this Draft EIR has been submitted to the Governor's Office of Planning and Research State Clearinghouse for review by State agencies and, as such, is available for public review and comment for a **60-day review period**. A Notice of Availability has been circulated to Federal, State, and local agencies and interested parties, who may wish to review and issue comments on its contents. All comments should be directed to:

**Valley District**

Heather Dyer, General Manager

380 East Vanderbilt Way, San Bernardino, CA 92408

Email: [uppersarhcp@icf.com](mailto:uppersarhcp@icf.com)

Comments on the Draft EIR will be accepted in writing via mail or email. Written comments may be submitted anytime during the Draft EIR review period. During the 60-day review period, Valley District will conduct one public meeting open to the general public. The public meeting will include a brief presentation providing an overview of the Proposed Project, CEQA process, and findings of the Draft EIR. The meeting will be held as a Zoom meeting on **Tuesday, June 15, 2021, from 6 p.m. to 8 p.m.** Notices will provide the specific time and login information.

All written comments received on the Draft EIR will be considered, and responses will be included in the Final EIR. Comments on the Draft EIR must be received by 5:00 p.m. on the last day of the 60-day review period.

# Chapter 1

## Introduction

---

This environmental impact report (EIR) evaluates the impacts associated with issuing endangered species permits and implementing the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP or Proposed Project). The Upper SAR HCP is a regional, species conservation plan that provides a habitat conservation and restoration framework to improve conditions for plant and animal species in San Bernardino and Riverside Counties. The Upper SAR HCP provides analysis and background information to inform decisions to issue endangered species permits for species that may be affected by specified projects in a specified permit area. It provides conservation measures, to be implemented within a habitat preserve system, to offset adverse effects on species and their habitats. The proposed conservation framework would help streamline endangered species permitting for specific agency and other projects and provides a comprehensive conservation approach to benefit threatened and endangered species in the Upper Santa Ana River watershed.

The following public agencies are applying for Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) permits from the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). Southern California Edison (SCE) is a private entity applying for separate permits.

- Rialto Utility Authority
- East Valley Water District
- Inland Empire Utilities Agency
- Metropolitan Water District of Southern California
- Orange County Water District
- Riverside Public Utilities
- San Bernardino Valley Conservation Trust
- San Bernardino Municipal Water Department
- San Bernardino Valley Municipal Water District
- San Bernardino Valley Water Conservation District
- Upper Santa Ana River Sustainable Resources Alliance
- West Valley Water District
- Western Municipal Water District of Riverside County

These public entities (Permittee Agencies) and SCE are referred to collectively as the *Permittees*. The Permittees are applying for incidental take permits (ITPs) from USFWS pursuant to Section 10(a)(1)(B) of the FESA. The same entities are also applying for CESA Section 2081(b) permit(s) from CDFW. The CESA ITP will be a Section 2081 Multi-Project ITP, or other ITP(s) as deemed appropriate by CDFW. The permits would authorize take of certain State and Federally listed species (i.e., Covered Species) during the course of otherwise lawful activities (i.e., Covered Activities) as detailed in the Upper SAR HCP and described in Chapter 2, *Project Description*. To fulfill an application requirement for these permits, the Permittees have collaboratively prepared the Upper

SAR HCP, which will support issuance of ITPs and 2081(b) permits that would expire 50 years from the date it is signed by CDFW, or under an alternate timeframe as identified by CDFW.

This EIR is prepared in accordance with the California Environmental Quality Act of 1970, Public Resource Code §21000 et seq., as amended (CEQA) and the Guidelines for Implementation of the California Environmental Quality Act, California Code of Regulations (CCR), Title 14, §15000 et seq. (State CEQA Guidelines). As required by §15121 of the State CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable project alternatives.

As the CEQA lead agency, the San Bernardino Valley Municipal Water District (Valley District) will consider the information in this EIR, the Upper SAR HCP, and other relevant information prior to certifying this EIR and approving the Proposed Project. The Proposed Project evaluated in this EIR is specifically defined in Chapter 2, Section 2.2.1, *Definition of the Proposed Project*, and generally includes issuance of ITPs for Covered Activities and implementation of the Upper SAR HCP.

CDFW is a responsible agency with permit authority over the Proposed Project and a trustee agency. A *responsible agency* under CEQA is a State or local public agency other than the CEQA lead agency that has discretionary approval over the project, and a *trustee agency* is a State agency that has jurisdiction by law over natural resources affected by a project that are held in trust for the people of California. USFWS will be the Federal lead agency under the National Environmental Policy Act of 1969 (NEPA) and will prepare a NEPA document separately for the Upper SAR HCP to support its permit decision.

## 1.1 Upper SAR HCP Overview

The Upper SAR HCP has been collaboratively prepared by Valley District and other Permittees to meet the requirements of Section 10 of the FESA and USFWS's HCP Handbook for a specified planning area, generally within San Bernardino and Riverside Counties (Figure 1-1, and Section 1.1.2, *HCP Planning Area and Permit Area*). The HCP presents many valuable benefits to the region by providing a mechanism and approach to collaboratively address endangered species issues on a regional scale and with long-term funding assurances. The conservation approach is designed to anticipate, prevent, and resolve potential conflicts over current and future resource needs through the HCP planning and implementation process. This includes development of strategies to meet minimum in-stream flow requirements to protect native aquatic species and riparian communities in the Santa Ana River, creative solutions to be implemented for tributary habitat restoration/rehabilitation and long-term protection, conservation, and management of the natural resources and species of the Upper Santa Ana River watershed. These actions, as detailed in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP and summarized in Chapter 2, *Project Description*, are intended to be implemented to benefit and reduce incidental take of Covered Species in a way that ensures long-term ecological value to the region. This regional conservation approach is intended to help avoid the need for project-by-project incidental take approval for the specified Covered Activities, which can be costly and time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation.

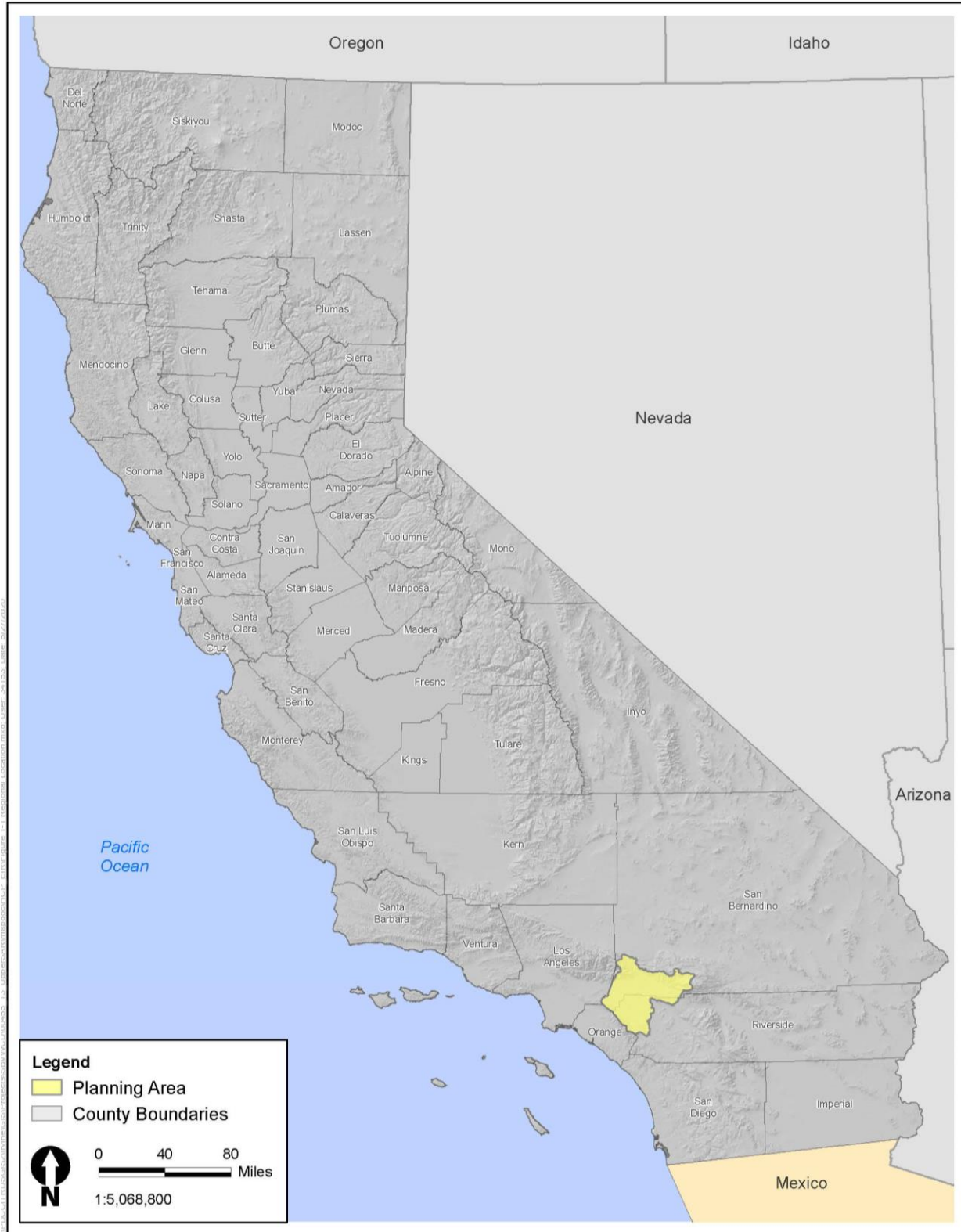


Figure 1-1. Regional Location Map

### 1.1.1 HCP Background and Development

The Santa Ana River watershed is the largest coastal stream system in Southern California and has been the subject of many important water use and water rights agreements, judicial orders, judgments, and accords dating back to the early twentieth century.

The Upper Santa Ana River is home to dozens of water districts, flood control districts, and other, local water management agencies with an interest in the sound management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. Many of these entities have participated in integrated regional watershed management coordination efforts in the Upper Santa Ana River since the 1960s. Recent cooperative planning initiatives among the water districts and stakeholders have resulted in a comprehensive vision for sustainable stewardship and watershed management (e.g., One Water, One Watershed 2.0 Plan finalized in 2014). However, several considerable challenges remain in the Upper Santa Ana River watershed, including ongoing modification of the Santa Ana River hydrogeomorphology, reduction of river flow, alteration of natural habitats, and the long-term effects of these changes on the functional ecology and native species of the watershed. These ongoing watershed effects are the result of continuing population growth, increased water demand, reductions in imported water supplies, and effects of climate change.

The Upper SAR HCP was initiated to help resolve some of these watershed challenges coordinated with regional water and other infrastructure projects. Because of the tremendous public value associated with improving regional water supply reliability and flood protection, the Permittees are proposing long-term commitments to native resources by agreeing to conserve, monitor, and manage Covered Species and their habitats in perpetuity. In exchange, the Permittees would receive assurances that USFWS would not require additional land, water, or other natural resources beyond the level agreed upon in the HCP as long as the Permittees are honoring the terms and conditions of the permit. Figure 1-2 shows some of the major steps in the planning process from its beginning in 2013 to the present day with the release of the Draft Upper SAR HCP and this EIR.

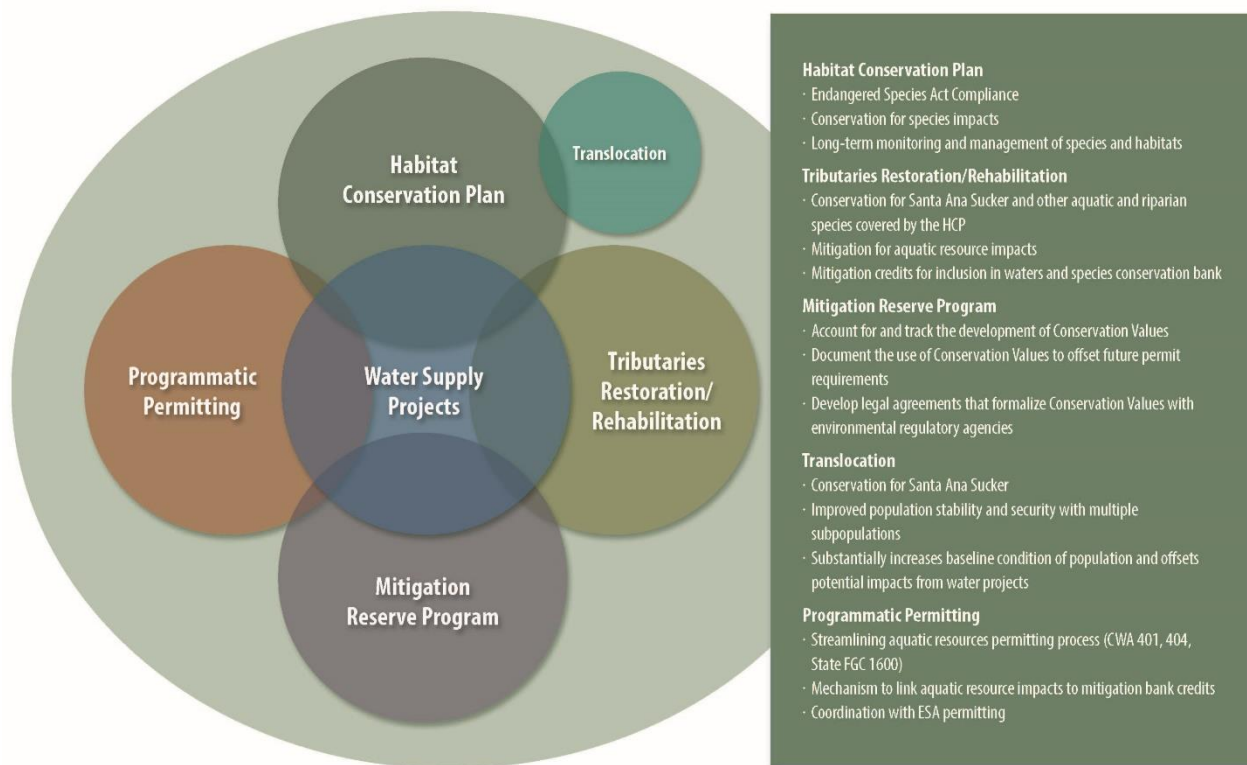


Figure 1-2. Habitat Conservation Plan Planning Process Timeline

A key to developing a regional conservation approach has been a highly collaborative and transparent process involving Federal, State, and local agencies and stakeholder groups. The Santa Ana HCP Team includes the Permittees (the Permittee Agencies and SCE); Federal, State, and local agencies; and interested members of the public. During the planning process, the team met on a regular basis and were kept up to date via the HCP website (<http://www.uppersarhcp.com/>). The foundation of the HCP was developed by the Biological Technical Advisory Committee and the Hydrologic Technical Advisory Committee. The Biological Technical Advisory Committee helped to identify the Covered Species; provided conceptual species model input; and identified threats, natural drivers, and conservation targets for the Covered Species that helped develop biological goals and objectives. The Hydrologic Technical Advisory Committee provided input for the hydrological modeling conducted for the Upper Santa Ana River and its tributary system. A hydraulic model was used to estimate the effects on aquatic habitats in terms of low-flow habitat suitability and high-flow sediment transport. This modeling created the foundation for quantifying existing hydrologic conditions and future conditions with implementation of the Covered Activities on the Upper Santa Ana River and its tributaries.

Implementing the Upper SAR HCP will be accomplished through the Upper Santa Ana River Sustainable Resources Alliance (Alliance). The Alliance will be responsible for implementing the conservation strategy, directing regulatory compliance, and conserving water and species habitat to facilitate timely approval and reliability of water supply projects. The ultimate goal of the Alliance is to maintain a sustainable watershed for water resources and species resources, of which the Upper SAR HCP is a substantial part. The Upper SAR HCP and other watershed sustainability components overseen by the Alliance will bring together a variety of organizations, agencies, and the public to create a forum for collaborative problem-solving to meet diverse needs and missions that include the protection of endangered species and timely approval and reliability of water supply projects. Figure 1-3 provides an overview of the Upper Santa Ana River program components.

## FULLY INTEGRATED ENVIRONMENTAL COMPLIANCE PROGRAM



**Figure 1-3. Upper Santa Ana River Program Components**

The Upper Santa River geography is also home to another independent HCP. The Upper Santa Ana River Wash HCP (Wash Plan) was permitted in July 2020 and includes several of the same participating water agencies and similar Covered Activities in a 4,892-acre permit area. While these two HCPs have similarities and are in the same general planning area, the Wash Plan and its approvals are independent of the Upper SAR HCP.

### 1.1.2 HCP Planning Area and Permit Area

The HCP Planning Area is in San Bernardino and Riverside Counties, California, and encompasses approximately 862,966 acres (Figure 1-4). The Planning Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water resource agency boundaries extend beyond the Santa Ana River watershed or where the Planning Area is mostly constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Planning Area because conservation activities and the Covered Activities under the HCP are not planned therein. Additional information is provided in Chapter 2, *Project Description*.

The area covered by the proposed ITPs, which falls within but does not include the entire Planning Area, is referred to as the Permit Area. The Upper SAR HCP Permit Area is the geographic area where the impacts of the Covered Activities are expected to occur and is depicted as the ownership, easements, and areas of operation and maintenance where all Covered Activities are located within natural habitats. The Permit Area also includes the HCP Preserve System so that the ITPs cover the



potential take associated with habitat mitigation, management, and monitoring. While a number of mitigation areas are already known (e.g., tributary restoration/rehabilitation sites), others will be identified during HCP implementation. If the HCP Preserve System is expanded in the future, the Permit Area will also include any new areas of the HCP Preserve System. Figure 1-5 depicts the Permit Area.

## 1.2 Relationship Between the Habitat Conservation Plan and EIR – Incorporation by Reference

The Upper SAR HCP and EIR are separate documents; however, because the HCP contains a high level of detailed description of the Proposed Project, the Upper SAR HCP is incorporated by reference in this EIR, pursuant to State CEQA Guidelines §15150. The HCP will be circulated for public review along with this EIR, and copies of the HCP are available from Valley District, at the address provided below in Section 1.6.3.1, *Public Review of the Draft EIR*. The content of the HCP is summarized throughout this EIR and referenced when additional detail is needed to understand the Proposed Project or impact analyses.

## 1.3 Purpose of the EIR

### 1.3.1 Overview of CEQA EIR Provisions

CEQA requires State and local agencies to evaluate the potential environmental implications of their actions and aims to prevent or minimize adverse environmental impacts of those actions by requiring those agencies, when feasible, to avoid or reduce potentially significant environmental impacts. The State CEQA Guidelines serve as the primary source of interpretation of CEQA. As set forth in 14 CCR 15063, CEQA requires that the lead agency prepare an EIR when the lead agency determines that a project may have a significant effect on the environment. Valley District, as the lead agency under CEQA, has determined that the Proposed Project may result in a significant impact on the environment, and thus this EIR has been prepared.

The Proposed Project is also subject to Federal environmental impact review under NEPA. A separate document will be prepared to comply with NEPA, which applies to all Federal agencies and to most of the activities they manage, regulate, or fund that affect the human environment.

### 1.3.2 Focus and Level of Detail

The nature and focus of this EIR is determined by the nature of the action being evaluated, namely the approval of the HCP by Valley District as the lead agency, and actions taken by CDFW as a responsible agency. This EIR evaluates the potential impacts of a decision by Valley District to apply for, and a CDFW decision to issue, ITP(s) for the State-listed species covered in the HCP, pursuant to Section 2081 of the California Fish and Game Code, and implementation of the HCP by the Permittees (see Chapter 2, *Project Description*, for a detailed description of the objectives and components of the HCP). This EIR also evaluates the impacts of three alternatives to the Proposed Project, as well as the No Project Alternative.

Consistent with the nature of the Proposed Project as an HCP, this EIR provides particular emphasis on impacts related to listed species, and the impacts on hydrology and biological resources of the Upper SAR HCP conservation activities. These impacts on Covered Species are evaluated assuming implementation of the HCP and the maximum extent of foreseeable activity on biological and hydrological resources in the Permit Area. This EIR also includes analysis of impacts on other categories of resources, but given the nature of the Proposed Project, issuance of ITPs, and implementation of the HCP, impacts in other topical areas are less likely and are evaluated at a more general level.

This EIR is not intended to serve as the CEQA document for, or to fully evaluate, the Covered Activities. Instead, this EIR evaluates the impacts of providing incidental take coverage to the Covered Activities, and other aspects of the HCP. See Section 1.3.3, *Intended Uses of this EIR*, for a discussion of how this EIR may be used in connection with later consideration of Covered Activities.

The HCP and the information contained in this EIR may also help to streamline the environmental review of the biological and hydrological resource impacts of the Covered Activities, which may be evaluated and considered by the various Permittees, as lead agencies prior to approval and implementation of Covered Activities.

### **1.3.3 Intended Uses of this EIR**

This EIR is intended to cover the actions of the lead agency and the other Permittee Agencies in their review and consideration of the HCP, and adoption and implementation of the HCP. Permittees may use this EIR to consider impacts of the HCP and the scope of any comments to submit to Valley District on the impacts of the HCP.

Other agencies, including USFWS and CDFW and other responsible and trustee agencies, will use this EIR in their actions to consider and act on applications for the related permits.

Later environmental analysis for more specific projects, or Covered Activities, undertaken by Valley District or by individual Permittees, will be prepared separately from this EIR. Covered Activities will be considered and approved by the Permittees as independent lead agencies, and each will evaluate and determine the appropriate CEQA document and level of review required for Covered Activities under their jurisdiction.

The Permittees may decide to use or refer to applicable analyses in this EIR, to the extent appropriate. Given that the focus of this EIR is on the impacts of the Proposed Project and the biological and hydrological resource impacts in particular, it is anticipated that the use of the information in this EIR in connection with subsequent consideration of Covered Activities may be limited to determining whether the impacts of individual Covered Activities on listed species were sufficiently evaluated in this EIR.



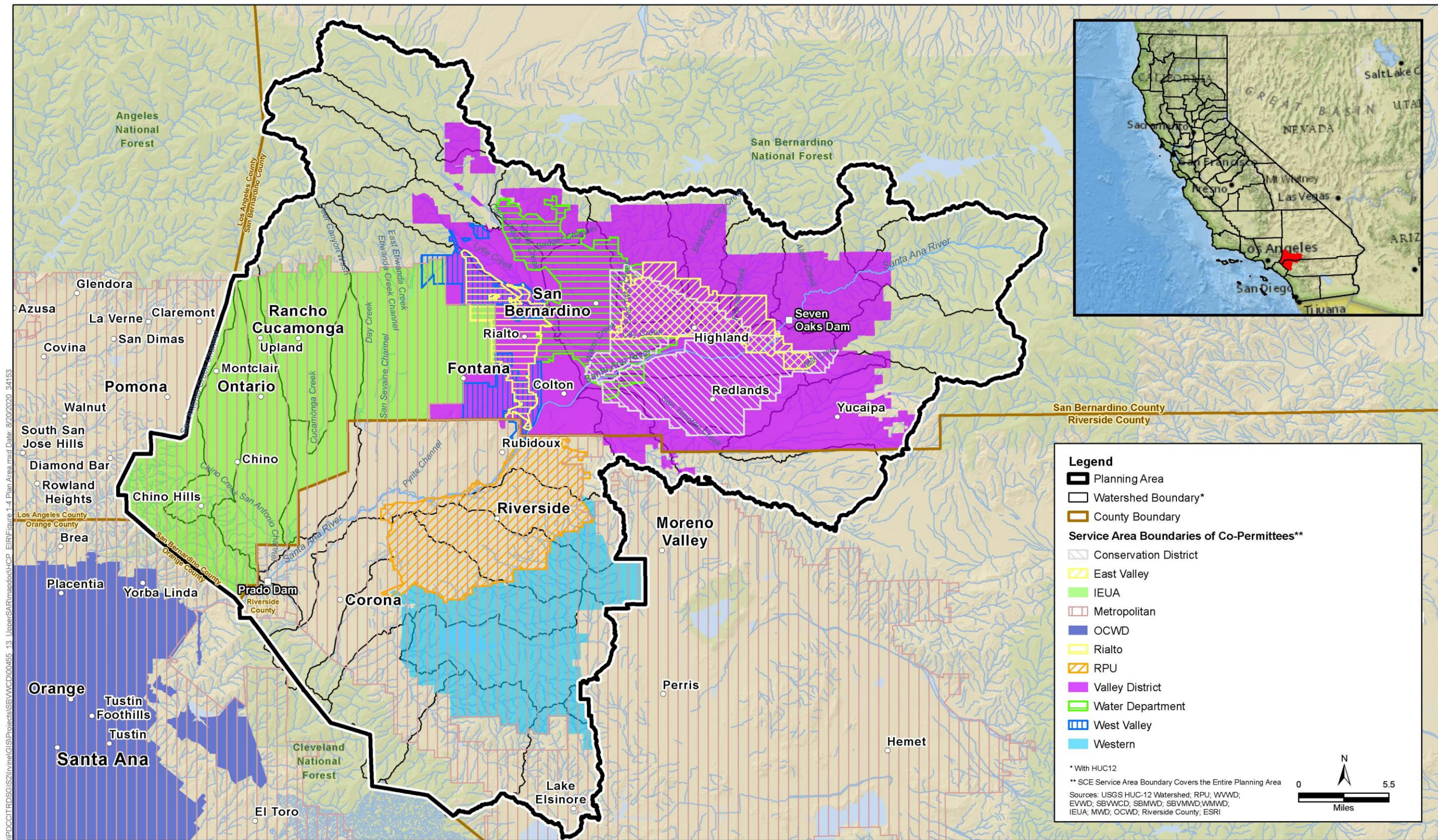


Figure 1-4. Planning Area



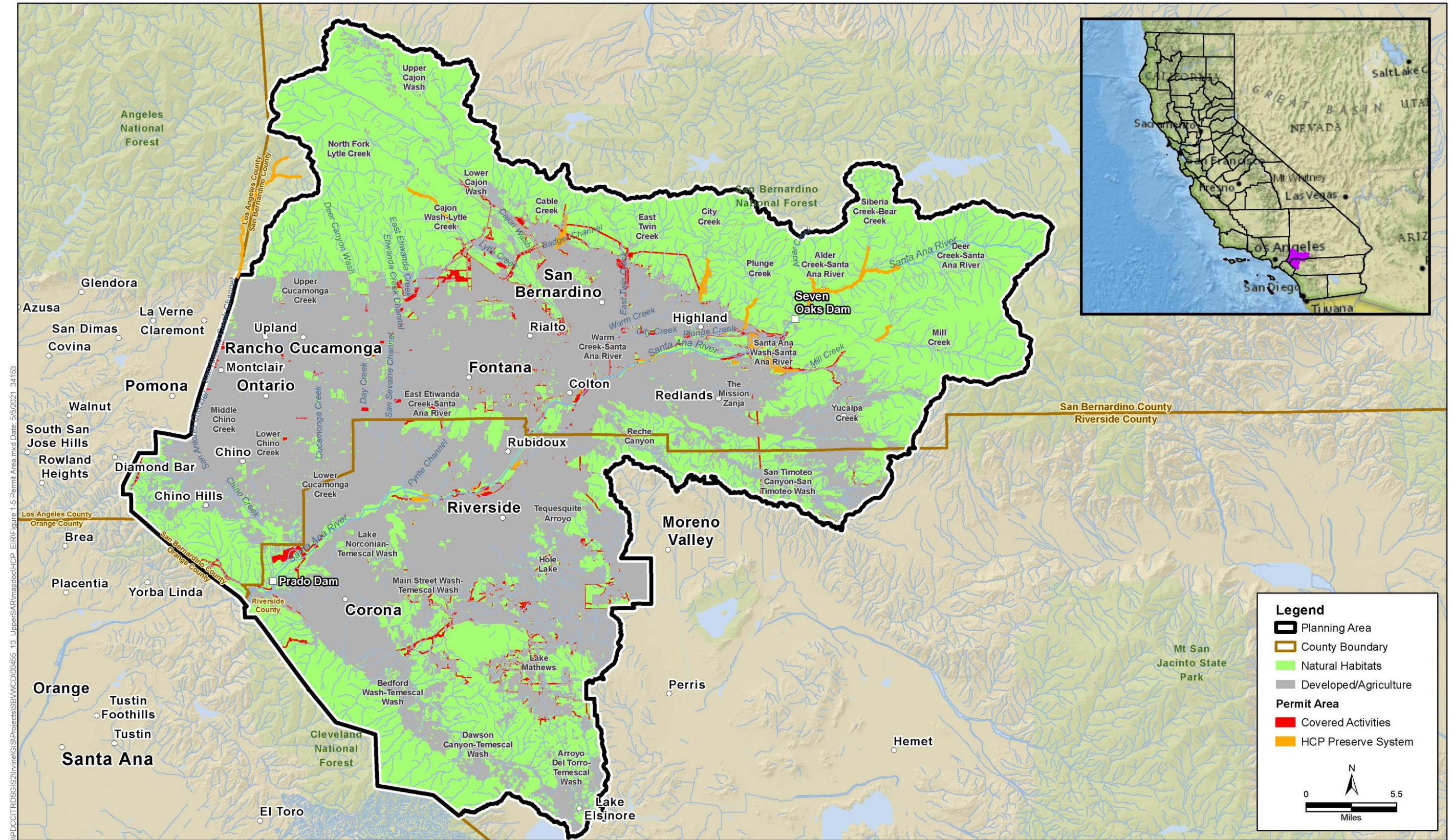


Figure 1-5. Permit Area



## 1.4 Related Laws and Regulations

The Upper SAR HCP is designed to comply with the FESA and the CESA. Implementation of the HCP will occur in compliance with other State and Federal wildlife and related laws and regulations, each of which is referenced below and described in greater detail in Section 1.3, *Regulatory Framework*, of the Upper SAR HCP.

- Federal Endangered Species Act (U.S. Code, Title 16, Section 153 et seq.)
- California Endangered Species Act (California Fish and Game Code Section 2050)
- California Fish and Game Code Sections 3511, 4700, 5050, and 5515 (Fully Protected Species)
- California Fish and Game Code Section 3503 (Bird Nests)
- California Fish and Game Code Section 3503.5 (Birds of Prey)
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act
- California Environmental Quality Act of 1970
- National Environmental Policy Act of 1969
- Clean Water Act Sections 401, 402, and 404
- Porter-Cologne Water Quality Control Act
- California Fish and Game Code Section 1600 et seq. (Lake or Streambed Alteration Agreement)
- National Historic Preservation Act

For a complete list of State and Federal permits that may be required for activities covered by the Upper SAR HCP, refer to Appendix A, *Covered Activities Permit Matrix*, in the Upper SAR HCP.

## 1.5 Permittees' Responsibilities

When public agencies jointly prepare and implement a programmatic HCP, they typically use a co-permittee structure. In this approach, all Permittees are named on one permit issued to all of them jointly. Following this approach, the public agencies will be co-permittees and the single private entity, SCE, will have its own ITP. The HCP delineates the responsibilities of each of the water agencies and SCE for HCP implementation, including funding. This approach provides the greatest flexibility in implementation and ensures that all Permittees share equally in the obligations and risks associated with the HCP. As the lead agency under CEQA, Valley District has the principal responsibility for approving the project. The public agency Permittees will apply for one inclusive Section 10(a)(1)(B) ITP from USFWS for all species in the Upper SAR HCP and appropriate Section 2081(b) permits from CDFW for all State-listed species in the Upper SAR HCP after CEQA and NEPA approvals have been granted. SCE, as a private entity, will apply separately.

## 1.6 CEQA Environmental Review Process

### 1.6.1 Public and Agency Involvement During the Environmental Review Process

#### 1.6.1.1 Public Involvement During HCP Development

Public involvement was an integral part of the process of developing the HCP. Stakeholders and the public had the following opportunities to provide their input and influence the development of the HCP:

- Public scoping and public involvement associated with the CEQA process.
- Periodic presentations to official advisory and governing bodies of participating agencies (e.g., Board of Directors, stakeholder HCP meetings).

The Project website provided information about all public meetings and posted all public documents (<http://www.uppersarhpc.com/>).

Valley District, in cooperation with the other Permittees, developed the HCP in compliance with USFWS's public involvement guidelines (U.S. Fish and Wildlife Service and National Marine Fisheries Service 2016).

#### 1.6.1.2 Notice of Preparation and Public Scoping

*Scoping* refers to the process used to determine the focus and content of an EIR. Scoping solicits input on the potential topics to be addressed in an EIR, the range of project alternatives, and possible mitigation measures. Scoping is also helpful in establishing methods of assessment and in selecting the environmental effects to be considered in detail. Tools used in scoping this EIR included informal stakeholder and interagency consultation, a public scoping meeting, and publication of the Notice of Preparation (NOP).

Pursuant to State CEQA Guidelines §15082, the lead agency is required to send an NOP stating that an EIR will be prepared to the State Office of Planning and Research (OPR), responsible and trustee agencies, and Federal agencies involved in funding or approving the project. The NOP must provide sufficient information in order for responsible agencies to make a meaningful response. At a minimum, the NOP must include a description of the project, location of the project, and probable environmental effects of the project (State CEQA Guidelines §15082(a)(1)). Within 30 days after receiving the NOP, responsible and trustee agencies and OPR must provide the lead agency with specific detail about the scope and content of the environmental information related to that agency's area of statutory responsibility that must be included in the Draft EIR (State CEQA Guidelines §15082(b)).

On December 7, 2018, an NOP for the Proposed Project was submitted to the California OPR, and distributed to responsible and trustee agencies and other interested parties for a 46-day review period (CEQA requires a 30-day public review) that ended January 21, 2019, although late comments were accepted by Valley District and have been incorporated herein. The NOP was mailed to local, State, and Federal agencies and groups or individuals who had expressed interest in the project. Copies of the NOP were made available for public review on the Valley District website (<http://www.uppersarhpc.com/documents>) and at the Valley District offices at 380 East Vanderbilt

Way, San Bernardino, California 92408. Appendix A includes a copy of the NOP and all written comments.

Pursuant to State CEQA Guidelines §15082(c)(1), if a project is determined to have statewide, regional, or area-wide significance, the lead agency is required to conduct at least one scoping meeting. A public scoping meeting was held during the scoping period. The meeting was held on January 8, 2019, from 4:00 p.m. to 6:00 p.m. at the Valley District Office at 380 East Vanderbilt Way in San Bernardino, California. The scoping meeting provided an opportunity for the attendees to comment on environmental issues of concern and the alternatives that should be discussed in the EIR. Five agency representatives attended the scoping meeting, specifically from the City of Yucaipa, San Bernardino Municipal Water District, Chino Basin Watermaster (two members), City of Rialto, and AKD Consulting. No members of the public attended the meeting. No oral or written comments were provided during the scoping meeting.

## 1.6.2 Known Areas of Controversy and Issues of Concern

Pursuant to State CEQA Guidelines §15123(b)(2), a lead agency is required to include in the EIR areas of controversy raised by agencies and the public during the public scoping process. Issues of concern and issue areas include Santa Ana sucker, cultural and tribal resources, biological resources, water resources availability, air quality, greenhouse gases, cumulative effects, recreational uses and activities within the Santa Ana River area, public access, impacts on existing infrastructure projects, long-term restoration success, property acquisition impacts, timing of implementation and maintenance of activities, alternatives, and homeless encampments.

## 1.6.3 Draft EIR

The scope of environmental issues addressed in this Draft EIR was determined through review of environmental documentation developed for the Proposed Project, environmental documentation for nearby projects, and public and agency responses to the NOP. This Draft EIR provides an analysis of reasonably foreseeable impacts associated with the Proposed Project. For the purposes of this EIR, a modified baseline is used, and the assumptions for that baseline include physical environmental conditions, facilities, and ongoing programs that existed as of December 7, 2018 (publication date of the NOP to prepare this EIR) as well as the date that biological and hydrological analyses were conducted prior to 2018. This modified baseline is described in more detail in the *Environmental Setting* subsection of Chapter 3's *Introduction to the Analysis*. The impact analysis is based on changes to baseline conditions that would result from implementation of the Proposed Project.

In accordance with State CEQA Guidelines §15126, this Draft EIR describes the Proposed Project and the existing environmental setting; identifies short-term, long-term, and cumulative environmental impacts associated with project implementation; identifies mitigation measures for significant impacts; analyzes potential growth-inducing impacts; and provides an analysis of alternatives. Significance criteria have been developed for each environmental resource analyzed in this Draft EIR. The significance criteria are defined at the beginning of each impact analysis section, and determinations are categorized as follows:

- **No Impact.** This impact would cause no discernible change in the environment as measured by the applicable significance criteria; therefore, no mitigation would be required.

- **Beneficial Impact.** This impact would cause a net positive change in the environment as measured by the applicable significance criteria.
- **Less than Significant.** This impact would cause no substantial adverse change in the environment as measured by the applicable significance criteria; therefore, no mitigation would be required.
- **Significant.** This impact would cause a substantial adverse change in the physical conditions of the environment.
- **Significant and Unavoidable.** This impact would cause a substantial adverse change in the environment and cannot be avoided or mitigated to a less-than-significant level if the Proposed Project is implemented.

### 1.6.3.1 Public Review of the Draft EIR

In accordance with State CEQA Guidelines §15105, this Draft EIR has been submitted to the OPR State Clearinghouse for review by State agencies and is available for public review and comment for a **60-day review period**. A Notice of Availability has been circulated to Federal, State, and local agencies and interested parties, who may wish to review and issue comments on its contents. All comments should be directed to:

**Valley District**

Heather Dyer, General Manager

380 East Vanderbilt Way, San Bernardino, CA 92408

Email: [uppersarhcp@icf.com](mailto:uppersarhcp@icf.com)

Comments on the Draft EIR will be accepted in writing via mail or email. Written comments may be submitted anytime during the Draft EIR review period. During the 60-day review period, Valley District will conduct one public meeting open to the general public. The public meeting will include a brief presentation providing an overview of the Proposed Project, CEQA process, and findings of the Draft EIR. The meeting will be held as a Zoom meeting on **Tuesday, June 15, 2021, from 6 p.m. to 8 p.m.** Notices will provide the specific time and login information.

All written comments received on the Draft EIR will be considered, and responses will be included in the Final EIR. Comments on the Draft EIR must be received by 5:00 p.m. on the last day of the 60-day review period.

### 1.6.3.2 Final EIR

Once the Draft EIR public review period has ended, Valley District will prepare written responses to all comments received on the Draft EIR. The Final EIR will be composed of the Draft EIR, responses to comments received on the Draft EIR, and any changes or corrections to the Draft EIR that are made, including changes that may be made based on the responses to comments. As the lead agency, Valley District has the option to make the Final EIR available for public review prior to considering the Project for approval (State CEQA Guidelines §15089(b)). The Final EIR must be available to commenting agencies at least 10 days prior to certification (State CEQA Guidelines §15088(b)).

Prior to considering the Proposed Project for approval, Valley District's Board of Directors will review and consider the information presented in the Final EIR and will certify that the Final EIR has been adequately prepared in accordance with CEQA. Once the Final EIR is certified, Valley District's Board of Directors may proceed to consider project approval (State CEQA Guidelines §15090,



§15096(f)). Prior to approving the Proposed Project, Valley District must make written findings in accordance with State CEQA Guidelines §15091. In addition, Valley District must adopt a Statement of Overriding Considerations concerning each unmitigated significant environmental effect identified in the Final EIR (if any). The findings and Statement of Overriding Considerations will be included in the record of the Project's approval and mentioned in the Notice of Determination following State CEQA Guidelines §15093(c). Pursuant to State CEQA Guidelines §15094, Valley District will file a Notice of Determination with the OPR State Clearinghouse, the San Bernardino County Clerk, and the Riverside County Clerk within 5 working days after project approval.

### 1.6.3.3 Mitigation Monitoring and Reporting Program

CEQA requires lead agencies to “adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment” (State CEQA Guidelines §15097). The mitigation measures, if any, adopted as part of the Final EIR will be included in a Mitigation Monitoring and Reporting Program and implemented by Valley District.

## 1.7 EIR Document Organization

This EIR is organized into the following chapters.

- **Executive Summary.** This introductory section summarizes the elements of the Proposed Project and the environmental impacts that would result from its implementation, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation. It also acknowledges alternatives that could reduce or avoid significant impacts.
- **Chapter 1, Introduction.** This chapter provides an introduction and overview describing the intended use of the EIR and the review and certification process.
- **Chapter 2, Project Description.** This chapter provides a detailed description of the Proposed Project, including the Project's location, background information, major objectives, and components.
- **Chapter 3, Environmental Setting, Impacts, and Mitigation Measures.** The evaluation of environmental impacts is presented on a resource-by-resource basis in Sections 3.1 through 3.19 of the EIR. Each technical section is organized around four subsections: Environmental Setting, Regulatory Framework, Impacts and Mitigation, and Summary of Potential Types of Impacts of Covered Activities. This chapter also evaluates the Proposed Project for each environmental resource area (aesthetics, agricultural resources; air quality; biological resources; cultural resources; geology soils, and paleontological resources; greenhouse gas emissions and energy; hazards and hazardous waste; hydrology and water quality; land use and planning; mineral resources; noise; population and housing; public services; recreation; transportation; tribal cultural resources; utilities and service systems; and wildlife).
- **Chapter 4, Cumulative Impacts.** This chapter provides a summary of cumulative impacts, which are created as a result of the combination of the Proposed Project together with other projects causing effects in the project area.
- **Chapter 5, Statutorily Required Sections.** This chapter provides discussions required by CEQA regarding impacts that would result from the Proposed Project, including potential growth-

inducing impacts, significant and unavoidable impacts, and significant irreversible changes to the environment.

- **Chapter 6, Alternatives Analysis.** This chapter presents an overview of the alternatives development process and describes the alternatives to the Proposed Project that were considered. It includes an evaluation of the No Project Alternative and three alternatives to the Proposed Project, and discusses the alternatives that were eliminated from detailed consideration in the EIR. It also identifies the environmentally superior alternative.
- **Chapter 7, Report Preparation and Persons Consulted.** EIR authors who provided technical assistance in the preparation and review of the Draft EIR are listed in this chapter.
- **Chapter 8, References and Consultations.** This chapter provides bibliographic information for all references and resources cited. The chapter also summarizes personal communications made during the EIR process.
- **Appendices.** The appendices include the NOP and comments received during the NOP comment period in Appendix A, a review of regional and local regulations organized by environmental resource in Appendix B, and programmatic evaluation for Covered Activities included as part of the HCP in Appendix C.

## 2.1 Introduction

The San Bernardino Valley Municipal Water District (Valley District), 10 other water agencies, and Southern California Edison (SCE) (collectively, the Permittees) are proposing to adopt and implement a conservation plan to address the species-related effects of certain public infrastructure projects and other activities (Covered Activities) expected to be carried out in and around the Upper Santa Ana River over the next 50 years. This conservation plan, known as the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP or Proposed Project), would be adopted by the Permittees and implemented by a joint exercise of powers authority composed of those agencies. The Upper SAR HCP would achieve conservation goals and comply with State and Federal environmental regulations, while establishing a preserve system and streamlining planning and permitting for planned water supply or other infrastructure projects needing incidental take coverage for endangered and threatened species in the Upper Santa Ana River watershed.

This chapter provides a specific definition of the Proposed Project (Section 2.2.1) and provides a summary of HCP components that compose the Proposed Project evaluated in this environmental impact report (EIR). The analysis of the alternatives to the Proposed Project is presented in Chapter 6, *Alternatives Analysis*.

### 2.1.1 Plan Location and Setting

The Planning Area is in San Bernardino and Riverside Counties and includes the majority of the upper Santa Ana River watershed. The Planning Area extends from Prado Dam along the San Bernardino County and Los Angeles County line to the north, and then along the Santa Ana River watershed boundary west to east in the San Gabriel and San Bernardino Mountains, reaching elevations of approximately 2,000 to 8,000 feet in the Planning Area. The Planning Area continues south into Riverside County to the Box Spring Mountains (at elevations up to approximately 2,500 feet), and then southwest through the Moreno Valley to the eastern slopes of the Santa Ana Mountains (at elevations up to approximately 3,500 feet) where it runs north again along the border with Orange County. Elevation in the valleys ranges from approximately 500 feet at Prado Basin to approximately 2,000 feet at the eastern end of San Bernardino Valley. Figure 1-1 in Chapter 1, *Introduction*, shows the Planning Area's regional location. Please refer to Section 1.1.2 in Chapter 1 for a description of the Planning and Permit Areas used in this EIR.

Conservation actions, including management and monitoring of mitigation sites, would occur within the larger Planning Area. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County.

A large portion of the Planning Area consists of unincorporated lands in Riverside and San Bernardino Counties, which are largely rural areas with undeveloped lands. The Planning Area also includes a number of cities: Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and

Yucaipa in San Bernardino County; and Beaumont, Calimesa, Corona, Eastvale, Jurupa Valley, Lake Elsinore, Moreno Valley, Norco, and Riverside in Riverside County.

In general, the portions of the Planning Area that are located within cities are more urban areas. Often, the principal land use within cities is residential, along with urban uses (e.g., retail, commercial, schools) developed to support the residential uses. There may also be industrial development in these more urban areas. Sensitive receptors in the Planning Area include residential uses, transient lodging such as hotels, schools, hospitals, places of worship, and recreational parks.

## 2.2 Elements of the Proposed Project

This section provides a definition of the Proposed Project that was used to focus the analyses and significance conclusions; project goals and objectives used to develop the Proposed Project and alternatives to the Proposed Project (Chapter 6, *Alternatives Analysis*); and summaries of the Covered Species, Conservation Strategy, and Covered Activities. Please refer to the Upper SAR HCP for detailed descriptions.

### 2.2.1 Definition of the Proposed Project

The Upper SAR HCP is a regional, comprehensive program that would provide a framework to protect, enhance, and restore the habitat for specifically identified plant and animal species (Covered Species), while streamlining permitting for Covered Activities. The term Proposed Project, as used in this EIR, for California Environmental Quality Act (CEQA) purposes, is defined as the adoption and implementation of the Upper SAR HCP and associated Incidental Take Permits (ITPs) for Permittees. Therefore, the Proposed Project evaluated in this EIR is focused on the potential direct and indirect impacts that could result from the implementation of conservation actions and the issuance of ITPs for Covered Activities.

For biological resources and hydrology, the Proposed Project impacts address the net effect of implementing the conservation actions in context with the Covered Species habitat impacts. The Proposed Project is specifically designed to offset (minimize and mitigate) Covered Activity habitat and streamflow impacts on Covered Species.

The analyses presented in this EIR are focused on the direct and indirect impacts that may result from implementing the Proposed Project, which include the following major elements:

- Issuance of permits for the incidental take of 20 of the 22 Covered Species.
- Conservation and restoration activities within an HCP Preserve System to be established and managed for Covered Species habitat.
- Additional actions to improve aquatic, riparian, and alluvial scrub habitats, as well as additional sensitive habitats throughout the Upper Santa Ana River watershed (i.e., not necessarily within the HCP Preserve System).
- Species-specific conservation measures that also include the re-establishment of native fish species, through processes of captive headstarting and translocation, to create additional resilience to extinction by establishing redundant populations in the Upper Santa Ana River watershed mountain tributary streams.

- Upper SAR HCP Preserve System management and monitoring, including habitat improvement, the control of nonnative species (flora and fauna), Covered Species captive headstarting and translocation activities, species surveys and research, additional vegetation management to reduce fire potential, site cleanup, preserve patrols, and others.

## 2.2.2 Proposed Project Objectives

CEQA requires an EIR to contain a statement of the objectives of the project, including the underlying purpose of the project (State CEQA Guidelines §15124(b)). The goal, or underlying purpose, of the Proposed Project is to streamline permitting for Covered Activities by protecting and restoring the habitats needed for Covered Species to offset the effects of water supply management activities in the HCP Planning Area. To meet this goal, the Upper SAR HCP includes a Conservation Strategy that will conserve and protect the long-term ecological health and resilience of Covered Species and other non-listed native species within the HCP Preserve System.

In addition to this overarching goal, the Proposed Project would achieve the following, specific project objectives.

- Provide Federal ITPs that facilitate the ability of the Permittee Agencies to construct new facilities and/or operate and maintain facilities associated with their mission.
- Establish the HCP Preserve System.
- Maintain, enhance, or establish metapopulations of Covered Species within the HCP Preserve System.
- Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.
- Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

To achieve these objectives, the Upper SAR HCP describes avoidance and/or minimization of impacts, mitigation measures to ensure habitat conservation strategies, compatible joint uses of lands, and land use restrictions.

The following HCP objectives will support the HCP goals:

- Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.
- Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.
- Maintain and successfully enhance existing and new Santa Ana sucker habitats.
- Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.
- Implement successful conservation measures to promote the recovery of Covered Species.

- Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.

### 2.2.3 Covered Species

The HCP addresses both Federally and State-listed threatened and endangered species, as listed in Table 2-1. Although the primary intent of the Proposed Project is to provide mitigation for effects on Covered Species, it would also contribute to the overall protection of native biological diversity, habitat for native species, natural communities, and local ecosystems. This broad scope would conserve a wide range of natural resources, including native species that are common and those that are rare.

As listed in Table 2-1, 20 species are covered by the Proposed Project, 9 listed and 11 non-listed species, and there are 2 additional fully avoided species that are listed but that will be fully avoided by impacts from Covered Activities. The incidental take authorization under Section 10 of the Federal Endangered Species Act (FESA) will apply to the wildlife species. Impacts on listed plant species are not prohibited under the FESA or authorized under a Section 10(a)(1)(B) permit. However, the two plant species conserved by the Proposed Project are listed in the 10(a)(1)(B) permit in recognition of the conservation measures and benefits provided for them under the Upper SAR HCP such that the Permittees will receive assurances pursuant to the U.S. Fish and Wildlife Service (USFWS) “No Surprises” Rule. Similarly, the unlisted Covered Species will also receive assurances under the “No Surprises” Rule should they become listed in the future. In addition to Covered Species for which incidental take authorization is requested, two species are fully avoided species: Delhi Sands flower-loving fly and arroyo toad. The avoidance and minimization measures (AMMs) included in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP are expected to reduce any adverse effects on these species so that any adverse effects from Covered Activities would not rise to the level of take (see Section 2.2.3.1, *Federal and State Definitions of Take*, below).

State authorization for incidental take of other wildlife species that may be State-listed in the future may be sought through the amendment process and in accordance with the applicable provisions of the California Fish and Game Code. Although the California Department of Fish and Wildlife (CDFW) will not approve the Upper SAR HCP, its conservation strategies are intended to satisfy the requirements of the California Endangered Species Act (CESA) and support the issuance of the ITP(s). Species for which incidental take authorization will be requested under the CESA are indicated as State-listed species in Table 2-1. Please also refer to descriptions of the Covered Species in Section 3.8 of Chapter 3, *Planning Area and Existing Environment*, of the Upper SAR HCP for more detail.

**Table 2-1. Covered Species**

Common Name	Scientific Name	Status	
		Federal	State
<i>Covered Species</i>			
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	Endangered	Endangered
Santa Ana River woolly-star	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Endangered	Endangered
Santa Ana sucker	<i>Catostomus santaanae</i>	Threatened	None
Arroyo chub	<i>Gila orcuttii</i>	None	SSC
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	None	SSC

Common Name	Scientific Name	Status	
		Federal	State
Mountain yellow-legged frog (Southern California DPS)	<i>Rana muscosa</i>	Endangered	Endangered
Western spadefoot	<i>Spea hammondi</i>	None	SSC
California glossy snake	<i>Arizona elegans occidentalis</i>	None	SSC
South coast garter snake	<i>Thamnophis sirtalis</i> sp.	None	SSC
Western pond turtle	<i>Emys pallida</i>	None	SSC
Tricolored blackbird	<i>Agelaius tricolor</i>	None	Threatened
Burrowing owl	<i>Athene cunicularia</i>	None	SSC
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	None	SSC
Yellow-breasted chat	<i>Icteria virens</i>	None	SSC
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Threatened	Endangered
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered
Coastal California gnatcatcher	<i>Polioptila californica</i>	Threatened	SSC
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	Endangered
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	None	SSC
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	Endangered	Candidate
<i>Fully Avoided Species<sup>a</sup></i>			
Delhi Sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	Endangered	None
Arroyo toad	<i>Anaxyrus californicus</i>	Endangered	None

<sup>a</sup> Implementation of avoidance measures as described in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP would prevent the take of these species.

DPS = Distinct Population Segment; SSC = California Department of Fish and Wildlife Species of Special Concern

### 2.2.3.1 Federal and State Definitions of Take

Under the FESA, the term *take* (sometimes referred to as *taking*) is defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Harm* is defined as “an act which actually kills or injures wildlife [and] may include significant habitat modification.” Note that, under the Supreme Court’s decision in *Babbitt v Sweet Home Chapter Communities for a Great Oregon*, not every action that modifies habitat results in a take under the FESA. Nonetheless, this EIR considers all of the impacts on Covered Species, regardless of whether they arise to the level of take in any particular instance.

The definition of take under the CESA is narrower than the Federal definition (Section 86 of the California Fish and Game Code defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill”). In considering issuance of an ITP under Section 2081 of the CESA, however, CDFW must consider all of the impacts on State-listed species that are caused by the action to be permitted, even if not all of those impacts arise to the level of take under the CESA.

### 2.2.3.2 Incidental Take Authorizations for Non-Listed Covered Species

Non-listed Covered Species must be treated as if they were already listed. All conservation measures described in the Upper SAR HCP for non-listed species must satisfy the permit issuance criteria under Section 10(a)(2)(B) of the FESA that would otherwise apply if the non-listed Covered Species were actually listed (50 Code of Federal Regulations 17.3). The Federal ITPs will identify all Covered Species regardless of Federal listing status. The Federal ITPs will become effective for the incidental taking of listed Covered Species at the time the Federal ITPs are issued, provided the implementation of Covered Activities is compliant with the terms of the Federal ITPs. The Federal ITPs will become effective for a non-listed Covered Species upon the listing of such species. Any reference in the Upper SAR HCP to incidental take of Covered Species refers to potential impacts on all Covered Species, regardless of current Federal listing status.

## 2.2.4 Conservation Strategy

The Proposed Project's Conservation Strategy, described in detail in Chapter 5 of the Upper SAR HCP, is designed to avoid, minimize, and mitigate impacts on Covered Species to the maximum extent practicable. The strategy was designed to meet the regulatory requirements of both the Federal and State Endangered Species Acts (FESA and CESA, respectively) and to streamline compliance with other applicable State and Federal environmental laws and regulations. The Conservation Strategy defines biological goals and objectives, and describes the implementation of conservation actions in relation to achieving these goals.

The following sections summarize the elements of the Conservation Strategy, which include mitigation based on the biological needs of the Covered Species and, when fully implemented, will meet the biological goals and objectives of the Proposed Project. This HCP mitigation will also offset the impacts of Covered Activities to the maximum extent practicable.

### 2.2.4.1 Biological Goals and Objectives (Section 5.3 of the Upper SAR HCP)

Biological goals are broad, guiding principles based on the conservation needs of the Covered Species. The following biological goals will be accomplished within the HCP Preserve System.

- **Goal 1:** Conserve Covered Species and manage their habitats to contribute to the recovery of listed species or those that may become listed under the FESA.
- **Goal 2:** Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- **Goal 3:** Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.
- **Goal 4:** Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

The following biological objectives will support the HCP goals:

- **Objective 1:** Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.



- **Objective 2:** Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.
- **Objective 3:** Maintain and successfully enhance existing and new Santa Ana sucker habitats.
- **Objective 4:** Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.
- **Objective 5:** Implement successful conservation measures to promote the recovery of Covered Species.
- **Objective 6:** Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.

Species-specific objectives and species-specific conservation actions are presented for each Covered Species in Section 5.9, *Species-Specific Conservation Strategies*, to achieve the HCP-level goals and objectives.

### 2.2.4.2 HCP Preserve System (Section 5.4 of the Upper SAR HCP)

The HCP Preserve System includes a network of conservation lands selected for their existing biological resource values and restoration potential. Over the 50-year permit term for the Upper SAR HCP, the HCP Preserve System would provide a means for protecting, restoring, managing, and monitoring the natural communities and habitats that support the recovery of the Covered Species. The HCP Preserve System is shown on Figure 2-1. As the figure shows, the HCP Preserve System includes Conservation Areas that are contiguous with existing open space and protected areas within the Planning Area.

The HCP Implementing Entity will be the Upper Santa Ana River Sustainable Resources Alliance (Alliance), which will be established by the Upper SAR HCP joint exercise of powers authority. The Alliance will be responsible for implementing the HCP and all conservation actions described in the Conservation Strategy for the permanent conservation of a minimum of approximately 1,349 acres within the HCP Preserve System, and assisting the other Permittee Agencies in complying with the conditions of the HCP ITPs in connection with their Covered Activities.

The HCP Preserve System will be assembled through a combination of property acquisitions, and/or establishment of conservation easements. Habitat improvement will occur on land within the HCP Preserve System and will be managed and monitored through the Comprehensive Adaptive Management and Monitoring Program (CAMMP) to be implemented by the Alliance.

## Phasing

Upper SAR HCP implementation has been separated into phases to ensure that the conservation actions and associated mitigation are able to stay ahead of the impacts of Covered Activities. Covered Activities are also anticipated to occur in different phases during implementation of the HCP. These HCP phases are as follows (Table 2-2):

- **Phase 1**—0 to 5 years from permit issuance
- **Phase 2**—6 to 10 years from permit issuance
- **Phase 3**—11 to 15 years from permit issuance
- **Phase 4**—16 years from permit issuance to end of permit term

Approximately 80.9 acres (6%) of the HCP Preserve System will be dedicated for conservation and under active habitat management prior to HCP implementation. Approximately 825.9 acres (61%) of the HCP Preserve System will be dedicated for conservation during Phase 1 of the permit duration, with the remaining 442.1 acres (33%) dedicated in Phase 2. Additionally, approximately 2,441.5 acres of ground-disturbing impacts are anticipated for Covered Activities across all phases. Approximately 1,182.0 acres (48%) will be affected during Phase 1, 908.7 acres (37%) during Phase 2, 198.6 acres (8%) during Phase 3, and 152.2 acres (6%) during Phase 4 of HCP implementation.

The HCP Preserve System is included within the HCP Permit Area, and the ITPs cover the potential impacts associated with habitat improvement, management, research, and monitoring associated with the Conservation Strategy. The HCP Preserve System is divided into five main preserve units: Santa Ana River Preserve Unit, Alluvial Fan Preserve Unit A, Alluvial Fan Preserve Unit B, and Santa Ana Sucker Translocation Preserve Units A and B. All conserved lands planned for within the HCP Preserve System will become an important component of the network of preserved lands that includes other HCPs and Natural Community Conservation Plans (e.g., the Upper Santa Ana River Wash HCP, Western Riverside County Multiple Species Habitat Conservation Plan), open space parks and wildlife areas (e.g., county parks and CDFW lands), and other public lands (e.g., United States Forest Service and Bureau of Land Management lands).

Various habitat management, maintenance, and monitoring activities in the HCP Preserve System will also be implemented during the permit term to meet the biological goals and objectives of the Conservation Strategy.



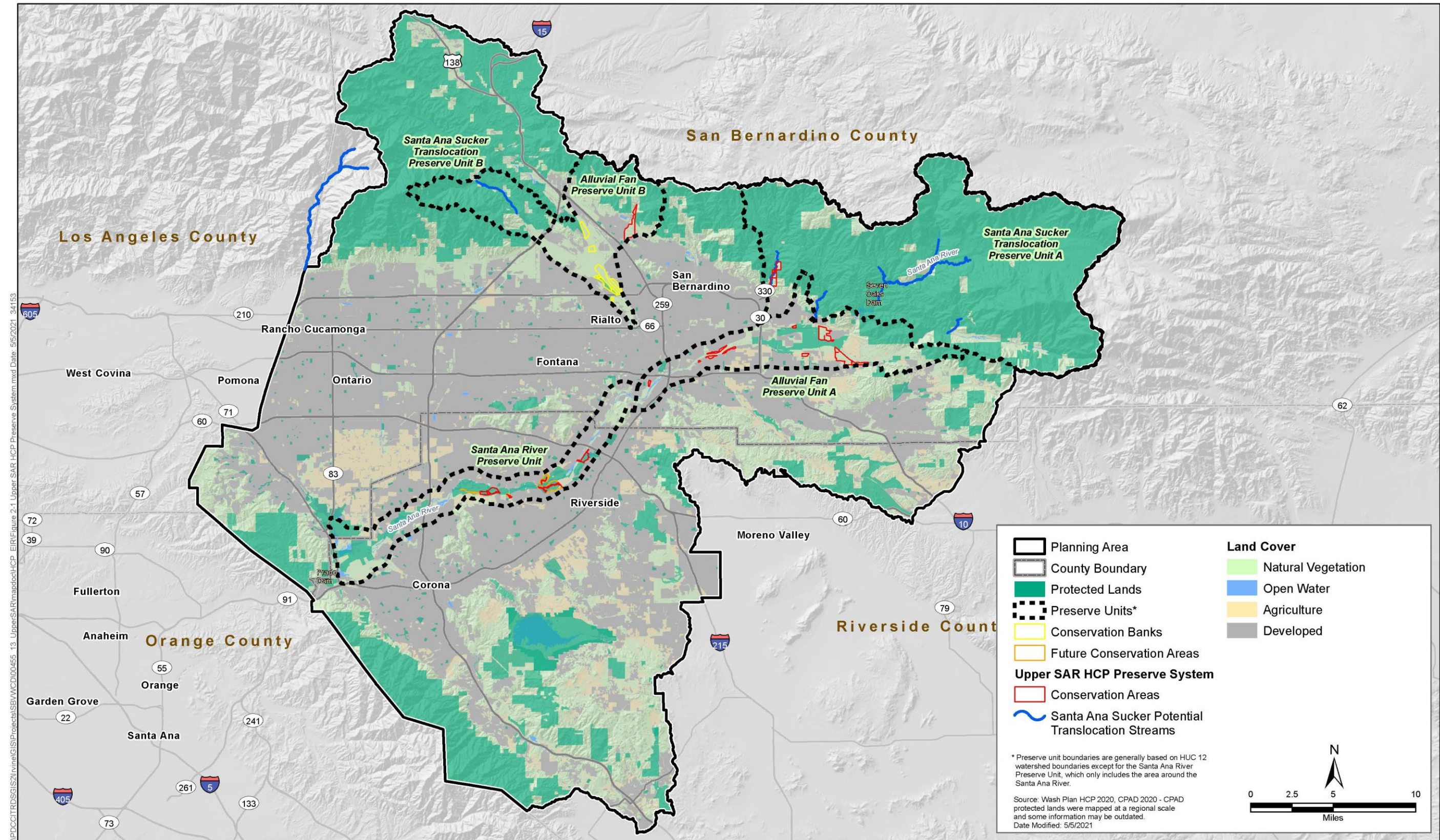


Figure 2-1. Upper Santa Ana River HCP Preserve System



*This page intentionally left blank.*

## Up-Front and Stay-Ahead Provisions

The HCP's Up-Front and Stay-Ahead Provisions require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. The Alliance will ensure that HCP implementation is in compliance with the Up-Front and Stay-Ahead Provisions by monitoring and tracking the establishment and management of the HCP Preserve System along with tracking of Covered Activity impacts. To ensure that mitigation is "In-Step" and ahead of impacts (i.e., similar or superior Covered Species habitat is being acquired, restored, and managed, compared to that affected by Covered Activities), the Up-Front and Stay-Ahead Provisions will track mitigation and impacts by vegetation type. Compliance with and status of the Up-Front and Stay-Ahead Provisions will be implemented through the consistency review process for Covered Activities and via the submission of annual reports.

## Mitigation Reserve Program (Mitigation Accounting)

The Alliance will establish a Mitigation Reserve Program to account for and track the development of conservation values (e.g., species, waters, and/or habitat values) as well as account for the use of these values to offset future permit requirements for Covered Activities. The purpose of the Mitigation Reserve Program is to establish a common understanding and legal framework for the conservation values created by HCP conservation actions, and to establish a transparent mechanism for tracking those values (creation and use) over time. In this way the Mitigation Reserve Program will be used to inform and track regulatory compliance of the Covered Activities, including species and aquatic resource mitigation.

The Mitigation Reserve Program will provide accounting to establish and track all conservation values as they are established (e.g., through acquisitions, conservation easements, and restoration/rehabilitation) and used (i.e., dedicated to offset a specific project's impacts) and maintain records on the management of those resources over time. As Covered Activities are implemented under the HCP, the impacts on species and aquatic resources will be monitored, tracked, and debited from the Mitigation Reserve Program for an efficient and transparent process for using conservation values.

The Mitigation Reserve Program will include development of legal agreements, where relevant, that will formalize the conservation values created by establishment of Conservation Areas within the HCP Preserve System as recognized by the environmental regulatory agencies (U.S. Army Corps of Engineers, CDFW, Regional Water Quality Control Board, and USFWS).

## Conservation Areas

Habitat improvement projects are being pursued in all five of the HCP Preserve Units. There are 20 Conservation Areas that have been identified to date as potential mitigation sites for the HCP (Figures 5-2 through 5-5 of the Upper SAR HCP). These areas were identified because they have suitable habitat or could be restored to support habitat for Covered Species. Some locations also support presumed extant occurrences of Covered Species. Additionally, these areas were selected because they were adjacent to, or in close proximity to, other protected areas of habitat in the network of protected lands in the Upper SAR HCP. Therefore, they have high potential for sustaining Covered Species on habitat to be conserved and managed under the HCP.

Throughout the HCP the acreages of habitat contained in the Preserve System are quantified by natural vegetation community type (as in Table 2-2) and by acres of suitable habitat based on species habitat suitability models (see individual species tables in Section 5.9 of the HCP). However, the acres of potential restoration are based on early restoration designs for many of the sites, and/or based on the judgment of restoration experts with respect to the restoration potential of each site. These acres represent the potential amount of suitable habitat that could be restored on each site, and will serve as a general restoration target for each site.

Because habitat improvement may involve some type of land disturbance or habitat manipulation to create, restore, or rehabilitate conditions for Covered Species, these projects are also considered Covered Activities. Implementation of each restoration project may result in greater or lesser acreages of individual Covered Species habitat depending on the final restoration site design and restoration site performance. Future restoration projects will continue to be developed and implemented over time to ensure that the HCP is able to achieve and maintain its biological goals and objectives.

Approximately 80.9 acres of the HCP Preserve System will be dedicated for conservation and under active habitat management prior to HCP implementation. Additionally, approximately 825.9 acres of habitat in Conservation Areas will be acquired or have easements established under Phase 1 of the HCP (much of which will have already been achieved by the time of HCP permit issuance). Another 442.1 acres are identified for Phase 2. Because the acquisition and/or establishment of easements is dependent on willing sellers it is possible that not all of these 20 Conservation Areas will become a part of the HCP Preserve System. Similarly, other potential Conservation Areas with suitable habitat for Covered Species may become available in the future and could be added to the HCP Preserve System.

Total habitat acreage for the up-front provisions, two phases, and 20 Conservation Areas includes riparian habitat (208.3 acres), wetlands (39.0 acres), permanent water (37.8 acres), alluvial fan sage scrub (509.4), dry channel/shrublands (51.4 acres), other shrublands (314.3 acres), grasslands (152.5 acres), woodlands (21.0 acres), and rock outcrops (15.2 acres), for a total natural habitat area of 1,348.8 acres. Any Conservation Areas currently identified for acquisition and/or easements or identified in the future will require wildlife agencies' concurrence before becoming part of the HCP Preserve System and the conservation value(s) assigned to the HCP. All areas that become a part of the HCP Preserve System will be monitored and adaptively managed according to the Comprehensive Adaptive Management and Monitoring Program of the HCP.

Restoration projects are divided into the HCP Preserve Unit within which they are located.

The Santa Ana River Preserve Unit includes multiple tributary stream restoration/rehabilitation projects that will be constructed predominantly prior to HCP finalization and during Phase 1 at the following tributary restoration project areas: Anza Creek and Old Ranch Creek, Lower Hole Creek, Hidden Valley Creek, Hidden Valley Ponds, Evans Lake Drain, and Sunnyslope Creek. The focus of these projects is to restore tributary streams and the adjacent riparian and/or upland buffer habitat to create and/or rehabilitate existing habitat for Santa Ana sucker and/or other aquatic and riparian Covered Species. These projects include the creation of new channels, restoration or rehabilitation of existing channels, expansion or creation of floodplains, control of nonnative invasive vegetation, and limiting of human disturbance. The Upper SAR HCP also identifies specific restoration actions in portions of existing creeks.

In addition to restoration/rehabilitation of the tributaries and their adjacent riparian buffers, the HCP Conservation Strategy includes restoration/rehabilitation of the adjacent and associated riparian floodplain habitats. Restoration/rehabilitation of these areas are proposed to occur predominantly during Phase 2 and include Hidden Valley Creek and Hidden Valley Ponds. These projects would restore/rehabilitate the broader riparian floodplain beyond the riparian buffer associated with the tributary stream restoration projects discussed above.

Restoration/rehabilitation projects within Alluvial Fan Preserve Unit A will focus on the improvement of habitat for alluvial scrub species including San Bernardino kangaroo rat and Santa Ana River woolly-star. Restoration and/or rehabilitation of the Redlands Airport, San Bernardino Avenue, and Weaver sites will commence prior to HCP finalization. The Enhanced Recharge Basins and Santa Ana Refugia sites will commence in Phase 1. The Drainage A Woolly-Star site (or alternate location of similar acreage and restoration potential) is planned for Phase 2.

Restoration/rehabilitation projects within Alluvial Fan Preserve Unit B will also focus on the improvement of habitat for alluvial scrub species. One project has been identified to date within this preserve unit, but other locations are being actively pursued. Habitat improvement of the Devil Creek site will occur during Phase 1 of HCP implementation. Conservation activities will include the rehabilitation of alluvial fan scrub habitat and adjacent habitat for the benefit of Covered Species.

Habitat improvement within Santa Ana Sucker Translocation Units A and B will focus on aquatic and riparian Covered Species. The City Creek site has been identified to occur in Phase 2 of HCP implementation. Habitat improvement actions within the lower foothill portion of the creek will provide species benefits and reduce the propensity of wildfire ignitions.

**Table 2-2. Approximate Phasing of HCP Preserve System Assembly and Habitat Improvement Projects**

<b>Vegetation Types</b>	<b>Up-Front</b>	<b>HCP Phase 1 (years 0-5)</b>	<b>HCP Phase 2 (years 6-10)</b>	<b>HCP Phase 3 (years 11-15)</b>	<b>HCP Phase 4 (years &gt;15)</b>	<b>Totals</b>
<b>HCP Preserve System (acres)</b>						<b>HCP Preserve System Total</b>
Riparian	11.1	103.4	93.8	--	--	208.3
Wetlands	1.2	12.5	25.4	--	--	39.0
Permanent Water	1.7	18.7	17.4	--	--	37.8
Water in Existing Basins	--	--	--	--	--	--
Alluvial Fan Sage Scrub	16.8	487.1	5.5	--	--	509.4
Dry Channel/Shrubland	0.1	7.5	43.8	--	--	51.4
Other Shrublands	0.8	81.3	232.1	--	--	314.3
Woodlands	--	21.0	--	--	--	21.0
Grasslands	49.2	79.5	23.9	--	--	152.5
Rock Outcrops	--	15.0	0.2	--	--	15.2
<i>Total by Phase</i>	80.9	825.9	442.1	--	--	1,348.8
<b>Conserved Habitats (acres or stream miles)</b>						<b>Conservation Total</b>
Tributary Stream Channel <sup>a</sup> (stream miles/acres)	--	1.5/1.7	2.4/1.9	--	--	3.9/3.6
Santa Ana River Microhabitat (acres)	--	1.5	--	--	--	1.5
Riparian <sup>b</sup> (acres)	11.1	103.4	93.8	--	--	208.3
Wetland <sup>c</sup> (acres)	1.2	12.5	25.4	--	--	39.1
Alluvial Fan Sage Scrub <sup>d</sup> (acres)	16.8	436.9	5.5	--	--	459.2
<i>Total by Phase (stream miles)</i>	--	1.5	2.4	--	--	3.9
<i>Total by Phase (acres)</i>	29.1	556.0	126.6	--	--	711.7
Additional Area <sup>e</sup>	51.8	269.9	315.5	--	--	637.2
<b>Grand Total</b>	80.9	825.9	442.1	--	--	1,348.8

<sup>a</sup> Tributary stream channel restoration at Hidden Valley Creek, Anza Creek, Old Ranch Creek, Lower Hole Creek, Evans Lake Creek and installation of Santa Ana River Microhabitat Structures.

<sup>b</sup> Floodplain restoration at Hidden Valley Creek and Ponds, Evans Lake Creek, Sunnyslope Creek.

<sup>c</sup> At Hidden Valley Creek and Ponds.

<sup>d</sup> Alluvial fan sage scrub restoration within Alluvial Fan Units A and B.

<sup>e</sup> Additional area within Conservation Areas that have/will be assessed to determine habitat improvement potential.



### **2.2.4.3 Hydrologic Manipulation and Substrate Management (Section 5.5 of the Upper SAR HCP)**

The goal of this habitat management action is to create a minimum of six nodes of habitat created by installing a series of structures within the stream flow of the mainstem Santa Ana River to increase flow velocity and increase localized sediment transport of fine sediment (scour) in order to create and maintain suitable microhabitats for native fishes. The expectation is that these structures (made of natural materials) will increase the total amount of suitable habitat available to Santa Ana sucker, including riffles, small scour pools, and exposed patches of coarse substrate. Strategically placing the microhabitat creation structures downstream of the San Bernardino/Colton Rapid Infiltration and Extraction Facility discharge location between occupied reaches will create “steppingstone” nodes of habitat to connect occupied areas and the new mainstem tributary restoration/rehabilitation sites and facilitate movement of native fishes between newly created habitat and currently occupied areas. Where appropriate, structures made of natural materials such as boulders, large cobble, and large woody debris will be used to manipulate the flow and path of the river to increase and maintain habitat suitability for Santa Ana sucker. Structures could also include stream diversion features that would be an engineered structure to serve multiple purposes, at minimum to include water diversion and sediment exclusion, and may include a weir, boulder clusters, large woody debris, groin, etc.

This conservation measure will include actions to improve stream habitat including Santa Ana River mainstem microhabitat creation with natural instream structures, coarse substrate management and rehabilitation, Santa Ana River flow and path manipulation, water flow and temperature improvement in Rialto Channel with groundwater pumped from wells, and flow improvement in Tequesquite Creek from a recycled water pipeline.

### **2.2.4.4 Captive Headstarting and Translocation (Section 5.6 of the Upper SAR HCP)**

Two conservation programs are underway that are supported in part by the Upper SAR HCP, including for Santa Ana sucker and mountain yellow-legged frog. A Translocation Plan will be developed for the Santa Ana sucker and will serve as a framework for evaluating potential translocation sites, translocating Santa Ana sucker to those sites should they be found suitable, and monitoring the new population, with the ultimate goal of creating and maintaining persistent and reproducing (viable) populations that are resilient to natural disturbance and anthropogenic changes. No translocation plan is proposed for the mountain yellow-legged frog; however, the Upper SAR HCP will continue to support the San Diego Zoo Institute for Conservation Research (renamed the San Diego Zoo Wildlife Alliance) captive headstarting and reintroduction program, and the U.S. Geological Survey’s conservation efforts for this species.

### **2.2.4.5 Species and Habitat Research (Section 5.7 of the Upper SAR HCP)**

This conservation measure includes conducting research and additional surveys and analysis for these key species: Santa Ana sucker, mountain yellow-legged frog, western spadefoot, Santa Ana speckled dace, and southwestern pond turtle.

- Santa Ana sucker population genetics research and management will involve characterizing the current status of the genetic health of the Santa Ana River population and compare this with historic collections of Santa Ana sucker to inform how genetic health and diversity of this

population has changed. Additionally, the information collected will help guide the translocation program (which may include captive headstarting in the future) that will ultimately provide fish for reestablishment efforts in portions of the species' historic range within the Santa Ana River watershed.

- Mountain yellow-legged frog surveys will collect data on demographics, distribution, and population size as well as disease, water quality, habitat parameters, and site disturbances.
- Western spadefoot surveys will identify breeding sites and evaluate occupancy of spadefoot at these sites over time.
- Santa Ana speckled dace surveys will be completed to fill in gaps in information on presence/absence, demographics, and remaining suitable habitat. Genetic samples will be collected for future genetic analysis and to help develop a threat assessment at locations where surveys take place.
- Western pond turtle surveys are needed to establish presence/absence, demographics, and remaining suitable habitat. The survey and threat analysis will include reconnaissance surveys; trapping surveys; removal of nonnative aquatic species; and compilation of all survey results into a report.

#### **2.2.4.6 Conservation Bank Credits (Section 5.8 of the Upper SAR HCP)**

The Lytle Creek Conservation Bank and Cajon Creek Conservation Bank are in the alluvial floodplain and active channel of Lytle Creek and Cajon Creek, respectively, near the confluence of Lytle and Cajon Creeks (north of Interstate 210 and west of Interstate 215). Both banks have habitat conservation values available to mitigate impacts on San Bernardino kangaroo rat and Santa Ana River woolly-star.

Mitigation to offset impacts on Covered Species (and their habitat) from Covered Activities within Alluvial Fan Preserve Unit B will be satisfied by land acquisition, habitat uplift (restoration or rehabilitation), and management of lands within this same preserve unit. Mitigation lands are actively being pursued for acquisition into the HCP Preserve System; however if additional mitigation is needed above and beyond these actions, then conservation/mitigation credits in the Lytle Creek or Cajon Creek Conservation Banks may be used.

#### **2.2.4.7 Species-Specific Conservation Strategies (Section 5.9 of the Upper SAR HCP)**

The Upper SAR HCP includes specific habitat conservation, improvement, management, monitoring, AMMs, and other actions for each Covered Species. The species-specific conservation strategies are the heart of the HCP Conservation Strategy. Each species-specific conservation strategy is described in terms of the conservation objectives and conservation actions developed specifically for that species. The strategy describes the species-specific AMMs to be implemented in addition to the general AMMs for the Upper SAR HCP. Specific instream flow management measures are included to benefit Santa Ana sucker and arroyo chub. Captive headstarting and translocation of Santa Ana sucker is also planned for higher elevation streams to create additional resilience by establishing redundant populations in upper watershed tributaries. Streams considered for translocation sites include the Santa Ana River upstream of Seven Oaks Dam, and City, Plunge, Hemlock, Mill, Bear, and Lytle Creeks. San Antonio Creek may also be considered for translocation. Translocation activities

for mountain yellow-legged frog is also being supported by the Upper SAR HCP Conservation Strategy.

#### **2.2.4.8 Fully Avoided Species (Section 5.10 of the Upper SAR HCP)**

The Delhi Sands flower-loving fly and arroyo toad are included in the Upper SAR HCP because they are species that overlap with known or modeled habitat areas; however, all impacts will be avoided by implementing both the general measures to avoid adverse impacts described in the Upper SAR HCP and the species-specific measures. The measures will be employed to avoid all impacts on the Delhi Sands flower-loving fly and arroyo toad by implementation of Covered Activities, and the Upper SAR HCP does not provide incidental take coverage for either species. If the proposed activity does not have the potential to directly or indirectly result in adverse effects on these two species, including temporary or permanent impacts on their habitat, no additional mitigation or AMMs would be required for this species.

#### **2.2.4.9 Measures to Avoid and Minimize Effects (Section 5.11 of the Upper SAR HCP)**

As required by the FESA (Section 10 (a)(2)(A)(ii)), the Upper SAR HCP includes measures with a primary focus of avoiding or minimizing impacts on the Covered Species (i.e., death of or injury to species) and effects on habitat that may be affected by Covered Activities. These measures to avoid and minimize impacts are designed to achieve the following objectives:

- Provide avoidance of Covered Species during implementation of Covered Activities throughout the Planning Area.
- Prevent impacts on individuals from Covered Activities as prohibited by law.
- Minimize adverse effects on Covered Species and their habitats where conservation actions will take place.

The Upper SAR HCP describes the best management practices and general AMMs that apply overall to Covered Species and Covered Activities, as well as species-specific AMMs, including the timing of species habitat surveys, preconstruction surveys, and construction monitoring relative to impacts (Chapter 5, Section 5.11, and Appendix G, *Covered Activity AMMs*, of the HCP). For long-term projects and projects that are phased, the frequency and timing of surveys relative to impacts should also be phased such that surveys and monitoring (if required) will be conducted prior to each construction phase if the entire Project Area is not continuously disturbed between phases.

As described in the HCP, it is the responsibility of Permittees to design and implement their projects in compliance with these measures and of the Alliance to provide adequate conservation to provide for the HCP Stay-Ahead Strategy. AMMs may be revised over the course of the permit duration based on results of implementation through the CAMMP and in accordance with the Upper SAR HCP. However, even with these AMMs, sub-lethal (e.g., harm) impacts on Covered Species may still occur.

#### **2.2.4.10 Comprehensive Adaptive Management and Monitoring Program (Sections 5.12 of the Upper SAR HCP)**

The CAMMP is an all-encompassing adaptive management and monitoring program for the entire HCP Preserve System. The CAMMP applies guidance and directives to the five preserve unit plans (PUPs) of the HCP Preserve System, focusing on the specific habitat types, Covered Species, and

management issues prevalent in each unit. Both the CAMMP and the PUPs will require periodic updating as significant new information and tools become available; however, the PUPs will require more frequent updating to integrate the adaptive management results and reprioritize management needs. The CAMMP and PUPs will be maintained as “living” documents, greatly simplifying the update process.

The Alliance will be responsible for the preparation of the CAMMP and of PUPs as well as an HCP annual report. Additionally, the Alliance will implement the CAMMP and will be responsible for ensuring that success criteria are being met within the HCP Preserve System through conservation actions that contribute to the HCP’s Conservation Strategy. The overarching objective of the CAMMP is to ensure that the Conservation Strategy and the biological goals and objectives of the Proposed Project are being achieved. Additional objectives of the CAMMP include the following.

1. Provide an organizational framework and decision-making process using the results of monitoring, targeted studies, and other data to adjust management actions.
2. Document the baseline condition of biological resources in the HCP Preserve System using existing data and the results of ongoing field surveys.
3. Develop conceptual models for vegetation communities and Covered Species that can be used as the basis for collecting information, verifying hypotheses, and designing and changing management practices.
4. Incorporate hypothesis testing and experimental management, including targeted studies to address key uncertainties and to improve management and monitoring efforts.
5. Develop and implement scientifically valid monitoring protocols at multiple levels to ensure that data collected will inform management and integrate with other monitoring efforts.
6. Ensure that monitoring data are collected, analyzed, stored, and organized so the data are accessible to the Permittee Agencies, regulatory agencies, scientists, and, as appropriate, the public.

## 2.2.5 Covered Activities

*Covered Activities*, as used in the Upper SAR HCP and this EIR, are the activities with the potential to result in impacts on Covered Species for which the Permittees are applying for incidental take coverage. Covered Activities include water reuse, groundwater recharge, wells and water conveyance infrastructure, solar energy development, and routine operations and maintenance activities implemented by the Permittees. Covered Activities also include habitat improvement, management, and monitoring activities proposed in the Upper SAR HCP to offset the Covered Species habitat impacts of other Covered Activities that are projected to occur in the Permit Area during the 50-year permit term and to support the goals of the HCP Preserve System. Activities related to SCE’s operations and maintenance of diversion structures associated with hydroelectric facilities where potential future Covered Species fish populations may be established through translocation as part of the HCP Conservation Strategy are also Covered Activities. Table 2-3 summarizes the Covered Activity categories. A detailed description of the Covered Activities is provided in Chapter 2, *Covered Activities*, of the Upper SAR HCP, including the size and location of the affected area, frequency of activity, and the type and intensity of impact. Table 2-1 of the HCP summarizes Covered Activities by phase, showing how Covered Activities will take place over a long period of time. Figures identifying Covered Activities are also provided in Chapter 2 of the Upper

SAR HCP (Figures 2-1 through 2-26). Mandatory conditions on the Covered Activities are necessary to meet State and Federal permit issuance criteria, to help meet the regional conservation goals, and to assist Permittees in meeting their funding obligations.

Agencies seeking permit coverage for specific projects would follow a formal process for analysis and inclusion as described in Chapter 6, *Plan Implementation*, of the Upper SAR HCP. All Covered Activities must incorporate the relevant conditions on Covered Activities in order to avoid, minimize, or mitigate effects on Covered Species and natural communities. For projects to be approved for coverage under the Upper SAR HCP, Permittees must demonstrate that conditions have been incorporated or will be incorporated properly into their proposed projects.

**Table 2-3. Covered Activity Types**

<b>Activity Type</b>	<b>Description</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge, activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins.
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development.
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities.
Routine Operations and Maintenance	Activities that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure.
Habitat Improvement, Management, and Monitoring	Activities that support the restoration, rehabilitation, management, and monitoring of habitat values in the Planning Area, including species surveys, monitoring, research, and adaptive management activities.

In certain instances, a Covered Activity may include multiple components (e.g., conveyance infrastructure and recharge basins). In these cases, the HCP categorizes the Covered Activity in the component anticipated to result in the greatest effects.

Projects covered under the Upper SAR HCP are in various stages of planning, and, therefore, project descriptions may vary in detail according to how far along in planning a project is. For example, a project occurring in Phase 1 may have very detailed descriptions (e.g., specific location, site layout) while activities in earlier planning stages may have more general descriptions (general location and/or development envelope). Activities not covered by the HCP and the incidental take authorizations are described in Chapter 2, Section 2.2, *Projects and Activities Not Covered by the HCP*, of the Upper SAR HCP.

The Permittees are seeking a 50-year ITP, which would accommodate the expected schedule for construction of projects in the Permit Area and ongoing associated operations and maintenance. The permit term for the ITP for SCE will be independent of that of the other Permittees' ITP. SCE operates and maintains hydroelectric facilities in accordance with three 30-year licenses issued by the Federal Energy Regulatory Commission in 2003, and the SCE ITP permit term may be established to coincide with the Federal Energy Regulatory Commission relicensing cycles.

## 2.2.6 Level of Analysis of Impacts of Covered Activities

The Proposed Project is the focus of the analyses in this EIR and is intended to support the decision to authorize ITPs for impacts on Covered Species potentially resulting from implementation of Covered Activities. As described in Chapter 1, the implementation of the individual Covered Activities will be separate actions, carried out by the Permittees, each requiring independent environmental review and analysis, and separate and independent approval (Section 1.3.3, *Intended Use of this EIR*). Potential environmental effects of the Covered Activities are discussed in this EIR for informational purposes and to provide context for the Proposed Project and alternatives analyses. This Proposed Project is not intended to provide incidental take authorization or any other approval for activities not identified as Covered Activities.

Issuance of permits by USFWS and CDFW (the Wildlife Agencies) would provide compliance with the FESA and CESA for Covered Species. Approval of the proposed HCP would not confer or imply approval to implement the Covered Activities. All Covered Activities would be subject to the approval authority of one or more of the Permittees with jurisdiction over such projects, and the Alliance. Future Covered Activity environmental analyses may use portions of this EIR to support project-specific findings as described in Chapter 1, Section 1.3.3, *Intended Uses of this EIR*.

The Proposed Project consists of implementation of the Upper SAR HCP and issuance of ITPs to restore quantity, quality, and function of vulnerable habitats; conserve land; and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species, in order to offset impacts from Permittee Agency Covered Activities in the Permit Area.

Each of the resource sections in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, includes an evaluation of the direct and reasonably foreseeable indirect impacts associated with implementation of the Proposed Project, specifically related to issuance of ITPs, and conservation and habitat improvement activities and management, maintenance, and monitoring activities associated with implementation of the Upper SAR HCP. However, because the ITPs authorize incidental impacts on Covered Species that may occur as a result of implementing Covered Activities, each of these resource sections includes a summary discussion of the potential types of effects associated with implementation of the Covered Activities for information purposes. Where applicable, types of best practices are identified that may be useful for future project-level environmental review of Covered Activities.

Mitigation measures, HCP-specific AMMs, or other recommended best practices presented in this EIR could be used in future environmental documents. More detail on how this affected the approach to the environmental analysis in this EIR is found in Chapter 3's *Introduction to the Analysis*, specifically under the *Impacts and Mitigation* subsection.

## 2.3 Discretionary Actions/Required Approvals

Implementation of the Proposed Project would require certain discretionary permits and approvals from lead agencies as well as other public agencies, as summarized in Table 2-4.

**Table 2-4. Summary of Federal, State, and Local Permits and Approval Decisions for the Proposed Project**

Agency	Legal Authority	Permit or Approval Decision
<b>Federal</b>		
U.S. Fish and Wildlife Service	Federal Endangered Species Act, Section 7	Biological Opinion
	Federal Endangered Species Act, Section 10(a)(1)(B)	Incidental take permit, implementing agreement
	National Environmental Policy Act	Certify Environmental Impact Statement
U.S. Army Corps of Engineers	Clean Water Act, Section 404	Permit for the discharge of dredged and/or fill material into waters of the United States under Section 404 of the Clean Water Act
<b>State</b>		
California Department of Fish and Wildlife	California Fish and Game Code, Section 1600 et seq., Section 2081	Lake and Streambed Alteration Agreements(s) Incidental take permit(s)
Santa Ana Regional Water Quality Control Board	Clean Water Act, Section 401 Section 402	Regional Water Quality Certification Section 402 National Pollutant Discharge Permit Construction General Permit Compliance
<b>Local</b>		
San Bernardino Valley Municipal Water District	California Environmental Quality Act	Adopt final HCP; establish Joint Powers Authority; sign agreements; certify Environmental Impact Report; adopt Mitigation Monitoring and Reporting Program
Permittee Agencies and Southern California Edison	California Environmental Quality Act	Enter into a Joint Powers Authority and funding agreements

# Chapter 3

## Environmental Setting, Impacts, and Mitigation Measures

---

### Introduction to the Analysis

The Proposed Project is the focus of the analyses in this environmental impact report (EIR) and is intended to support the decision to authorize incidental take permits (ITPs) for impacts on Covered Species potentially resulting from implementation of Covered Activities and of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). The impact discussions provided in Sections 3.1 through 3.19 focus on those topical areas that have the potential to be significantly affected by the Proposed Project.

As described in Section 1.3.3, *Intended Uses of this EIR*, implementation of the individual Covered Activities will be separate actions, carried out by the Permittees, each requiring independent environmental review and analysis, with separate and independent approval. Therefore, the potential types of environmental effects of the Covered Activities are discussed in this EIR for informational purposes and to provide context for the Proposed Project and alternatives analyses.

### Environmental Issues Addressed in this EIR

Resource topics considered in this EIR were derived from issues presented in the Proposed Project's California Environmental Quality Act (CEQA) Guidelines Appendix G initial study checklist and input received from the public during the scoping period. Based on this information, it was determined that the Proposed Project could potentially affect the following environmental resources.

- Section 3.1—Aesthetics
- Section 3.2—Agriculture and Forestry Resources
- Section 3.3—Air Quality
- Section 3.4—Biological Resources
- Section 3.5—Cultural Resources
- Section 3.6—Geology, Soils, and Paleontological Resources
- Section 3.7—Greenhouse Gas Emissions and Energy
- Section 3.8—Hazards and Hazardous Materials
- Section 3.9—Hydrology and Water Quality
- Section 3.10—Land Use
- Section 3.11—Minerals
- Section 3.12—Noise
- Section 3.13—Population and Housing
- Section 3.14—Public Services



- Section 3.15—Recreation
- Section 3.16—Transportation
- Section 3.17—Tribal Cultural Resources
- Section 3.18—Utilities and Service Systems
- Section 3.19—Wildfire

## Resource Chapter Organization

Each resource topic addressed in this chapter describes the relevant physical and regulatory settings, explains the criteria used to determine impact significance and the analysis methodology, and discloses the environmental impacts and proposed mitigation measures identified to reduce impacts of the Proposed Project. Specifically, each resource section in Chapter 3 is organized around the following subtopics.

- Environmental Setting
  - Regional Setting
  - Planning Area
- Regulatory Framework
  - Federal Regulations
  - State Regulations
  - Local Regulations
    - County of San Bernardino
    - County of Riverside
- Impacts and Mitigation
  - Significance Criteria
  - Methodology
  - Impact Analysis and Mitigation
    - Impact Statement
    - Mitigation Measures
- Summary of Potential Types of Impacts of Covered Activities

## Environmental Setting

The environmental setting sections establish the baseline for the analysis of impacts on the resources evaluated in this EIR by characterizing the existing physical environment for the specific resource and describing historical changes and trends affecting it. Where possible, this information is supplemented through site-specific assessment(s). In addition, this section may define resource-specific study areas that are within the regional and Planning Area settings.

Under CEQA, the baseline for assessing significance of impacts of a proposed project is normally the environmental setting, or existing conditions, at the time a Notice of Preparation is issued (State

CEQA Guidelines §15125(a)). The baseline is developed to assess whether a proposed project and alternatives would create impacts on the physical environment that would exceed significance criteria when the impact is compared to existing conditions.

For the purposes of this EIR, a modified baseline is used, and the assumptions for that baseline include physical environmental conditions, facilities, and ongoing programs that existed as of December 7, 2018 (publication date of the Notice of Preparation to prepare this EIR) as well as the date that biological and hydrological analyses were conducted prior to 2018. For example, U.S. Geological Survey Annual Fish Survey Data from 2015 to 2018 were used as a data source in the species distribution models, or existing conditions are based on 2012 land use and precipitation records. While additional development has occurred within the Planning Area since 2012, it is not expected to create an appreciable difference at the watershed level that would result in different model results for the purposes of the analysis provided in the HCP. This modified baseline fulfills the goals of using a consistent, legally defensible baseline across the Draft EIR, while relying upon the best available scientific information. Additional site conditions for the physical environmental condition of the Planning Area is found in Chapter 3, *Planning Area and Existing Environment*, of the Upper SAR HCP.

The Planning Area setting is described to ensure that the natural resources that might be affected by the Proposed Project as well as the foreseeable impacts related to Covered Activities were adequately considered at a regional scale and that sufficient and feasible mitigation opportunities are available. The Planning Area is in San Bernardino and Riverside Counties, and encompasses approximately 862,966 acres.

The Permit Area is the area in which the Permittees are requesting incidental take authorization from the U.S. Fish and Wildlife Service (USFWS) for activities and projects covered by the Upper SAR HCP. The Permit Area setting is described as the ownership, easements, and areas of operation and maintenance where all Proposed Project activities are located. The Permit Area includes the entire Santa Ana River and tributaries within the Planning Area, including the broader alluvial floodplains, alluvial fans, and other areas of natural habitat where future conservation actions might be located.

## Regulatory Framework

The regulatory setting sections in Chapter 3 describe the Federal, State, and local laws, regulations, and policies that are relevant to specific resource impact assessments. The section establishes the regulatory framework for the analysis of each resource.

The regulatory framework is generally described for the Planning Area, which includes areas within the cities of Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa in San Bernardino County; and the cities of Beaumont, Calimesa, Corona, Eastvale, Jurupa Valley, Lake Elsinore, Moreno Valley, Norco, and Riverside in Riverside County. Although multiple cities are also encompassed by the Planning Area, the relevant local plans, policies, ordinances, and programs from San Bernardino and Riverside Counties were selected to provide the needed impact context because the counties are representative of the cities they include.

Appendix B includes a more detailed discussion of relevant local plans, policies, ordinances, and programs related to the individual resources.

## Impacts and Mitigation

### Significance Criteria

The thresholds and criteria for determining the significance of impacts for this analysis are based on the Environmental Checklist in Appendix G of the State CEQA Guidelines and other resource-specific guidance, as applicable.

### Methodology

This section describes the methods used in the analysis.

The focus of this EIR is determined by the nature of the action being evaluated, namely the approval of the HCP by the San Bernardino Valley Municipal Water District (Valley District) as the lead agency, and the submission of the HCP by Valley District to USFWS and the California Department of Fish and Wildlife (CDFW) (the Wildlife Agencies) for approval in their role as responsible agencies. This EIR evaluates the potential impacts of a decision by Valley District to apply for, and a CDFW decision to issue, ITP(s) for the State-listed species covered in the HCP, pursuant to Section 2081 of the California Fish and Game Code, implementation of the HCP by the Permittees, and activities and projects that occur inside the Planning Area. Consistent with the nature of the Proposed Project as an HCP, this EIR provides particular emphasis on impacts related to listed species, and the impacts on hydrology and biological resources of the Upper SAR HCP conservation activities. These impacts on Covered Species are evaluated assuming implementation of the HCP and the maximum extent of foreseeable activity on biological and hydrological resources in the Permit Area. This EIR also includes analysis of impacts on other categories of resources, but, given the nature of this Proposed Project as an HCP, such impacts are generally less than significant, or mitigated to a less-than-significant level, as detailed in the various sections in this chapter.

This EIR is not intended to serve as the CEQA document for, or to fully evaluate, the Covered Activities. Instead, this EIR evaluates the impacts of providing incidental take coverage to the Covered Activities, and other aspects of the HCP. See Chapter 1, Section 1.3.3 for a discussion of how this EIR may be used in connection with later consideration of Covered Activities.

### Impact Mechanisms

Table 3-1 summarizes the physical activities associated with conservation actions that could result in physical impacts. The impact analysis used these impact mechanisms in assessing the effects of the Proposed Project on the environment.

**Table 3-1. Impact Mechanisms**

<b>Conservation Action</b>		<b>Physical Impact Mechanisms</b>
Land Acquisition		None
Conservation Projects		
Tributary Stream Channels		
Create new channels	Excavate to recontour the ground and create a new channel where one does not already exist. Place a coarse sediment mixture of sand, gravel, and cobble onto the channel bed in specified reaches to provide native fish habitat and to limit water infiltration into the sandy and silty soils at the site. Revegetate areas.	<ul style="list-style-type: none"> <li>• Earth moving</li> <li>• Use of heavy equipment</li> <li>• Movement of rock, sand and gravel</li> <li>• Use of hand tools and mechanized equipment for planting</li> </ul>
Restore existing channels	Install instream habitat structures made of woody material and rock. Excavate ground to recontour pools and banks. Revegetate areas.	<ul style="list-style-type: none"> <li>• Earth moving</li> <li>• Use of heavy equipment</li> <li>• Movement of rock, sand and gravel</li> <li>• Use of hand tools and mechanized equipment for planting.</li> </ul>
Expand/create floodplains	Construct new floodplain by excavating the ground adjacent to the channel to lower the elevation of the top of the channel's bank. Revegetate areas.	<ul style="list-style-type: none"> <li>• Earth moving</li> <li>• Use of heavy equipment</li> <li>• Use of hand tools and mechanized equipment for planting.</li> </ul>
Control nonnative invasive vegetation	Remove nonnative plants and plant native vegetation.	<ul style="list-style-type: none"> <li>• Use of light utility vehicles</li> <li>• Activities associated with the application of herbicides (not including the herbicides themselves)</li> <li>• Use of hand tools and a masticator (heavy equipment) for vegetation removal and planting.</li> </ul>
Manage human use	Manage human visitation and disturbance in appropriate ways, including removal of encampments, trash dumping, and off-road vehicle use, and unintended social trails that degrade vegetation and disturb wildlife, including Santa Ana sucker.	<ul style="list-style-type: none"> <li>• Use of heavy equipment on site for initial site cleanups</li> <li>• Installation of signage</li> <li>• Use of vehicles for monitoring and enforcement</li> </ul>
Santa Ana River Microhabitat	Install and manage natural instream structures; manage and rehabilitate river gravel and cobble, Santa Ana River flow, and path manipulation; improve water flow and temperatures in Rialto Channel with groundwater pumped from wells; and improve flows in Tequesquite Creek from a recycled water source.	<ul style="list-style-type: none"> <li>• Earth moving</li> <li>• Limited use of equipment such as bobcats and backhoes</li> <li>• Movement of rock, sand and gravel</li> <li>• Operation of pumps</li> </ul>

Conservation Action		Physical Impact Mechanisms
Riparian	Install trash racks/booms at lowland tributaries; install signs to educate the general public on the sensitivity of the Santa Ana sucker and goals of the HCP; protect riparian habitat from off-highway vehicle use; coordinate with flood control agencies to reduce the amount of riparian mowing adjacent to Santa Ana sucker habitat; and reduce the impact of migrant encampments within the Preserve System.	<ul style="list-style-type: none"> <li>• Use of small trucks and power equipment to install trash racks and signage</li> <li>• Use of vehicles for monitoring and enforcement</li> </ul>
Wetland	Increase the amount and quality of available open water habitat within the mainstem Santa Ana River floodplain.	<ul style="list-style-type: none"> <li>• Earth moving</li> <li>• Use of heavy equipment</li> <li>• Movement of rock, sand and gravel</li> <li>• Operation of pumps</li> </ul>
Alluvial Fan Sage Scrub	Restore and rehabilitate alluvial fan scrub habitat.	<ul style="list-style-type: none"> <li>• Ground disturbance</li> <li>• Use of heavy equipment</li> <li>• Use of heavy equipment and hand tools for revegetation</li> </ul>
Hydrologic Manipulation and Substrate Management	Install microhabitat creation structures, water diversion and sediment exclusion, and (possibly) include a weir, boulder clusters, large woody debris, and groin.	<ul style="list-style-type: none"> <li>• Earth moving</li> <li>• Use of heavy equipment</li> <li>• Movement of rock, sand and gravel</li> </ul>
Captive Headstarting and Translocation	Conduct surveys, remove species, and introduce native fish species into new habitat.	<ul style="list-style-type: none"> <li>• Use of vehicles for surveys and monitoring and translocation activities</li> </ul>
Species and Habitat Research	Perform surveys and monitoring.	<ul style="list-style-type: none"> <li>• Use of vehicles for surveys and monitoring and translocation activities</li> </ul>

## Impact Analysis and Mitigation

The Proposed Project consists of implementation of the Upper SAR HCP and issuance of ITPs to restore quantity, quality, and function of vulnerable habitats; conserve land; and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species, in order to offset impacts from Permittee Agency Covered Activities in the Permit Area.

Each of the resource sections in this chapter includes an evaluation of the direct and reasonably foreseeable indirect impacts associated with implementation of the Proposed Project, specifically related to issuance of ITPs, and conservation and habitat improvement activities and management, maintenance, and monitoring activities associated with implementation of the Upper SAR HCP.

Under CEQA, the significance of an impact is described to fully disclose the impact and determine if mitigation measures are needed to reduce an impact. A *significant impact* on the environment is defined as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code Section 21068). The potential impact findings used in this document are as follows.

- **No Impact.** This impact would cause no discernible change in the environment as measured by the applicable significance criteria; therefore, no mitigation would be required.

- **Beneficial Impact.** This impact would cause a net positive change in the environment as measured by the applicable significance criteria.
- **Less than Significant.** This impact would cause no substantial adverse change in the environment as measured by the applicable significance criteria; therefore, no mitigation would be required.
- **Significant.** This impact would cause a substantial adverse change in the physical conditions of the environment. Impacts determined to be significant based on the applicable significance criteria fall into two categories: (1) those impacts for which there is feasible mitigation available that would avoid or reduce the environmental impacts to less-than-significant levels, and (2) those impacts for which there is either no feasible mitigation available or for which, even with implementation of feasible mitigation measures, there would remain a significant impact on the environment. Those impacts that cannot be reduced to a less-than-significant level by mitigation are identified as significant and unavoidable.
- **Significant and Unavoidable.** This impact would cause a substantial adverse change in the environment and cannot be avoided or mitigated to a less-than-significant level if the Proposed Project is implemented. Even if the impact finding is still considered significant with the application of mitigation, the agency is obligated to incorporate all feasible measures, if available, to reduce the severity of the impact.

Impact significance is provided for each resource topic impact assuming no mitigation measures applied to reduce the effects. The significance of impacts after applying mitigation measures is also provided to disclose the effectiveness of the mitigation measures to reduce an impact.

### **Mitigation Measures**

Where required, mitigation measures are proposed in this EIR to meet CEQA's specific requirement that, whenever possible, agency decision-makers adopt feasible mitigation to reduce a project's significant impacts to a less-than-significant level. Every impact statement for the Proposed Project within each resource section includes a mitigation measures subsection describing any mitigation measures identified to reduce significant impacts.

## **Summary of Potential Types of Impacts of Covered Activities**

Issuance of permits by the Wildlife Agencies would provide compliance with the Federal and State Endangered Species Acts for the Covered Species. Approval of the proposed HCP would not confer or imply approval to implement the Covered Activities. However, because the ITPs authorize the incidental take of Covered Species that may occur as a result of implementing Covered Activities, each of the resource sections in this chapter includes a summary discussion of the potential types of effects associated with implementation of the Covered Activities for informational purposes. Where applicable, types of best practices are identified that may be useful for future project-level environmental review of Covered Activities. More detail is provided in Appendix C.

All Covered Activities would be subject to the approval authority of one or more of the Permittees with jurisdiction over such projects. Future Covered Activity environmental analyses may use portions of this EIR to support project-specific findings. Mitigation measures, HCP-specific avoidance and minimization measures, or other recommended best practices presented in this EIR could be used in future environmental documents.

## 3.1 Aesthetics

For purposes of this environmental impact report (EIR), *aesthetics* is the human perception of visual quality of an environment's physical characteristics and resources in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities. *Visual resources* generally consist of the landforms, vegetation, rock and water features, and other similar natural resources and human modifications that create the visual character and sensitivity of a landscape. *Visual quality* is defined as the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics.

### 3.1.1 Environmental Setting

#### 3.1.1.1 Regional Setting

In a regional context, the most prominent visual resource is the Santa Ana River. It extends from the San Bernardino Mountains and flows through San Bernardino and Riverside Counties before traversing the northern Santa Ana Mountains through Santa Ana Canyon and flowing through urban Orange County to drain into the Pacific Ocean. The Santa Ana River is the largest watershed in Southern California, covering an area of approximately 2,800 square miles, and contains approximately 50 mapped tributaries.

Development in the region is influenced by the landform: the steeper slopes of the national forests and land use restrictions limit development to the flatter valley lands and gently rolling terrain. The region's open spaces and rolling-to-mountainous terrain allow for scenic vista views to the surrounding landscape where intervening development, terrain, and vegetation do not limit such views.

#### 3.1.1.2 Planning Area

Affected viewers within the Planning Area include private residential viewers; travelers on roadways; recreationists; and workers and patrons of commercial, industrial, civic, and institutional businesses. Generally, higher visual sensitivity is attributed to residential viewers, who have longer-term views and a higher sense of ownership of views, as well as recreational viewers, who tend to have a higher regard for and acuity to changes in the natural and built environments. Lower visual sensitivity is generally attributed to roadway commuters who tend to be focused on driving and business workers and patrons who are more focused on work activities or engaged in shopping or receiving services. Recreational roadway travelers have slightly higher sensitivities than roadway commuters because they often select routes based on their scenic qualities. Table 3.1-1 identifies the officially designated scenic resources in the Planning Area.

**Table 3.1-1. Scenic Elements in the Planning Area**

Type	Resource <sup>b</sup>
Designated State Scenic Highways	<ul style="list-style-type: none"> <li>• Route 15 from SR-76/San Luis Rey River to SR-91/Corona</li> <li>• SR-138/Mt. Anderson to SR-247/Lucerne Valley</li> <li>• SR-10/Redlands to SR-18/Fawnskin</li> <li>• SR-91/Corona to SR-83/Corona</li> <li>• SR-55 Santa Ana Canyon to I-15</li> <li>• SR-2/Wrightwood to SR-18/Mt. Anderson</li> <li>• Orange CL/Peyton Drive</li> <li>• SR-30/Highland to SR-18/Running Springs</li> <li>• Route 74 from I-5/San Juan Capistrano to SR-111</li> </ul>
County Scenic Routes	<ul style="list-style-type: none"> <li>• Lake Gregory Loop</li> <li>• Lone Pine Canyon Drive</li> <li>• Lytle Creek Canyon Drive</li> <li>• Mt. Baldy Valley to Mountain Drive</li> <li>• Oak Glen Apple Loop</li> <li>• Sand Canyon to Mentone Citrus Drive</li> <li>• Angeles Crest Forest Sawpit Canyon to Desert Drive</li> <li>• SR-18, SR-38, SR-138, and SR-330</li> </ul>
Designated State Scenic Vistas	<ul style="list-style-type: none"> <li>• Eyes of the World Vista Point</li> <li>• Mill Creek Vista Point</li> <li>• Donald S. Wieman Vista Point</li> <li>• Bear Valley Dam Vista</li> </ul>
Local Scenic Corridors <sup>a</sup>	<ul style="list-style-type: none"> <li>• Van Buren Boulevard</li> <li>• Limonite Avenue</li> <li>• 46<sup>th</sup> Street</li> </ul>

<sup>a</sup> Designated in the City of Jurupa Valley Draft General Plan (2017). Note that Pedley Hills is also considered a scenic vista for its rugged rock outcroppings and landforms that add visual interest in combination with the Jurupa Mountains.

<sup>b</sup> Within the San Bernardino County portion of the Planning Area, State Route (SR-) 18, SR-38, SR-91, SR-138, SR-142, SR-189, and SR-330 are eligible for designation as State Scenic Highways (Caltrans 2019). Within Riverside County, Interstate (I-) 15 and SR-71, SR-74, and SR-91 are eligible for designation as State Scenic Highways.

The surface waters of the Santa Ana River in the Planning Area include freshwater rivers and streams, lakes, reservoirs, and wetlands. The mainstem of the Santa Ana River is divided into six reaches, starting from upstream of the Seven Oaks Dam down to the tidal zone flowing into the ocean. Reaches 3 through 6 are within the Planning Area; reaches 1 and 2 are downstream of the Planning Area. Major Santa Ana River tributaries in the watershed include Mill Creek, City Creek, Plunge Creek, Mission Creek, San Timoteo Wash, East Twin Creek, Cajon Wash, Lytle Creek, Rialto Channel, San Sevaine Creek, Day Creek, Chino Creek, and Temescal Wash. Figure 3.9-1 in Section 3.9, *Hydrology and Water Quality*, shows the main reaches of the Santa Ana River and the sub-watersheds in the Planning Area. Major reservoirs and lakes include Prado Reservoir and Seven Oaks Reservoir in the northern portion and Lake Mathews in the southern portion of the Planning Area. Lake Elsinore and Canyon Lake are adjacent to the Planning Area, outside of the Planning Area boundary.

Due to urbanization, flood control, inter-basin water transfers, and other water-supply projects throughout the Santa Ana River basin, the natural hydrology of watershed runoff and streamflow for



most streams have been substantially altered. Existing alterations to natural hydrologic conditions, including diversions, constructed drainages, channels, and other impervious surfaces, are especially prevalent in the San Bernardino Mountains foothills and the Santa Ana River Valley, resulting in alterations to the natural river areas.

In addition to their fundamental water-related functions, these watercourses provide visual corridors through developed land and link open spaces together. The Santa Ana River and its tributaries and floodplain are considered significant visual resources that can be seen from local scenic vistas, especially in more natural areas. Large swaths of open space line the Santa Ana River corridor, providing an expansive natural buffer between the cities of Riverside and Jurupa Valley (County of Riverside 2015). Interconnecting trails provide access to a scenic wildlife setting associated with the Santa Ana River.

The Santa Ana River floodplain's native habitat is also considered a scenic visual resource. Views of the Santa Ana River floodplain from neighboring areas and the Santa Ana River Trail are described in the County of Riverside General Plan Jurupa Area Plan (County of Riverside 2011) and the cities of Riverside and Jurupa Valley general plans as "scenic." According to the City of Riverside General Plan, the Santa Ana River watercourse and riverbed are prominent scenic resources extending along the city's northern boundary. "The Santa Ana River is a place of natural beauty...a place of significant natural habitat for many species of birds and other animals, as well as being a prominent visual landmark for visitors and residents" (City of Riverside 2007). The Planning Area is located along the southern boundary of Jurupa Valley where the Santa Ana River represents a significant recreational, habitat, and visual resource (City of Jurupa Valley 2017). It drains southwest toward Prado Dam, and serves as a prominent natural buffer between Jurupa Valley and the cities of Riverside and Norco in Riverside County.

Hidden Valley Nature Center and Wildlife Area is located along the Santa Ana River, east of Norco on Arlington Avenue, in the city of Jurupa Valley. It is set on 1,500 scenic acres and has access to 25 miles of hiking and equestrian trails. Hidden Valley Nature Center is within the Permit Area and is a scenic resource with views of the Santa Ana River and migratory bird species, flora and fauna, and aquatic life within the wildlife area.

## **3.1.2 Regulatory Framework**

### **3.1.2.1 Federal Regulations**

#### **National Forest Land and Resource Management Plans**

Portions of the Planning Area fall within parcels of the Angeles and San Bernardino National Forests, which are managed in accordance with the Land and Resource Management Plans prepared for each National Forest. The purpose of these plans is to guide the integrated protection and use of forest resources. The Resource Management Plans establish goals for maintaining and enhancing the visual quality of the views within the National Forests.

#### **National Trails System Act**

The Pacific Crest National Scenic Trail and the Juan Bautista de Anza and Old Spanish National Historic Trails pass through the Planning Area, and are protected under the National Trails System Act of 1968 and through comprehensive management plans for each trail (National Park Service

2018). The National Trails System Act was established to promote the “enjoyment and appreciation of trails while encouraging greater public access” and establishes four classes of trails: national scenic trails, national historic trails, national recreation trails, and side and connecting trails (National Park Service 2018). Each trail has a management plan with an objective to protect the trails, including protecting natural, cultural, and scenic resources along the trails.

### 3.1.2.2 State Regulations

#### Scenic Highways

The California Department of Transportation (Caltrans) defines a scenic corridor as the “land that is visible from, adjacent to, and outside the highway right-of-way, and is comprised primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries.” Designated scenic corridors are subject to protection, including the regulation of land use, site planning, advertising, earthmoving, landscaping, and design and appearance of structures and equipment. As described in the Scenic Highway Guidelines, highways can be nominated to be an eligible State Scenic Highway under Streets and Highways Code Section 263 when they are believed to have outstanding scenic values, and becoming an eligible State Scenic Highway does not require any legislative action. The following conditions must be met to nominate a route:

- The State or county highway consists of a scenic corridor that is composed of a memorable landscape that showcases the natural scenic beauty or agriculture of California.
- Existing visual intrusions do not significantly affect the scenic corridor.
- There is demonstration of strong local support for the proposed scenic highway designation.
- The length of the proposed scenic highway is not less than a mile and is not segmented.

Once a State route is identified as eligible under Streets and Highways Code Section 263, it may be nominated for official designation by the local governing body with jurisdiction over the lands adjacent to the proposed scenic highway. Division 1, Chapter 2, Article 2.5, Sections 260–284 of the California State Streets and Highway Code establishes the following:

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

A route may be removed for consideration as a scenic route or taken out of the State Scenic Highways program when there has been significant degradation of scenic quality due to visual intrusions and changes in visual character. Examples of visual intrusions that would degrade scenic corridors, as stipulated by Caltrans, and that would apply to the Proposed Project include extensive cut and fill, scarred hillsides and landscape, steep slopes with little or no vegetation, exposed and unvegetated earth, and scale and appearance of roadway that are incompatible with landscape. Unsightly land uses would include actions that result in these conditions (Caltrans 2008).

### 3.1.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan, along with other relevant local plans, policies, ordinances, and programs related to aesthetics. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to aesthetics in full.

#### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) was last amended in April 2014 and covers a planning period through 2020. The relevant goals and policies presented in the Land Use, Circulation and Infrastructure, Conservation, Open Space, and Safety Elements are summarized here.

The County of San Bernardino General Plan elements aim to preserve natural resources within the region, including any State- or Federally designated scenic area, national forest, or national monument, with a focus on the desert and mountain regions and the night sky, while providing opportunities for commercial and industrial development. The Circulation and Infrastructure Element seeks to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns. The Safety Element mandates that Hazard and Resources Overlay Maps be used to identify areas suitable or required for retention as open space. Policy D/OS 1.6 specifies that no development of any kind, including resource extraction, can be approved that would destroy or seriously diminish the visual quality of existing sand dunes.

#### San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by the County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The San Bernardino Countywide Plan's Natural Resources Element maintains specific goals and policies related to preservation of open space, park, recreation, and scenic resources to prioritize conservation actions that demonstrate multiple resource preservation benefits. The Land Use Element also seeks to identify and preserve scenic qualities of communities within unincorporated portions of the County, while balancing the quality of life for current and future residents with opportunities for commercial and industrial development.

## County of San Bernardino Code of Ordinances

San Bernardino County does not have any ordinances relevant to potential aesthetics impacts of the Proposed Project.

## County of Riverside General Plan

The County of Riverside General Plan contains aesthetics-related policies within multiple elements. The Land Use Element provides for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, and watercourses, including arroyos and canyons; and provides for scenic and recreational opportunities. The Circulation Element identifies County-eligible scenic corridors to protect their aesthetic value. The Multipurpose Open Space Element aims to identify, maintain, and conserve open space resources such as skylines, view corridors, and outstanding scenic vistas. The Safety Element requires adequate mitigation of potential impacts from erosion, slope instability, and loss of aesthetic resources for development occurring on slope and hillside areas. The Healthy Communities Element promotes healthy land use patterns by preserving rural open space areas and scenic resources.

## County of Riverside Code of Ordinances

Riverside County does not have any ordinances relevant to potential aesthetics impacts of the Proposed Project.

### 3.1.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate aesthetics impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on aesthetics. A discussion of potential types of aesthetics impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce aesthetics impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.1.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Have a substantial adverse effect on a scenic vista? (Impact AES-1)
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway? (Impact AES-2)
- In non-urbanized 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? (Impact AES-3)
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Impact AES-4)

### 3.1.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project. The following steps were taken to analyze the potential aesthetics impacts of the Proposed Project.

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on aesthetics or damage to scenic or visual resources.
- Identify and evaluate potential impacts related to aesthetics resulting from implementation of the Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential aesthetics impacts.

Impacts related to aesthetics were assessed based on review of the HCP, consultation with the Permittees and Southern California Edison, and review of applicable local government authorities, such as general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines and standard professional practice were used to determine whether the Proposed Project would have a significant impact on aesthetics and visual resources.

This analysis of potential aesthetic effects of the Proposed Project was conducted using the elements of the Federal Highway Administration's and Bureau of Land Management's (BLM) guidelines to determine Proposed Project impacts, in compliance with State CEQA Guidelines Appendix G.

The Federal Highway Administration guidelines require that a project be assessed as to whether it affects the overall aesthetic character of a project area and as to its physical compatibility with the site's existing visual quality (FHWA 1981). The guidelines include the following variables (i.e., evaluative criteria):

- Vividness. Visual power (i.e., memorability) of landscape components. Vividness includes consideration of landforms and land cover (e.g., vegetation, water, and development).
- Intactness. Integrity of the natural or built environment and freedom from encroaching elements. Development could enhance or subtract from otherwise intact urban and pristine landscapes.
- Unity. Visual coherence or harmony of individual landscape elements; compatibility. Although most landscapes exhibit a greater or lesser degree of unity between natural and built landscape elements, entirely natural landscapes and/or predominantly urban landscapes can be visually unified or chaotic.

When all three of these criteria are rated highly in a project setting, visual quality is accordingly considered to be high. However, a landscape setting that has low visual quality may still be sensitive to project-related changes.

The BLM methodology assumes that the degree to which a project affects the visual quality of a landscape depends on the degree of contrast created between a project and the existing landscape. The basic design elements of the BLM guidelines include form, line, color, and texture. BLM's general guidance for assessing contrast is defined as follows (BLM 1978):

- **Form.** Contrast in form results from changes in the shape and mass of landforms or structures. The degree of change depends on how dissimilar the introduced forms are to those that remain in the landscape.
- **Line.** Contrasts in line results from changes in edge types and interruption or introduction of edges, bands, and silhouette lines. New lines may differ in their sub-elements (i.e., boldness, complexity, and orientation) from existing lines.
- **Color.** Changes in value and hue tend to create the greatest contrast. Other factors, such as chroma (i.e., color saturation or brilliance), reflectivity, and color temperature (e.g., red is warm, blue is cold), also increase the contrast.
- **Texture.** Noticeable contrast in texture usually stems from differences in the grain, density, and internal contrast. Other factors, such as irregularity and directional patterns of texture, may affect the rating.

### 3.1.3.3 Impact Analysis and Mitigation

#### *Impact AES-1: Have a substantial adverse effect on a scenic vista?*

The Proposed Project would involve conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP. Conservation activities include habitat improvement, management, and monitoring activities as well as routine management and maintenance activities within dedicated Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. Many of these activities would involve the use of construction equipment.

Implementing the Proposed Project has the potential to temporarily affect scenic vistas, particularly those that occur near the Upper Santa Ana River and its tributaries, because of habitat construction needed to implement the Conservation Strategy. Construction activities could occur over several years but would be dispersed across a large Permit Area. As described in Table 3-1, construction activities would include earth moving, grading, and installation of structures in Conservation Areas as a part of restoration. However, Proposed Project activities would be temporary and public views of these sites post-construction would include views of restored native habitat with infrequent maintenance activities. Because potential effects on scenic vistas would be temporary, and implementing the Upper SAR HCP would result in improvements to Covered Species habitat, the potential for substantial adverse effects on scenic vistas from construction, management, and operational activities is extremely low. Furthermore, habitat improvement would likely result in beneficial impacts such as the restoration of degraded riparian habitat to increase habitat value for native fish, wildlife, and plant species. In addition, Conservation Areas would increase the amount of native vegetative communities that attract wildlife, thus helping to improve the visual quality and visual diversity of the restoration area. Therefore, the Proposed Project would not have a substantial adverse effect on a scenic vista, and this impact would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

***Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway?***

As described above, the Planning Area contains multiple designated and potentially eligible scenic highways. Temporary construction activities associated with Conservation Areas could introduce visually discordant features as viewed from scenic highways if they are within the viewshed of a scenic highway because such activities involve grading; site clearing and cleaning; sediment, dirt, and vegetation removal; materials hauling; and use of construction equipment for site improvements. For example, Van Buren Boulevard is a scenic corridor adjacent to a number of Conservation Areas and it passes over the Santa Ana River in the cities of Riverside and Jurupa Valley. For Conservation Areas, temporary changes to the visual environment could also result from vegetation removal that could be noticeable to travelers along these routes, especially as restoration work is in process and vegetation growth is pending. Construction activities could occur over several years but would be dispersed across the large Planning Area. However, Conservation Areas would be in a transitional state over a period of one to several years, until plant species mature and vegetation recolonizes the sites. In addition, restored sites would increase the amount of native vegetative communities that attract wildlife, thus helping to improve the visual quality and visual diversity of the Conservation Area. Post-construction, changes associated with restoration activities would not affect the visual quality within scenic highway corridors and would not result in significant impacts.

Management and maintenance activities for Conservation Areas could involve cleaning, repair of structures, sediment removal, vegetation management and care along embankments, inspections, monitoring of habitat success, and removal of trash. These activities could be visible from scenic highways if they are in proximity to these features. However, the activities would maintain the visual character of the sites, and would not act to further change the visual quality or character of the sites or surrounding visual landscape during operations. Therefore, the physical act of maintaining Proposed Project sites would be the primary element visible from scenic highways during operation. These activities would require equipment ranging from machine-operated to hand-held tools to maintain facilities. However, maintenance activities are anticipated to occur within short periods of time and be of limited duration.

Therefore, the Proposed Project would not have a substantial adverse effect on scenic resources along a scenic highway due to the short-term nature of Proposed Project activities and the activities being dispersed across a large Permit Area. In the long term, management and maintenance activities, specifically at Conservation Areas, would improve scenic resources by enhancing site conditions compared to the existing setting by, for example, removing trash and nonnative invasive species. Therefore, the Proposed Project would not substantially damage any scenic resource, and impacts would be **less than significant**.

**Mitigation Measures**

No mitigation measures are required.

***Impact AES-3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings, including scenic vistas? (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?***

Portions of the Planning Area are within urban areas or directly adjacent to them; others are less developed and more natural. Even though the Proposed Project could result in temporary impacts due to construction and maintenance of Conservation Areas within the Planning Area, the Proposed Project would not have a substantial adverse effect on visual character and quality due to the short-term nature of Proposed Project improvements and the activities being dispersed across a large Permit Area over the entire 50-year Permit term. In the long term, construction, maintenance, and management activities of the Proposed Project, specifically at Conservation Areas, would improve visual character and quality and scenic vistas by improving site conditions as compared to the existing condition. The Proposed Project would not substantially degrade the existing setting associated with the restoration and/or rehabilitation of Conservation Areas, and the visual quality of sites may be improved with Proposed Project implementation.

The implementation of the proposed conservation actions would be consistent with specific goals and policies related to the identification and preservation of scenic resources identified in Section 3.1.2, *Regulatory Framework*, above, as improvements are being proposed. Furthermore, the Proposed Project does not include the addition of incompatible land uses or zones to the Planning Area and would not conflict with existing zoning governing scenic quality that is identified in the *Aesthetics* section of Appendix B, *Regional and Local Regulations*. Therefore, impacts would be **less than significant**.

**Mitigation Measures**

No mitigation measures are required.

***Impact AES-4: Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?***

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Planning Area. Conservation activities include habitat improvement, management, and monitoring activities within the Conservation Areas in the Permit Area, and would not involve the installation of new lighting. Furthermore, the Proposed Project would not require construction lighting because all work would be conducted during daylight hours. Structures built for conservation purposes would be of natural or natural-appearing materials, that would not be reflective and, for this reason, would not result in new sources of glare. As there would be no reflective structures or lighting constructed in the Permit Area, there would be **no impact**.

**Mitigation Measures**

No mitigation measures are required.



### 3.1.4 Summary of Potential Types of Impacts of Covered Activities

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of aesthetics and visual resources effects that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could result in aesthetics impacts and potential best practices that could be incorporated into future projects to reduce aesthetics impacts.

Covered Activities by type and their possible relationship to aesthetics impacts if implemented with permit coverage are shown in Table 3.1-2 and discussed below.

**Table 3.1-2. Construction and Operation of Covered Activities and Their Relevance to Aesthetics**

Covered Activity	Description	Relevance
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Construction areas could be visible to adjacent sensitive land uses and negatively affect the visual character and quality views of affected area; following construction, existing structures could introduce new features into the landscape and affect overall aesthetic character of a project area and compatibility with the existing visual quality.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Minor land disturbance or management of vegetation that may be visible in scenic vistas; periodic vehicle trips to sites for operations and maintenance

Potential aesthetics impacts that could result from implementing the types of Covered Activities identified in Table 3.1-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.1-2, aesthetic impacts associated with constructing, operating, and maintaining these types of Covered Activities could include negative impacts on the visual character and quality views of affected areas, changes in the aesthetic character of a project area, or incompatibility with the existing visual quality.

The presence of construction and operations activities and associated equipment could affect views of and from a given project area. Some Covered Activities would be perceived as temporary or minor, but major construction projects could negatively affect the visual character and quality views of the affected area. Construction and operations activities could also be visible in the vicinity of scenic vistas and scenic highways. Changes to the visual environment could result from vegetation removal that could be noticeable to travelers along these routes. Implementation of Covered Activities in the Permit Area would also result in vegetation removal, earthwork, and construction of built features that could remove existing visual resources, introduce new features into the landscape, and ultimately alter the visual landscape. These changes would convert more natural-looking corridors that have riparian vegetation to more utilitarian water infrastructure facilities in certain locations. Operations and maintenance activities of the Covered Activities in the Permit Area would be required periodically and would involve painting, cleaning, and repair of structures; sediment removal at recharge basins; vegetation management along embankments; facilities inspections; and vegetation management within transmission line rights-of-way that could be visible from scenic highways. The activities would maintain the visual character of the facilities, once built, and would not act to further change the visual quality or character of the facilities or surrounding visual landscape during operations.

Light and glare impacts associated with the variety of Covered Activities from construction and operations could occur in the Permit Area. Evening and nighttime construction and maintenance activities, if required, would result in the use of bright lights that would negatively affect adjacent viewers and nighttime views of and from work areas. Glare could occur from solar projects.

Recommended best practices to reduce aesthetics impacts would ensure that the facilities constructed as a part of Covered Activities complement and blend in with the local development and that features associated with the facilities are screened to lessen impacts on scenic highways. Recommended best practices generally include implementing aesthetic design treatments such as screening for new and expanded facilities that are built as a result of Covered Activities, reducing nuisance light and glare to the extent feasible, and restricting construction activities to daytime hours. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity aesthetics impacts and best practices that could be employed to reduce potential impacts.

## 3.2 Agriculture and Forestry Resources

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *agriculture resources* include the natural and human-made resources utilized for agricultural production and raising livestock, including the land, soil, water, and air, and any land designed for farmland or agricultural uses. For purposes of this EIR, *forestry resources* are resources that are found in a given forest, including flora, fauna, water, timber, recreation, fisheries, and other forest products among others found within designated forest lands. Forestry resources are managed natural resources that include existing forest reserves and non-timber resources and are sometimes used for fuel, lumber, and recreational or commercial purposes.

### 3.2.1 Environmental Setting

#### 3.2.1.1 Regional Setting

The region contains several forests and habitat reserves and other State and Federal lands that provide benefit to wildlife. Specific refuge lands with geographic proximity to the Planning Area are as follows (California Protected Areas Database 2019) (including a brief description of management activities).

- Federal
  - Bureau of Land Management (open access)
    - Unnamed lands. The Bureau of Land Management promotes multiple use on public lands: development, conservation through shared stewardship, promoting jobs, and allowing traditional uses of public lands (e.g., hunting, fishing, and other recreational uses) (Bureau of Land Management n.d.).
  - U.S. Forest Service (public access)
    - Cleveland National Forest. The Cleveland National Forest is the southernmost national forest in California and encompasses 460,000 acres (U.S. Forest Service n.d.1). It is managed for resources, including fire, ecological resources, archaeological resources, and recreation (U.S. Forest Service n.d.2).
    - Angeles National Forest. The Angeles National Forest is near the metropolitan area of Los Angeles and encompasses 700,000 acres (U.S. Forest Service n.d.3). It is managed for resources and recreation and includes natural environments, developed campgrounds and picnic areas, swimming, fishing, and skiing.
    - San Bernardino National Forest. The San Bernardino National Forest is in the San Bernardino and Jacinto Mountains and encompasses approximately 810,000 acres, including approximately 140,000 acres of inholdings (U.S. Forest Service n.d.4). It is managed for resources and recreation and includes national monuments, wilderness areas, wild and scenic rivers, and other resources (U.S. Forest Service n.d.5).
- State
  - California Department of Fish and Wildlife (restricted access or no public access)

- Lake Mathews-Estelle Mountain Ecological Reserve. The Lake Mathews-Estelle Mountain Ecological Reserve is jointly managed by the Metropolitan Water District of Southern California, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Riverside County Habitat Conservation Agency (Western Riverside County Regional Conservation Authority n.d.). The habitat reserve is approximately 11,000 acres (Riverside County Habitat Conservation Agency 2019). This area is important for bird nesting and feeding, among other values.
- Sycamore Canyon Ecological Reserve (Inland Deserts Region/Region 6). The Sycamore Canyon Ecological Reserve is 131 acres (California Department of Fish and Wildlife 2019). The dominant vegetation type is annual grassland, with some sparse coastal sage scrub species (primarily white sage and flat-topped buckwheat). The area is undeveloped and has been used primarily for non-consumptive recreation such as hiking. The property was purchased to protect habitat for endangered species and to provide compatible public uses.
- University of California (restricted access)
  - Box Springs Reserve. This reserve is 160 acres (University of California Natural Reserve System 2019). Box Springs Reserve lies on a steep and rugged granitic slope near the top of Box Springs Mountain, in a transitional zone between coastal sage scrub and chamise chaparral. A cold spring on the adjacent land gives rise to freshwater seeps and an intermittent stream. Rare species are resident at this reserve, as well as a diversity of more common species.

### 3.2.1.2 Planning Area

The environmental setting for agriculture and forestry resources includes the location of agriculture and forestry resources in the Planning Area. This section describes the types of crops, lands designated as Important Farmland, and lands protected under the Williamson Act.

Forestry resources are found within the cities of Corona and Lake Elsinore (Cleveland National Forest) and the cities of Calimesa, Highland, Rancho Cucamonga, San Bernardino, and Yucaipa (San Bernardino National Forest). Forestry also occurs within unincorporated land of the Angeles National Forest.

#### Existing Agricultural Resources

In the late nineteenth century, the Santa Ana River region had developed a successful agricultural economy. By the early twentieth century, expanding farms and orchards, along with an increasing population, began to outgrow available water supplies (SAWPA 2018). San Bernardino County had 1,249 farms totaling 77,199 acres in 2012. Riverside County had 2,949 farms totaling 344,044 acres (Riverside Agricultural Commissioner 2017). In 2018, agricultural production, not including livestock and poultry, was valued at approximately \$997 million in the County of Riverside, which represents a 5% decrease from 2016. In San Bernardino County, agricultural production was valued at approximately \$123 million.

#### Important Farmland

According to the Farmland Mapping and Monitoring Program (FMMP), the Planning Area encompasses 42,263 acres of Important Farmland within both San Bernardino and Riverside Counties. There are several parcels of land designated by the California Department of Conservation

as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Planning Area (see Figure 3.2-1). Table 3.2-1 shows the acreage of Important Farmland, separated by FMMP designation, within San Bernardino and Riverside Counties in the Planning Area.

**Table 3.2-1. Farmland of Importance within the Planning Area (acres)**

County	Prime Farmland	Unique Farmland	Farmland of Statewide Importance
San Bernardino	7,120	1,908	655
Riverside	2,129	3,050	1,376

Source: California Department of Conservation 2017

### Williamson Act Lands

Approximately 6,169 acres of land within the Planning Area are currently under active Williamson Act contracts (California Department of Conservation 2017). A total of 861 acres under active Williamson Act contracts are within San Bernardino County and 5,308 acres are within Riverside County. Figure 3.2-2 shows lands under Williamson Act contracts in the Planning Area. In 2015, San Bernardino County contained 2,346 (49.7%) acres of Williamson Act land classified as Prime Agricultural Land, while Riverside County had 49,010 acres (87.9% of total) of Williamson Act lands classified as Prime Agricultural Land (California Department of Conservation 2016). The rest of the Williamson Act lands within Riverside and San Bernardino Counties are classified as Non-Prime Agricultural Land. These classifications are different from those that apply to the Important Farmlands mapped by the California Department of Conservation, as described above.

### Forest Lands

The San Bernardino mountains were designated as a national forest more than 100 years ago (USDA 2019). Over the second half of the nineteenth century, mining, timber, and grazing grew rapidly, which led to much of the forest being felled and overgrazed. Water quality in nearby streams and rivers was also declining. With the intention of conserving natural resources, this area was designated as the San Bernardino National Forest in 1907. The San Bernardino National Forest consists of 672,701 total acres, spanning across San Bernardino and Riverside Counties.

Approximately 275,325 acres of land within the Planning Area are forest lands as designated by the U.S. Forest Service and San Bernardino and Riverside Counties, as shown on Figure 3.2-3. A total of 245,600 acres are within San Bernardino County and 29,725 acres are within Riverside County. Some of the parcels within the Planning Area may contain lands that would be defined as “forestry resources” (e.g., trees that can be processed for timber products). There is no wild-harvested, commercial forestry, or timber production industry within Riverside County (County of Riverside 2015). As home to the headwaters of the Santa Ana River, the forest lands, as designated by the U.S. Forest Service and the Bureau of Land Management (including the San Bernardino National Forest, Cleveland National Forest, and Angeles National Forest), encompass approximately 30% of the Santa Ana River watershed’s land mass. These areas also receive 90% of the Santa Ana River watershed’s annual precipitation (SAWPA 2018). Forest management practices have direct effects on both water quality and quantity, particularly relative to forest fires and the consequential effects of soil erosion on water storage.

## 3.2.2 Regulatory Framework

### 3.2.2.1 Federal Regulations

#### **Farmland Protection Policy Act**

The Farmland Protection Policy Act of 1984 requires Federal agencies to consider how their activities or responsibilities that involve financing or assisting construction of improvement projects or acquiring, managing, or disposing of Federal land and facilities may affect farmland. This act does not apply to projects related to Federal permits or licensing; therefore, it is not applicable to the Proposed Project.

The purpose of the act is to minimize Federal actions leading to the conversion of farmland to non-agricultural uses by ensuring that Federal programs are administered in a manner compatible with state government, local government, and private programs designed to protect farmland. The Natural Resources Conservation Service (NRCS) is the agency primarily responsible for implementing the Farmland Protection Policy Act, which is a voluntary program that provides funds to help purchase development rights to keep productive farmland in agricultural uses. The program provides matching funds to state, local, or tribal government entities and nongovernmental organizations with existing farmland protection programs to purchase conservation easements. Participating landowners agree not to convert the land to non-agricultural uses and retain all rights to the property for future agriculture. A minimum 30-year term is required for conservation easements, and priority is given to applications with perpetual easements. NRCS provides up to 50% of the fair market value of the easement.

#### **Safe Harbor Agreements**

Private property owners can voluntarily enter into a Safe Harbor Agreement with the U.S. Fish and Wildlife Service and engage in activities that are beneficial to endangered species on their property. In turn, property owners are provided assurances that new land use restrictions will not be required on the property, even if the population of listed species on the subject property increases. The assurances are provided by the U.S. Fish and Wildlife Service through an Enhancement of Survival Permit issued to the property owner and under the authority of Section 10(a)(1)(A) of the Federal Endangered Species Act. This permit authorizes incidental take of species that may result from actions undertaken by the landowner under the Safe Harbor Agreement, provided that the landowner is following the provisions of said agreement by providing a net conservation benefit that contributes to the recovery of the subject covered species. The contribution toward recovery varies from case to case. The Safe Harbor Agreement does not have to provide permanent conservation for the enrolled property. Safe Harbor Agreements would be applicable for lands within the Planning Area where protected species or protected habitat are present.



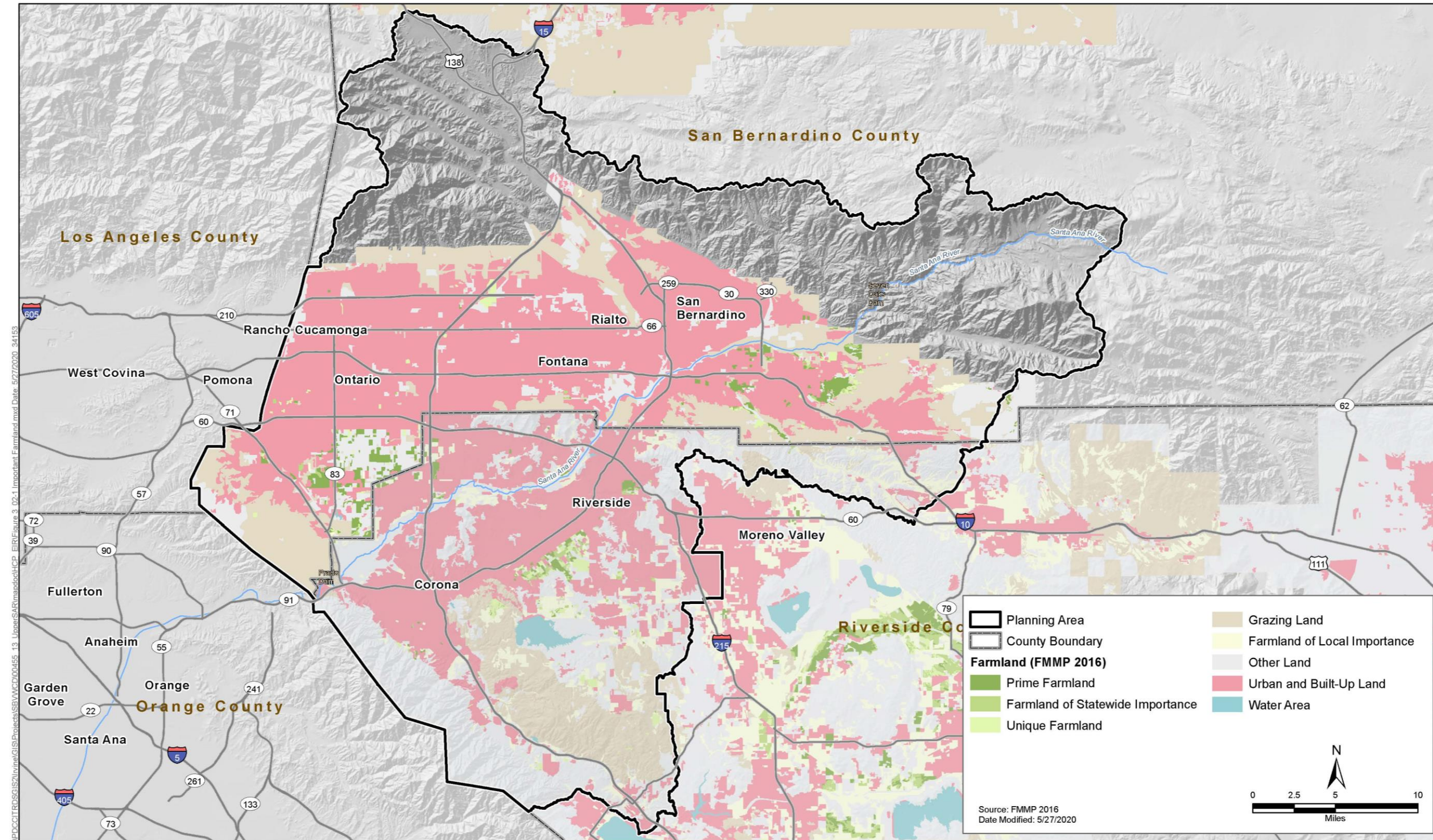


Figure 3.2-1. Important Farmland







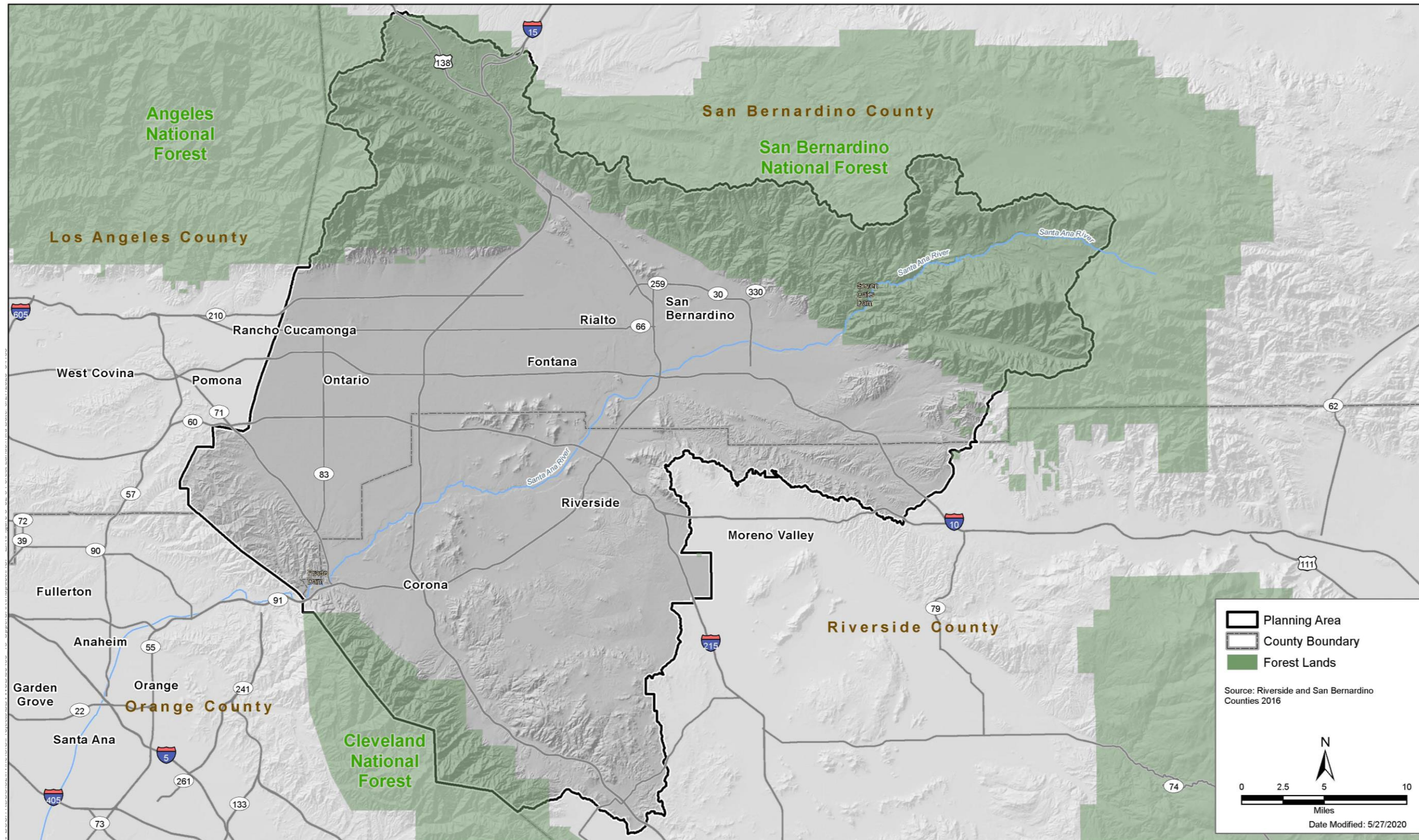


Figure 3.2-3. Forest Lands

*This page intentionally left blank.*

## National Forest Land and Resource Management Plans

Portions of the Planning Area fall within parcels of the Angeles, Cleveland, and San Bernardino National Forests, which are managed in accordance with the Land and Resource Management Plans prepared for each national forest. The purpose of these plans is to guide the integrated protection and use of forest resources. The Resource Management Plans establish goals for managing the land and its resources over the next 10 to 15 years within the national forests. The Resource Management Plans identify objectives and management goals to manage activities or practices to ensure the protection of resources.

### 3.2.2.2 State Regulations

#### Farmland Mapping and Monitoring Program

The California Department of Conservation established the FMMP in 1982 to provide a consistent and impartial analysis of agricultural land use and land use conversion throughout California. The FMMP identifies farmlands in the state based on current land use information and soil survey data on soil characteristics that best support crop production as compiled by the U.S. Department of Agriculture and NRCS.

The Department of Conservation maintains the FMMP and monitors the conversion of farmland to and from agricultural use through its Important Farmland Inventory System. The farmland classification system used by the FMMP consists of eight mapping categories: five categories of agricultural lands and three categories of non-agricultural lands. The characteristics of these categories are described in Table 3.2-2. The California Environmental Quality Act (CEQA) specifically is concerned with Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land, which are all identified as Important Farmland.

**Table 3.2-2. Important Farmland Category Definitions**

<b>Farmland Category</b>	<b>Definition</b>
<b>Agricultural Lands</b>	
Prime Farmland	Prime Farmland is defined by the State as “irrigated land with the best combination of physical and chemical features able to sustain long-term production of agricultural crops.” Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. To be designated as Prime Farmland, the land must have been used for production of irrigated crops at some time during the 4 years prior to the mapping date.
Farmland of Statewide Importance	The State defines Farmland of Statewide Importance as “irrigated land similar to Prime Farmland that has a good combination of physical and chemical characteristics for the production of agricultural crops.” However, this land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. In order for land to be designated as Farmland of Statewide Importance, it must have been used for production of irrigated crops at some time during the 4 years prior to the mapping date.
Unique Farmland	Unique Farmland is considered to consist of lower-quality soils and is used for production of 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. To qualify for this designation, land must have been used for crops at some time during the 4 years prior to the mapping date.

<b>Farmland Category</b>	<b>Definition</b>
Farmland of Local Importance	Farmland of Local Importance is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
Grazing Land	Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.
<b>Non-Agricultural Lands</b>	
Urban and Built-up Land	Urban and Built-up Land consists of land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This type of land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
Other Land	Other Land is land not included in any other mapping category. Examples include low-density rural developments and brush, timber, wetland, and riparian areas not suitable for livestock grazing. This category also includes vacant and non-agricultural land surrounded on all sides by urban development; confined livestock, poultry, or aquaculture facilities; strip mines; borrow pits; and water bodies smaller than 40 acres.
Water	Water includes perennial water bodies with an extent of at least 40 acres.

Source: California Department of Conservation 2016

## California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act, or Williamson Act, is one of the State's primary mechanisms for conserving farmland. The Williamson Act enables counties and cities to designate agricultural preserves (Williamson Act lands) and offer preferential taxation to private agricultural landowners based on the income-producing value of their property in agricultural use, rather than on the property's assessed market value. In return for the preferential tax rate, the landowner is required to sign a contract with the county or city agreeing not to develop the land for a minimum 10-year period. Contracts are automatically renewed annually unless a party to the contract files for non-renewal or petitions for cancellation. If the landowner chooses not to renew the contract, it expires at the end of its duration. Under certain circumstances, a county or city may approve cancellation of a Williamson Act contract. Cancellation requires private landowners to pay back taxes and cancellation fees.

Permissible land uses under Williamson Act contracts are governed by California Government Code Section 51238.1. Each city and county has the discretion to determine land uses that are or are not compatible with Williamson Act contracts, provided these uses are not prohibited under the act. The following are categories into which land can be placed under the Williamson Act.

### Prime Agricultural Land

Prime Agricultural Land enrolled under Williamson Act contract meets any of the following criteria.

1. Land that is Class I or Class II in the NRCS land use compatibility classification system.
2. Land that rates 80–100 in the Storie Index Rating system.



3. Land that supports livestock used for the production of food and fiber and has an annual carrying capacity equivalent to at least one annual unit per acre as defined by the U.S. Department of Agriculture.
4. Land planted with fruit- or nut-bearing trees, vines, bushes, or crops that have a non-bearing period of fewer than 5 years and will normally return during the commercial-bearing period on an annual basis from the production of unprocessed agricultural plant production not less than \$200 per acre.
5. Land that has returned from the production of unprocessed agricultural plant production with an annual gross value of not less than \$200 per acre for 3 of the previous 5 years.

### **Non-Prime Agricultural Land**

Non-Prime Agricultural Land enrolled under Williamson Act contract is other agricultural land that does not meet any of the criteria for classification listed above for Prime Agricultural Land. Non-Prime Agricultural Land is defined as Open Space Land of Statewide Significance under the California Open Space Subvention Act and may be identified as such in other documents. Most Non-Prime Agricultural Land is used for grazing or non-irrigated crops. However, Non-Prime Agricultural Land may also include other open space uses compatible with cultivated agriculture and consistent with local general plans.

### **Land in Non-Renewal**

If a landowner wishes to stop participating in the contract, the landowner can file for non-renewal of the Williamson Act contract. The 9-year non-renewal period begins with a Notice of Non-Renewal from the county, and the contract is terminated at the end of the non-renewal period. However, upon the filing for non-renewal under the Williamson Act, the existing contract remains in effect for the remainder of the time left on the existing contract. During the non-renewal process, the annual tax assessment gradually increases. At the end of the non-renewal period, the contract expires and the land is no longer designated under the Williamson Act.

### **California Right to Farm Act**

The “Right to Farm Act” (California Civil Code Sections 3482.5, 3482.6, 3483, and 3484, collectively) is a statewide agricultural protection act. Similar to Riverside County Code Chapter 14.05 (the Right to Farm Ordinance, discussed below), the Right to Farm Act helps protect agricultural operations, activities, facilities, etc. from nuisance complaints. Unlike the County Code, the Right to Farm Act has a broader sweep of protections with the intention of shielding agricultural processing activities, operations, and facilities, such as the processing of dairy products, the production of wine, the processing of meat and egg products, the drying of fruits and grains, the packing and cooling of fruits and vegetables, and the processing for wholesale and retail markets of agricultural products. The Planning Area has many of these processing facilities and operations. The Right to Farm Act prevails over contrary provisions of any city or county ordinance.

### **3.2.2.3 Local Regulations**

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to agriculture and forestry resources. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the

largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties' general plans and other local plans, policies, ordinances, and programs related to agriculture and forestry resources. Appendix B, *Regional and Local Regulations*, presents relevant local plans, policies, ordinances, and programs related to agriculture and forestry resources in detail.

## **County of San Bernardino General Plan**

The County of San Bernardino General Plan (County of San Bernardino 2007) expresses the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The Land Use, Conservation, and Open Space Elements provide goals and policies related to agricultural resources. The Land Use Element provides opportunities for a rural lifestyle that preserves the unique character within suitable locations of the Valley Region. The Conservation Element seeks to maintain natural resources that contribute to the quality of life within the county, to protect soils and agricultural lands from the effects of non-agricultural development and conversion.

The Open Space Element seeks to preserve and protect cultural resources throughout the county, including parks, areas of regional significance, and scenic, cultural, and historic sites that contribute to a distinctive visual experience for visitors and quality of life for county residents.

### **Agricultural Land Use Designations**

The County of San Bernardino General Plan establishes two agricultural land use designations: Agriculture (AG) and Rural Living (RL).

#### ***Agriculture (AG)***

The AG (Agriculture) land use zoning district identifies areas where agriculture is the primary land use but where other secondary uses that directly support agricultural uses may be permitted. The County also aims to encourage the open space values of these uses and to provide areas for both extensive and intensive agricultural pursuits.

#### ***Rural Living (RL)***

The RL (Rural Living) land use zoning district provides sites where non-agricultural activities are the primary use of the land, but where agricultural and compatible uses may coexist.

## **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Natural Resources Element of the Countywide Plan seeks to protect economically viable and productive agricultural lands from the adverse effects of urban encroachment and conversion, and to encourage farm operations to strengthen their economic viability. The Natural Resources Element also seeks to protect agriculture lands and soils, conservation and preservation incentives and support landowners in establishing new and existing California Land Conservation (Williamson Act) contracts.

### **Agricultural Land Use Zoning Designations**

The San Bernardino Countywide Plan establishes two agricultural land use zoning districts: Agriculture (AG) and Floodway (FW).

#### ***Agriculture (AG)***

The AG (Agriculture) land use zoning district provides sites for commercial agricultural operations, agriculture support services, rural residential uses, and similar and compatible uses. Open space and recreation uses may occur on non-farmed lands within this land use zoning district.

#### ***Floodway (FW)***

The FW (Floodway) land use zoning district provides sites for animal keeping, grazing, crop production, and similar and compatible uses.

### **County of San Bernardino Code of Ordinances**

San Bernardino County has two ordinances relevant to agricultural or forestry resources.

#### **Ordinance Code 82-1 (65/35 Land Preservation Plan)**

The purpose of this ordinance is to require urban development in the county to be limited to no more than 35% of the land in all the county. At least 65% of all land in the county is to be preserved for agriculture, open space, wetlands, parks, and other nonurban uses.

#### **Ordinance Code Section 82-1.024**

The purpose of this ordinance is to require the county enter into preservation agreements with cities designed to preserve land for agriculture and open space, wetlands, or parks.

### **County of Riverside General Plan**

The County of Riverside General Plan maintains specific policies related to the preservation of agricultural and forested lands. Goals and policies from the Land Use Element (County of Riverside 2019) seek to provide opportunities for a rural lifestyle that preserves the unique character within suitable locations of the Valley Region and to regulate the density of development in sloping hillside areas to reduce fire hazards, prevent erosion, and preserve the forest character of the region. The Multipurpose Open Space Element (County of Riverside 2015) seeks to preserve and maintain natural resources that contribute to the quality of life and to encourage conservation and sound management of the mountain forest character. It also seeks to balance the productivity and conservation of soil resources and protect agricultural lands. The Multipurpose Open Space Element (County of Riverside 2015) aims to coordinate the update of the Agricultural Resources map; employ agricultural land conservation programs; ensure funding for farmland protection; and work

with Federal and State agencies for the sustainable conservation of forest land, natural resources, and habitat lands included within the Multiple Species Habitat Conservation Plans.

Goals and policies of the Open Space Element seek to preserve and protect cultural resources throughout the County, including parks; areas of regional significance; and scenic, cultural, and historic sites and to ensure the preservation and proper management of National Forest lands within the Mountain Region.

One of the general plan's principal goals is to provide for the continued and even expanded production of agricultural products by conserving areas appropriate for agriculture and related infrastructure and supporting services. The definition of an agricultural land use in the general plan is provided below.

### **Agricultural Land Use Designations**

**Agriculture (AG)** - to "help conserve productive agricultural lands within the county" (County of Riverside 2019). Residential density is permitted at one dwelling unit per parcel provided that the parcel is 10 acres in size or larger. An additional dwelling unit may be allowed for each additional 10 acres being farmed for use by the owner, operator, or employees, up to five total dwelling units per parcel.

### **County of Riverside Code of Ordinances**

The County of Riverside Agricultural Commissioner's Office produces agricultural production reports for the acreage, yield, and gross valuation of all agricultural crops and livestock within Riverside County and oversees programs regarding environmental protection, pest prevention and exclusions, consumer protection, and compliance with many of the ordinances regarding agricultural production and operation provided below.

#### **Ordinance No. 559 (Regulating the Removal of Trees)**

The purpose of this ordinance is to ensure that Riverside County's timberlands are protected and their ecological balance preserved by requiring the review and issuance of a permit prior to removal of living native trees on properties greater than 0.5 acre and located in the unincorporated area of the County of Riverside above 5,000 feet in elevation.

#### **Ordinance No. 509 (Establishing Agricultural Preserves)**

The purpose of this ordinance is to ensure that incompatible uses are not allowed within established agricultural preserves. The ordinance also establishes "Uniform Rules" for agricultural and compatible uses allowed in an agricultural preserve. Land uses not covered in the ordinance are prohibited within agricultural preserves.

#### **Ordinance No. 625 (Right to Farm)**

The purpose of this ordinance is to "conserve, protect and encourage the development, improvement and continued viability of agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the county's residents." It seeks to "balance the rights of farmers to produce food and other agricultural products with the rights of nonfarmers who own, occupy or use land within or adjacent to agricultural areas."



### **Resolution No. 84-526 (Riverside County Rules and Regulations Governing Agricultural Preserves)**

These rules and govern agricultural preserve procedures within Riverside County and to aid in implementation of the Williamson Act. The rules and regulations address procedures for the initiation, establishment, enlargement, disestablishment, and diminishment of agricultural preserves.

## **3.2.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate agriculture and forestry resources impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on agriculture and forestry resources. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.2.3.1 Significance Criteria**

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- 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? (Impact AG-1)
- Conflict with existing zoning for agricultural use or a Williamson Act contract? (Impact AG-2)
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? (Impact AG-3)
- Result in the loss of forest land or conversion of forest land to non-forest use? (Impact AG-4)
- 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 AG-5)

### **3.2.3.2 Methodology**

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impacts on agriculture and forestry resources of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on agriculture and forestry resources.
- Identify and evaluate potential impacts related to agriculture and forestry resources resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts and apply mitigation as needed.

- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

Impacts related to agriculture were assessed based on review of the HCP, consultation with the Permittees, geographic information system analysis using ESRI software, and a review of applicable local government authorities, such as the County of San Bernardino General Plan (2007), San Bernardino Countywide Plan (2019), County of Riverside General Plan (2017), and county ordinances. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would have a significant impact on agriculture and forestry resources. Impacts related to construction and operation on agriculture and forestry resources were assessed based on generally accepted analysis techniques that estimate the impacts in areas where physical land disturbance is needed to implement the Proposed Project. Land use conversions are compared to the amount of overall land in the Planning Area and HCP Preserve Area that is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Department of Conservation.

### 3.2.3.3 Impact Analysis and Mitigation

#### ***Impact AG-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

The Proposed Project would involve conservation actions as well as HCP Preserve System management and monitoring activities to implement the Conservation Strategy for the Proposed Project. Conservation activities include habitat improvement (restoration and/or rehabilitation), management, and monitoring activities as well as management and maintenance activities within dedicated Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may also be conducted related to hydrologic manipulation and substrate management. These activities could be located on land that is currently designated Important Farmland.

#### **Construction**

The Proposed Project would affect less than 0.1 acre of Important Farmland. Table 3.2-3 provides a summary of acres of farmlands, including Important Farmlands, potentially affected by implementation of the Proposed Project. Within the HCP Preserve System, the majority of designated farmland is considered Grazing Land.

**Table 3.2-3. Summary of Important Farmland Potentially Affected by the Proposed Project in the HCP Preserve System**

<b>FMMP Category</b>	<b>Conservation Sites</b>
<b>Important Farmlands</b>	
Prime Farmland	0.0
Unique Farmland	<0.1
Farmland of Statewide Importance	0.0
<b>Total Important Farmlands</b>	<b>&lt;0.1</b>

FMMP Category	Conservation Sites
<b>Other Farmland</b>	
Farmland of Local Importance	73.6
Grazing Land	574.3
<b>Total All Farmlands</b>	<b>647.9</b>

Land acquired for the benefit of species could be converted from agriculture, or land mapped as Important Farmland, to habitat. Although the specific location of land use acquisitions is not yet determined, the agricultural land to be acquired could be designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Figure 3.2-1).

The Proposed Project would result in the conversion of less than 0.1 acre of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance that is within the HCP Preserve System through habitat improvement (restoration and/or rehabilitation) and conservation. Therefore, impacts would be **less than significant**.

### Operation

Periodic and intermittent HCP Preserve System management and monitoring activities are not expected to convert designated farmland to other uses as a result of control of nonnative invasive species, Covered Species captive headstarting and translocation activities, monitoring activities, vegetation and fire management, site cleanup, preserve patrols, etc. While maintenance and management activities for the Proposed Project are expected to be short term and/or relatively minor, the anticipated disturbance that would be caused would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to other uses. Therefore, impacts would be **less than significant**.

### Mitigation Measures

No mitigation measures are required.

### ***Impact AG-2: Conflict with existing zoning for agricultural use or a Williamson Act contract?***

#### Construction

Open space uses are generally considered compatible uses under Williamson Act contracts, so impacts directly related to acquisition would be limited. As no Williamson Act lands occur in the HCP Preserve System, there would be no impact related to a conflict with a Williamson Act contract. However, implementation of the Proposed Project could have an impact on lands zoned for agricultural use. In addition to the potential impacts that would occur from implementation of the HCP Preserve System, most of the lands to be acquired, conserved, and restored/rehabilitated under the Proposed Project would not be zoned for agriculture and are largely zoned as Open Space, specifically in the areas adjacent to the Santa Ana River.

The Proposed Project could result in the conversion of some land currently zoned for agricultural uses to non-agricultural uses. However, the Proposed Project's Conservation Strategy was developed with the intent of allowing habitat improvement and preservation to occur without precluding existing agricultural uses. Under the Proposed Project, lands currently zoned for agriculture may be purchased through conservation easement or in fee title, or donated in lieu of

payment, for conservation purposes. Preservation of lands under an easement within areas zoned for agricultural use would not conflict with the permitted uses of agriculturally zoned lands.

There would be **no impacts**.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact AG-3: 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))?***

There are no active timberland operations within the Permit Area, and, therefore, no impacts on active timberland operations would result. Implementation of the Proposed Project is not expected to result in rezoning of forest land. Conservation easements could be placed in areas within the HCP Preserve System to continue the existing forest use, specifically within the Conservation Areas. Proposed Project activities are expected to occur over approximately 145 acres of forest land within the San Bernardino National Forest within the HCP Preserve System. Temporary use of land designated as forest land for construction easements and staging areas could occur; any change would be minor, and any forest lands would likely be restored back to their current condition. No permanent conversion of forest land is anticipated for purposes of implementing the Conservation Strategy and conflicts with adjacent forest lands are not expected to occur because of the nature of the Proposed Project activities. Because the Proposed Project would not require rezoning of forest lands and would include permanent protection of forest land for Covered Species conservation and habitat improvement, this impact would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact AG-4: Result in the loss of forest land or conversion of forest land to non-forest use?***

Implementation of the Proposed Project could result in the conservation of forest land; no conversion of forest land to non-forest use would occur. Approximately 145 acres of forest land could be affected by implementation of the Proposed Project; however, these areas would be within the Conservation Areas of the HCP Preserve System and would not be lost or converted to other uses. Proposed Project activities within forest land would include conservation and habitat improvement (restoration and/or rehabilitation) actions as well as HCP Preserve System management and monitoring activities to implement the Conservation Strategy for the Proposed Project. As stated in *Impact AG-3*, potential construction and operational impacts on forest land from implementation of the Proposed Project would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

***Impact AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?***

The Proposed Project could result in other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use; however, no conflict with, or loss or conversion of, forest land to non-forest use is anticipated, as described above for *Impact AG-3* and *Impact AG-4*. Impacts on forest lands are anticipated to be less than significant. As described above for *Impact AG-1* and *Impact AG-2*, the Proposed Project includes conservation and habitat improvement actions as well as HCP Preserve System management and monitoring activities to implement the Conservation Strategy for the Proposed Project.

Some Proposed Project activities could provide a potential benefit to agricultural uses with activities proposing sustainable agricultural development, specifically Covered Activity Conserv.7 for the Louis Rubidoux Nature Center and Sunnyslope Creek project, although other activities could result in the permanent conversion of farmland to non-agricultural uses. The Louis Rubidoux Nature Center and Sunnyslope Creek project proposes several park improvements and the opportunity for construction and operation of sustainable agriculture. Community engagement opportunities resulting from this Proposed Project activity include events such as the Annual Pecan Festival and regular farmers' markets. Other conservation activities could also involve the addition of new and/or improved habitat, a positive change to the existing environment that would not involve the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Additional positive changes could include the conservation and provision of additional water sources within the Permit Area, which would create and maintain water sources that benefit agricultural use and forest resources.

The Proposed Project could result in the acquisition of lands that could be located adjacent to farmland and could potentially result in indirect conversion of those adjacent farmlands if restrictions on adjacent farmlands affected the commercial viability of agricultural operations. The Proposed Project would not restrict existing agricultural uses on adjacent properties, nor would it prohibit or restrict activities essential to irrigation, pest control, equipment operation, cultivation, or the raising of farm animals on adjacent properties. Given the benefits involving agricultural uses associated with the Proposed Project, and the limited amount of Important Farmland potentially affected, impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

### **3.2.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of effects on agriculture and forestry resources that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create impacts on agriculture and forestry resources and potential best practices that could be incorporated into future projects to reduce impacts on agriculture and forestry resources.

Covered Activities that would occur within the Permit Area covered by the Upper SAR HCP include all actions to be covered by Federal Endangered Species Act Section 10 and California Endangered Species Act 2081(b) permits. Covered Activities include both specific projects and ongoing activities, such as operations and maintenance actions. Covered Activities in the Permit Area could result in impacts related to agriculture and forestry resources. The Covered Activities and their possible relationship to impacts are shown in Table 3.2-4 and discussed below.

**Table 3.2-4. Construction and Operation of Covered Activities and Their Relevance to Agriculture and Forestry Resources**

<b>Activity Type</b>	<b>Description</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Potential land acquisition and construction of new development, potential conversion to non-agricultural use. Temporary construction impacts.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance (O&M)	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Minor disturbance on land that is likely already developed for infrastructure, periodic vehicle trips to sites for O&M.

Potential agriculture and forestry resource impacts that could result from implementing the types of Covered Activities identified in Table 3.2-4 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.2-4, potential land acquisition and construction of Covered Activities could result in the potential conversion to non-agricultural use. Temporary construction impacts and minor disturbances on land could occur. Implementation of the Covered Activities would not restrict existing agricultural uses on adjacent properties, nor would it prohibit or unreasonably restrict activities essential to irrigation, pest control, equipment operation, cultivation, or the raising of farm animals. Covered Activities could require construction, as well as temporary construction access and staging areas. Implementation of Covered Activities would result in the permanent conversion of 106 acres of agricultural land to non-agricultural uses. Of these permanent impacts, a portion occurs where Permittees currently conduct groundwater recharge activities (14.0 acres are within existing

basins); therefore, permanent impacts on agricultural land would be less: 92 acres. Additionally, proposed construction on agricultural uses would preclude the use of approximately 119 acres of agricultural land during the construction period; however, at the end of the construction period, any temporary construction areas would be returned to their original use. Nevertheless, if after the temporary construction the land is not returned to its original, preconstruction condition, it could affect the ability of the land to function adequately as agricultural land.

Implementation of the Covered Activities could result in the loss of forest land or conversion of forest land to non-forest use. Approximately 7 acres of forest land could be affected by implementation of the Covered Activities, but temporary use of forest land for construction easements and staging areas could be restored. Some Covered Activities could provide a potential benefit to agricultural uses with projects proposing sustainable agricultural development.

Recommended best practices to reduce impacts on agriculture and forestry resources of future Covered Activities include restoring lands used as temporary construction areas on areas designated as farmland to preconstruction conditions. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity impacts on agriculture and forestry resources and best practices that could be employed to reduce potential impacts.

## 3.3 Air Quality

For purposes of this environmental impact report (EIR), ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. This section summarizes how air pollution moves through the air, water, and soil within the air basins and how it is chemically changed in the presence of other chemicals and particles. The impact analysis focuses on the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, and the primary criteria pollutants the Proposed Project would generate, which are carbon monoxide (CO), particulate matter 10 microns or less in diameter (PM<sub>10</sub>) and 2.5 microns or less in diameter (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and the ozone precursors reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>).

### 3.3.1 Environmental Setting

#### 3.3.1.1 Regional Setting

The Proposed Project is within western San Bernardino and Riverside Counties, which are within the South Coast Air Basin (SCAB). A portion of the project area in San Bernardino County also falls within the Mojave Desert Air Basin (MDAB).

#### Regional Climate and Meteorology

##### South Coast Air Basin

The SCAB is in an area of high air pollution potential due to the magnitude of emissions sources and the combination of topography, low mean atmospheric mixing height, and abundant sunshine. Although the SCAB has a semi-arid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, a limited capacity to disperse air contaminants horizontally exists. The mountains and hills surrounding the SCAB contribute to the variation of rainfall, temperature, and winds throughout the region.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The SCAB experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of its perimeter.

During the spring and early summer, pollution is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the Earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants become more concentrated in urbanized areas with pollution sources of greater magnitude.



The SCAB experiences frequent temperature inversions. Atmospheric temperature typically decreases with height. However, under inversion conditions, temperature increases as altitude increases, thereby preventing air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere. This interaction creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward.

### **Mojave Desert Air Basin**

The MDAB is characterized by an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and Central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountain range by the Cajon Pass (4,200 feet). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley) (MDAQMD 2016).

### **Local Climate Conditions**

#### **South Coast Air Basin**

The mountains and hills within and surrounding the SCAB contribute to the variation of rainfall, temperature, and winds throughout the region. These variables characterize short-term weather conditions, and observing long-term averages and trends in these characteristics provides a synopsis of typical climatological conditions in the SCAB. These meteorological conditions affect the fate and transport of air pollution from emissions sources within the SCAB. The Western Regional Climate Center—in collaboration with the National Oceanic and Atmospheric Administration—processes and publicizes regional climate summary data for the western United States. There are several meteorological stations throughout the SCAB that collect and record climatological data including temperature, precipitation, and wind speed and direction.

The meteorological data station that is most representative of local climate conditions is Riverside City Fire Station 3 at 6395 Riverside Avenue. The annual average temperature at the station is 67 degrees Fahrenheit (°F), with an average winter temperature of 56°F and an average summer temperature of 76°F. Total annual precipitation averages from 12 inches in the coastal plain, 10 to 24 inches in the inland alluvial valleys, and 24 to 48 inches in the San Bernardino Mountains (USGS 2016). The Riverside Municipal Airport collects information on wind speeds and patterns. The data indicate a prominence of westerly winds (Western Regional Climate Center 2018).

#### **Mojave Desert Air Basin**

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are

weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, indicating at least 3 months have maximum average temperatures over 100.4°F (MDAQMD 2016). Most of the MDAB is sparsely populated and produces very few human-made pollutants, although dust can become airborne under high wind conditions.

## Pollutants of Concern

### Criteria Pollutants

The Federal and State governments have established national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for six criteria pollutants. Ozone and nitrogen dioxide (NO<sub>2</sub>) are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO<sub>2</sub>, and lead are considered local pollutants that tend to accumulate in the air locally. The primary criteria pollutants generated by implementation of projects like the Proposed Project would be ozone precursors (NO<sub>x</sub>, NO<sub>2</sub>, and ROG), CO, particulate matter, and SO<sub>2</sub>.

All criteria pollutants can have human health effects at certain concentrations. The ambient air quality standards for these pollutants are set to protect public health and the environment with an adequate margin of safety (Clean Air Act Section 109). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants and form the scientific basis for new and revised ambient air quality standards.

Principal characteristics and possible health and environmental effects from exposure to the primary criteria pollutants generated by implementation of projects like the Proposed Project are discussed below.

**Ozone**, or smog, is a photochemical oxidant that is formed when ROG and NO<sub>x</sub> (both byproducts of the internal combustion engine) react with sunlight. ROG are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. The two major forms of NO<sub>x</sub> are nitric oxide (NO) and NO<sub>2</sub>. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO<sub>2</sub> is a reddish-brown irritating gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in ozone formation, NO<sub>x</sub> directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Ozone poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggravate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (EPA 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large

individual differences in the intensity of symptomatic responses, with one study finding no symptoms in the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50% reduction in forced airway volume in the most responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (EPA 2019b). In addition to human health effects, ozone has been tied to crop damage, typically in the form of stunted growth and premature death. Ozone can also act as a corrosive, resulting in property damage such as the degradation of rubber products.

**CO** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects resulting from ambient CO (CARB 2019a).

**Particulate matter** consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized—inhalable coarse particles, or PM<sub>10</sub>, and inhalable fine particles, or PM<sub>2.5</sub>. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading.

Particulate pollution can be transported over long distances and may adversely affect human health, especially for people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked particulate matter exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Depending on its composition, both PM<sub>10</sub> and PM<sub>2.5</sub> can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (EPA 2019c).

**SO<sub>2</sub>** is generated by burning of fossil fuels, industrial processes, and natural sources, such as volcanoes. Short-term exposure to SO<sub>2</sub> can aggravate the respiratory system, making breathing difficult. SO<sub>2</sub> can also affect the environment by damaging foliage and decreasing plant growth (EPA 2019d).

### **Toxic Air Contaminants**

Although NAAQS and CAAQS have been established for criteria pollutants, no ambient standards exist for toxic air contaminants (TACs). Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment.

Air toxics are generated by many sources, including *stationary sources*, such as dry cleaners, gas stations, auto body shops, and combustion sources; *mobile sources*, such as diesel trucks, ships, and trains; and *area sources*, such as farms, landfills, and construction sites. Adverse health effects of TACs can be carcinogenic (cancer-causing), short-term (acute) non-carcinogenic, and long-term (chronic) non-carcinogenic. Direct exposure to these pollutants has been shown to cause cancer,

birth defects, damage to the brain and nervous system, and respiratory disorders. Diesel particulate matter (DPM) is the principal TAC associated with the Project area.<sup>1</sup>

### Odors

Offensive odors can be unpleasant and lead to considerable distress among the public. This distress often generates citizen complaints to local governments and air districts. According to CARB's (2005) *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, manufacturing, and agricultural activities. CARB provides recommended screening distances for siting new receptors near existing odor sources.

## 3.3.1.2 Planning Area

### Ambient Air Quality

The existing air quality conditions in the Planning Area can be characterized by monitoring data collected in the region. Table 3.3-1 through Table 3.3-3 summarize data for criteria air pollutant levels from three stations within the Planning Area, for the last 3 years for which complete data were available (2016–2018). The three stations are spatially dispersed across the Planning Area; therefore, monitoring data are representative of conditions in the Planning Area. Air quality concentrations are expressed in terms of parts per million (ppm) or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). As shown in the tables, monitoring stations within the Planning Area have detected numerous violations of the Federal and State ozone and particulate matter standards. No violations of Federal or State CO or NO<sub>2</sub> standards were reported.

**Table 3.3-1. Ambient Air Quality Monitoring Data from the Fontana-Arrow Highway Station (2015–2017)**

Pollutant	2016	2017	2018
<b>Ozone (O<sub>3</sub>)</b>			
Maximum 1-hour concentration (ppm)	0.139	0.137	0.141
Maximum 8-hour concentration (ppm)	0.105	0.118	0.0111
Number of days standard exceeded <sup>a</sup>			
CAAQS 1-hour (>0.09 ppm)	34	33	38
CAAQS 8-hour (>0.070 ppm)	52	51	72
NAAQS 8-hour (>0.070 ppm)	49	49	69
<b>Carbon Monoxide (CO)</b>			
Maximum 8-hour concentration (ppm)	1.0	1.3	1.1
Maximum 1-hour concentration (ppm)	1.7	1.6	1.9
Number of days standard exceeded <sup>a</sup>			
NAAQS 8-hour ( $\geq 9$ ppm)	0	0	0
CAAQS 8-hour ( $\geq 9.0$ ppm)	0	0	0
NAAQS 1-hour ( $\geq 35$ ppm)	0	0	0
CAAQS 1-hour ( $\geq 20$ ppm)	0	0	0

<sup>1</sup> According to *A General Location Guide for Ultramafic Rock in California*, the Project Area is not in an area that is known to contain naturally occurring asbestos (California Department of Conservation 2000). As such, asbestos is not discussed further in this EIR.

<b>Pollutant</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
State maximum 1-hour concentration (ppm)	0.071	0.069	0.063
State second-highest 1-hour concentration (ppm)	0.067	0.062	0.059
Annual average concentration (ppm)	0.018	0.018	0.018
Number of days standard exceeded			
CAAQS 1-hour (0.18 ppm)	0	0	0
<b>Particulate Matter (PM<sub>10</sub>)<sup>c</sup></b>			
National <sup>b</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	94.0	75.3	64.1
National <sup>b</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	71.0	73.3	61.5
State <sup>c</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	94.8	75.3	61.5
State <sup>c</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	71.9	73.3	61.4
National annual average concentration (µg/m <sup>3</sup> )	39.2	39.8	34.6
State annual average concentration (µg/m <sup>3</sup> ) <sup>d</sup>	*	*	*
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour (>150 µg/m <sup>3</sup> ) <sup>e</sup>	0	0	0
CAAQS 24-hour (>50 µg/m <sup>3</sup> ) <sup>e</sup>	14	8	8
<b>Particulate Matter (PM<sub>2.5</sub>)</b>			
National <sup>b</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	58.8	39.2	29.2
National <sup>b</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	30.4	26.5	28.5
State <sup>c</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	58.8	39.2	29.2
State <sup>c</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	30.4	26.5	28.5
National annual average concentration (µg/m <sup>3</sup> )	12.3	12.0	11.1
State annual average concentration (µg/m <sup>3</sup> ) <sup>d</sup>	*	12.9	10.1
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour (>35 µg/m <sup>3</sup> ) <sup>e</sup>	1	1	0
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>			
No data available			

Sources: CARB 2020; EPA 2018

<sup>a</sup> An exceedance is not necessarily a violation.

<sup>b</sup> National statistics are based on standard conditions data. In addition, national statistics are based on samplers using Federal reference or equivalent methods.

<sup>c</sup> State statistics are based on local conditions data, except in the SCAB, for which statistics are based on standard conditions data. In addition, State statistics are based on California-approved samplers.

<sup>d</sup> State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

<sup>e</sup> Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.

mg/m<sup>3</sup> = milligrams per cubic meter; > = greater than; \* = insufficient data

**Table 3.3-2. Ambient Air Quality Monitoring Data from the San Bernardino-4<sup>th</sup> Street Station (2015–2017)**

<b>Pollutant</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Ozone (O<sub>3</sub>)</b>			
Maximum 1-hour concentration (ppm)	0.158	0.158	0.138
Maximum 8-hour concentration (ppm)	0.118	0.136	0.116
Number of days standard exceeded <sup>a</sup>			
CAAQS 1-hour (>0.09 ppm)	70	81	63
CAAQS 8-hour (>0.070 ppm)	108	114	107
NAAQS 8-hour (>0.070 ppm)	106	112	102

<b>Pollutant</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Carbon Monoxide (CO)</b>			
Maximum 8-hour concentration (ppm)	1.7	2.3	2.5
Maximum 1-hour concentration (ppm)	2.2	2.5	2.7
Number of days standard exceeded <sup>a</sup>			
NAAQS 8-hour ( $\geq 9$ ppm)	0	0	0
CAAQS 8-hour ( $\geq 9.0$ ppm)	0	0	0
NAAQS 1-hour ( $\geq 35$ ppm)	0	0	0
CAAQS 1-hour ( $\geq 20$ ppm)	0	0	0
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
State maximum 1-hour concentration (ppm)	0.060	0.065	0.057
State second-highest 1-hour concentration (ppm)	0.059	0.065	0.055
Annual average concentration (ppm)	0.016	0.015	0.015
Number of days standard exceeded			
CAAQS 1-hour (0.18 ppm)	0	0	0
<b>Particulate Matter (PM<sub>10</sub>)<sup>c</sup></b>			
National <sup>b</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	277.0	157.8	130.2
National <sup>b</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	91.0	86.9	77.0
State <sup>c</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	277.8	76.7	63.9
State <sup>c</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	91.9	71.7	62.9
National annual average concentration ( $\mu\text{g}/\text{m}^3$ )	36.7	32.6	30.7
State annual average concentration ( $\mu\text{g}/\text{m}^3$ ) <sup>d</sup>	*	*	30.9
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour ( $>150 \mu\text{g}/\text{m}^3$ ) <sup>e</sup>	1	1	0
CAAQS 24-hour ( $>50 \mu\text{g}/\text{m}^3$ ) <sup>e</sup>	7	14	5
<b>Particulate Matter (PM<sub>2.5</sub>)</b>			
National <sup>b</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	53.5	38.2	30.1
National <sup>b</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	32.5	26.8	23.8
State <sup>c</sup> maximum 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	53.5	38.2	30.1
State <sup>c</sup> second-highest 24-hour concentration ( $\mu\text{g}/\text{m}^3$ )	32.5	26.8	23.8
National annual average concentration ( $\mu\text{g}/\text{m}^3$ )	11.1	11.4	11.1
State annual average concentration ( $\mu\text{g}/\text{m}^3$ ) <sup>d</sup>	11.1	*	*
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour ( $>35 \mu\text{g}/\text{m}^3$ ) <sup>e</sup>	1	1	0
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>			
No data available			

Sources: CARB 2020; EPA 2018

<sup>a</sup> An exceedance is not necessarily a violation.

<sup>b</sup> National statistics are based on standard conditions data. In addition, national statistics are based on samplers using Federal reference or equivalent methods.

<sup>c</sup> State statistics are based on local conditions data, except in the SCAB, for which statistics are based on standard conditions data. In addition, State statistics are based on California-approved samplers.

<sup>d</sup> State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

<sup>e</sup> Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.

mg/m<sup>3</sup> = milligrams per cubic meter; > = greater than; \* = insufficient data

**Table 3.3-3. Ambient Air Quality Monitoring Data from the Riverside-Rubidoux Station (2016–2018)**

Pollutant	2016	2017	2018
<b>Ozone (O<sub>3</sub>)</b>			
Maximum 1-hour concentration (ppm)	0.142	0.145	0.123
Maximum 8-hour concentration (ppm)	0.102	0.118	0.101
Number of days standard exceeded <sup>a</sup>			
CAAQS 1-hour (>0.09 ppm)	33	47	22
CAAQS 8-hour (>0.070 ppm)	71	82	57
NAAQS 8-hour (>0.070 ppm)	69	81	53
<b>Carbon Monoxide (CO)</b>			
Maximum 8-hour concentration (ppm)	1.3	1.8	2
Maximum 1-hour concentration (ppm)	1.7	2.4	2.2
Number of days standard exceeded <sup>a</sup>			
NAAQS 8-hour (≥9 ppm)	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
State maximum 1-hour concentration (ppm)	0.073	0.063	0.055
State second-highest 1-hour concentration (ppm)	0.059	0.062	0.054
Annual average concentration (ppm)	0.014	0.014	0.014
Number of days standard exceeded			
CAAQS 1-hour (0.18 ppm)	0	0	0
<b>Particulate Matter (PM<sub>10</sub>)<sup>c</sup></b>			
National <sup>b</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	84.0	92.0	86.5
National <sup>b</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	80.0	81.7	67.0
State <sup>c</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	170.5	137.6	126.0
State <sup>c</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	82.6	120.3	107.0
National annual average concentration (µg/m <sup>3</sup> )	38.1	39.0	35.4
State annual average concentration (µg/m <sup>3</sup> ) <sup>d</sup>	*	41.3	43.9
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour (>150 µg/m <sup>3</sup> ) <sup>e</sup>	0	0	0
CAAQS 24-hour (>50 µg/m <sup>3</sup> ) <sup>e</sup>	60	98	127
<b>Particulate Matter (PM<sub>2.5</sub>)</b>			
National <sup>b</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	51.5	50.3	66.3
National <sup>b</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	39.1	43.8	50.7
State <sup>c</sup> maximum 24-hour concentration (µg/m <sup>3</sup> )	60.8	50.3	68.3
State <sup>c</sup> second-highest 24-hour concentration (µg/m <sup>3</sup> )	40.5	45.8	50.7
National annual average concentration (µg/m <sup>3</sup> )	12.5	12.2	12.5
State annual average concentration (µg/m <sup>3</sup> ) <sup>d</sup>	12.6	14.5	12.6
Number of days standard exceeded <sup>a</sup>			
NAAQS 24-hour (>35 µg/m <sup>3</sup> ) <sup>e</sup>	5	7	3
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>			
No data available			

Sources: CARB 2020; EPA 2018

<sup>a</sup> An exceedance is not necessarily a violation.<sup>b</sup> National statistics are based on standard conditions data. In addition, national statistics are based on samplers using Federal reference or equivalent methods.<sup>c</sup> State statistics are based on local conditions data, except in the SCAB, for which statistics are based on standard conditions data. In addition, State statistics are based on California approved samplers.<sup>d</sup> State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

<sup>e</sup> Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.

mg/m<sup>3</sup> = milligrams per cubic meter; > = greater than; \* = insufficient data

## Attainment Status

Local monitoring data (Table 3.3-1 through Table 3.3-3) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are further defined as shown below.

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

Table 3.3-4 summarizes the attainment status of the Planning Area in San Bernardino and Riverside Counties with respect to the NAAQS and CAAQS.

**Table 3.3-4. Federal and State Attainment Status of the Planning Area in San Bernardino and Riverside Counties**

Pollutant	NAAQS <sup>a</sup>	CAAQS <sup>a</sup>
Ozone	Nonattainment	Nonattainment
CO	Maintenance <sup>b</sup> /Attainment <sup>c</sup>	Maintenance/Attainment <sup>c</sup>
PM <sub>10</sub>	Maintenance <sup>b</sup> /Nonattainment <sup>b</sup>	Nonattainment
PM <sub>2.5</sub>	Nonattainment <sup>b</sup> /Attainment <sup>c</sup>	Nonattainment/Attainment <sup>c</sup>
SO <sub>2</sub>	Attainment	Attainment
NO <sub>2</sub>	Maintenance	Attainment
Lead	Attainment	Attainment
Sulfates	No standard	Attainment
Visibility-Reducing Particles	No standard	Unclassified
Hydrogen Sulfide	No standard	Unclassified
Vinyl Chloride	No standard	Unclassified

Sources: EPA 2020; CARB 2019b

<sup>a</sup> Unless otherwise noted, the attainment statuses presented in this table are the same for both counties.

<sup>b</sup> Represents the attainment status of the SCAB portion of San Bernardino County.

<sup>c</sup> Represents the attainment status of the MDAB portion of San Bernardino County.

## Sensitive Receptors

Sensitive land uses are defined as locations where human populations, especially children, seniors, and sick persons, are located and where there is reasonable expectation of continuous human exposure according to the averaging period for the air quality standards (i.e., 24-hour, 8-hour). Typical sensitive receptors are residences, hospitals, schools, and parks. The Planning Area includes urban (i.e., cities of San Bernardino, Rancho Cucamonga, Ontario, Rialto, Highland, Fontana, Upland, Montclair, Grand Terrace, Loma Linda, Redlands, Yucaipa, Chino, Chino Hills, Colton, Riverside,



Corona, Beaumont, Calimesa, Eastvale, Jurupa Valley, Lake Elsinore, Moreno Valley, and Norco) and rural areas where residences, schools, hospitals, and neighborhood and community parks would be located within 1,000 feet of conservation activities. All the proposed Conservation Areas in the Planning Area would be located within 1,000 feet of sensitive receptors, except for Covered Activity Conserv. 8. The majority of the proposed Conservation Areas would be within 1,000 feet of residential receptors, while two sites (Covered Activities Conserv. 2 and Conserv. 3) are in the vicinity of sensitive receptors at parks.

## 3.3.2 Regulatory Framework

### 3.3.2.1 Federal Regulations

The Federal Clean Air Act (CAA) and its subsequent amendments form the basis for the nation's air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the CAA. A key element of the CAA is the NAAQS for criteria pollutants. The CAA delegates enforcement of the NAAQS to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations and ensuring that NAAQS and CAAQS are met. CARB, in turn, delegates regulatory authority for stationary sources and other air quality management responsibilities to local air agencies. The South Coast Air Quality Management District (SCAQMD) and Mojave Desert Air Quality Management District (MDAQMD) are the local air agencies within the Planning Area. The following sections provide more detailed information on Federal, State, and local air quality regulations that apply to the Proposed Project.

#### Clean Air Act

The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA establishes Federal air quality standards, known as NAAQS, for six criteria pollutants and specifies future dates for achieving compliance. The CAA also mandates that the states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. Table 3.3-5 shows the NAAQS currently in effect for each criteria pollutant, as well as the CAAQS (discussed further below).

**Table 3.3-5. Federal and State Ambient Air Quality Standards**

Criteria Pollutant	Average Time	California Standards	National Standards <sup>a</sup>	
			Primary	Secondary
Ozone	1 hour	0.09 ppm	None <sup>b</sup>	None <sup>b</sup>
	8 hour	0.070 ppm	0.070 ppm	0.070 ppm
Particulate Matter (PM <sub>10</sub> )	24 hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual mean	20 µg/m <sup>3</sup>	None	None
Fine Particulate Matter (PM <sub>2.5</sub> )	24 hour	None	35 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>
	Annual mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>

Criteria Pollutant	Average Time	California Standards	National Standards <sup>a</sup>	
			Primary	Secondary
Carbon Monoxide	8 hour	9.0 ppm	9 ppm	None
	1 hour	20 ppm	35 ppm	None
Nitrogen Dioxide	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1 hour	0.18 ppm	0.100 ppm	None
Sulfur Dioxide <sup>c</sup>	Annual mean	None	0.030 ppm	None
	24 hour	0.04 ppm	0.014 ppm	None
	3 hour	None	None	0.5 ppm
	1 hour	0.25 ppm	0.075 ppm	None
Lead	30-day Average	1.5 µg/m <sup>3</sup>	None	None
	Calendar quarter	None	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>
	3-month average	None	0.15 µg/m <sup>3</sup>	0.15 µg/m <sup>3</sup>
Sulfates	24 hour	25 µg/m <sup>3</sup>	None	None
Visibility-reducing Particles	8 hour	-- <sup>d</sup>	None	None
Hydrogen Sulfide	1 hour	0.03 ppm	None	None
Vinyl Chloride	24 hour	0.01 ppm	None	None

Source: CARB 2016

<sup>a</sup> National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

<sup>b</sup> The Federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.

<sup>c</sup> The annual and 24-hour NAAQS for SO<sub>2</sub> only apply for 1 year after designation of the new 1-hour standard to those areas that were previously in nonattainment for 24-hour and annual NAAQS.

<sup>d</sup> CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more due to particles when relative humidity is less than 70%.

ppm= parts per million; µg/m<sup>3</sup> = micrograms per cubic meter

## Non-road Diesel Rule

EPA has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and locomotives. New equipment that could be used for the Proposed Project within the Planning Area, including heavy-duty trucks and off-road construction vehicles, are required to comply with these emission standards.

## Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards (CAFE) were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks. The National Highway Traffic Safety Administrative (NHTSA) sets the CAFE standards, which are regularly updated to require additional improvements in fuel economy. The standards were last updated in October 2012 to apply to new passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2017 through 2025, and are equivalent to 54.5 miles per gallon (mpg). However, On August 2, 2018, NHTSA and EPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). On September 19, 2019, EPA and NHTSA issued a final action on the One National Program Rule, which

is consider Part One of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables EPA/NHTSA to provide nationwide uniform fuel economy and greenhouse gas vehicle standards, specifically by (1) clarifying that Federal law preempts State and local tailpipe greenhouse gas standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set State-specific standards.

EPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019 (84 *Federal Register* 51310). California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the SAFE Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). On October 28, 2019, the Union of Concerned Scientists, Environmental Defense Fund, and other groups filed a protective petition for review after the Federal government sought to transfer the suit to the D.C. Circuit (*Union of Concerned Scientists v. National Highway Traffic Safety Administration*). Opening briefs for the petition are currently scheduled to be completed on November 23, 2020. The lawsuit filed by California and others is stayed pending resolution of the petition.

EPA and NHTSA published final rules to amend and establish national CO<sub>2</sub> and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 *Federal Register* 24174). The revised rule changes the national fuel economy standards for light duty vehicles from 46.7 mpg to 40.4 mpg in future years. California, 22 other states, the District of Columbia filed a petition for review of the final rule on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending legal deliberations.

### 3.3.2.2 State Regulations

#### California Clean Air Act

In 1988, the State legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. The CAAQS and NAAQS are shown in Table 3.3-5.

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

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The

CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

### **Statewide Truck and Bus Regulation**

Originally adopted in 2005, the on-road truck and bus regulation requires heavy trucks to be retrofitted with particulate matter filters. The regulation applies to privately and Federally owned diesel-fueled trucks with a gross vehicle weight rating greater than 14,000 pounds. Compliance with the regulation can be reached through one of two paths: (1) vehicle retrofits according to engine year or (2) phase-in schedule. Compliance paths ensure that by January 2023, nearly all trucks and buses will have 2010 model year engines or newer.

### **State Tailpipe Emission Standards**

Like EPA at the Federal level, CARB has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and harbor craft operating in California. New equipment used for the Proposed Project would be required to comply with the standards.

### **Carl Moyer Program**

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the state to reduce air pollution emissions from heavy-duty engines. Locally, the air districts administer the Carl Moyer Program.

### **Toxic Air Contaminant Regulations**

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

CARB has identified DPM as a TAC and has approved a comprehensive Diesel Risk Reduction Plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce DPM emissions and the associated health risk by 75% by 2010 and by 85% by 2020. The plan identifies 14 measures that CARB will implement over the next several years. The Proposed Project would be required to comply with any applicable diesel control measures from the Diesel Risk Reduction Plan.

## **3.3.2.3 Local Regulations**

### **Air District Regulations**

At the local level, responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by the California Environmental Quality Act (CEQA). The air

quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws and for ensuring that NAAQS and CAAQS are met. The Planning Area falls under the jurisdiction of SCAQMD and MDAQMD. Applicable plans and regulations from both air districts are presented below.

### **South Coast Air Quality Management District**

SCAQMD is tasked with preparing regional programs and policies designed to improve air quality, which are assessed and published in the form of the Air Quality Management Plan (AQMP) for large areas of Los Angeles, Orange County, Riverside County, and San Bernardino County, including the Coachella Valley. The AQMP is updated every 4 years to evaluate the effectiveness of the adopted programs and policies and to forecast attainment dates for nonattainment pollutants to support the California SIP based on measured regional air quality and anticipated implementation of new technologies and emissions reductions. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the Federal air quality standards and healthful air. The 2016 AQMP is based on the forecasts contained within the Southern California Association of Governments' (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

In addition to the AQMP, SCAQMD develops and adopts various rules to reduce emissions throughout the SCAB. The Proposed Project may be subject to the following district rules. This list of rules may not be all-encompassing, as additional SCAQMD rules may apply as specific activities are further developed.

- Rule 401 (Visible Emissions) prohibits an air discharge that results in a plume that is as dark or darker than what is designated as No. 1 Ringelmann Chart by the United States Bureau of Mines for an aggregate of 3 minutes in any 1 hour.
- Rule 402 (Nuisance) states that a person should not emit air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health or safety of any such persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property.
- Rule 403 (Fugitive Dust) controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, re-establishing ground cover as quickly as possible, utilizing a wheel-washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, limiting vehicle speeds on unpaved roads to 15 miles per hour, and maintaining effective cover over exposed areas. Rule 403 also prohibits the release of fugitive dust emissions from any active operation, open storage piles, or disturbed surface area beyond the property line of the emission source and prohibits particulate matter deposits on public roadways.
- Rule 474 (Fuel Burning Equipment – Oxides of Nitrogen) limits NO<sub>x</sub> emissions from non-mobile fuel-burning equipment.
- Regulation IX (Standards of Performance for New Stationary Sources) specifies that all new sources of air pollution and all modified or reconstructed sources of air pollution shall comply with the more stringent of the standards, criteria, and requirements set forth therein or in applicable SCAQMD rules.

- Rule 2100 (Registration of Portable Equipment) requires registration for portable emissions units.
- Rules 1401–1472 (Toxic and Other Criteria Pollutants) include rules related to emissions from various sources such as existing sources of TACs, soils with TACs, stationary diesel-fueled internal combustion and other compression ignition engines, and facilities with multiple stationary emergency standby diesel-fueled internal combustion engines.

### **Mojave Desert Air Quality Management District**

The MDAQMD has also adopted attainment plans to achieve CAAQS and NAAQS to comply with these regulatory requirements for San Bernardino County’s High Desert and Riverside County’s Palo Verde Valley. The most recent and relevant air quality plans for the Planning Area are the 2008 Ozone Attainment Plan for the Western Mojave Desert Non-Attainment Area (for 8-hour ozone NAAQS), the 2004 Ozone Attainment Plan (for 1-hour ozone NAAQS), and the 1995 Mojave Desert Planning Area Federal Particulate Matter Attainment Plan.

In addition to the attainment plans, MDAQMD develops and adopts various rules to reduce emissions throughout the MDAB. The Proposed Project may be subject to the following district rules. This list of rules may not be all-encompassing, as additional MDAQMD rules may apply as specific activities are further developed.

- Rule 402 (Nuisance): Forbids the discharge of such quantities of air contaminants or other material that cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health or safety of any such persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property.
- Rule 403.2 (Fugitive Dust) restricts fugitive dust from construction/demolition and other activities in the Mojave Desert Planning Area. Specifies numerous restrictions to operators of construction/demolition for all projects greater than a half-acre in size (e.g., periodic watering, covering loaded haul vehicles, stabilize graded surfaces, cleanup project dust/debris on paved surfaces, reduce non-essential earth moving), and specifies additional rules for projects disturbing more than 100 acres per day (e.g., dust control plan, stabilized access routes).
- Rule 404 (Particulate Matter) states that a person shall not discharge into the atmosphere from any source particulate matter, except liquid sulfur compounds, in excess of the concentration at standard conditions.
- Rule 1300 (New Source) sets forth the requirements for the preconstruction review of all new or modified facilities, to ensure that the construction or modification of facilities subject to this regulation does not interfere with the attainment and maintenance of ambient air quality standards.

In addition, provisions of San Bernardino and Riverside Counties’ general plans and ordinances are included in Appendix B, *Regional and Local Regulations*.

### **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community

Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The San Bernardino Countywide Plan's Natural Resources Element maintains specific goals and policies related to the preservation of air quality for the health and wellness of residents in San Bernardino County. The Proposed Project may be subject to the following policies from this element.

- Policy NR-1.1 Land use. We promote compact and transit-oriented development countywide and regulate the types and locations of development in unincorporated areas to minimize vehicle miles traveled and greenhouse gas emissions.
- Policy NR-1.3 Coordination on air pollution. We collaborate with air quality management districts and other local agencies to monitor and reduce major pollutants affecting the county at the emission source.
- Policy NR-1.5 Sensitive land uses. We consider recommendations from the California Air Resources Board on the siting of new sensitive land uses and exposure to specific source categories.
- Policy NR-1.6 Fugitive dust emissions. We coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions.
- Policy NR-1.7 Greenhouse gas reduction targets. We strive to meet the 2040 and 2050 greenhouse gas emission reduction targets in accordance with state law.
- Policy NR-1.8 Construction and operations. We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

Additional policies included in the San Bernardino Countywide Plan are reviewed in detail in Appendix B, *Regional and Local Regulations*.

## County of Riverside General Plan

The Air Quality Element of the County of Riverside General Plan includes goals and policies such as implementing pollution controls, increasing multi-jurisdictional cooperation to improve air quality, and reducing negative impacts of poor air quality on sensitive receptors to improve air quality (County of Riverside 2015). The Proposed Project may be subject to the following policies from this element.

- Policy AQ 1.1 Promote and participate with regional and local agencies, both public and private, to protect and improve air quality. (AI 111)
- Policy AQ 1.4 Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced. (AI 111)
- Policy AQ 2.1 The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible. (AI 114)

- Policy AQ 2.2 Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible. (AI 114)
- Policy AQ 2.3 Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution. (AI 114)
- Policy AQ 4.1 Require the use of all feasible building materials/methods which reduce emissions.
- Policy AQ 4.5 Require stationary pollution sources to minimize the release of toxic pollutants through:
  - Design features;
  - Operating procedures;
  - Preventive maintenance;
  - Operator training; and
  - Emergency response planning
- Policy AQ 4.6 Require stationary air pollution sources to comply with applicable air district rules and control measures.
- Policy AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.
- Policy AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.
- Policy AQ 9.2 Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan. (AI 26)
- Policy AQ 15.1 Identify and monitor sources, enforce existing regulations, and promote stronger controls to reduce particulate matter.
- Policy AQ 16.1 Cooperate with local, regional, state and federal jurisdictions to better control particulate matter.
- Policy AQ 17.1 Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible. (AI 123)
- Policy AQ 17.3 Identify and create a control plan for areas within the County prone to wind erosion of soil.
- Policy AQ 17.6 Reduce emissions from building materials and methods that generate excessive pollutants, through incentives and/or regulations.

Additional policies included in the County of Riverside General Plan are reviewed in detail in Appendix B, *Regional and Local Regulations*.



### 3.3.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate air quality impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on air quality. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.3.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Conflict with or obstruct implementation of the applicable air quality plan? (Impact AQ-1)
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment area for an applicable Federal or State ambient air quality standard? (Impact AQ-2)
- Expose sensitive receptors to substantial pollutant concentrations? (Impact AQ-3)
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? (Impact AQ-4)

According to the State CEQA Guidelines §15064.7, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make significance determinations for potential impacts on environmental resources. The following sections summarize the local air district thresholds (where applicable) for each of the four impact criteria.

#### Plan Consistency

In analyzing whether the Proposed Project would conflict with or obstruct the implementation of the applicable air quality plan, the Proposed Project is analyzed for consistency with applicable SCAQMD, MDAQMD, and SCAG policies, including SCAQMD's 2016 AQMP, MDAQMD's attainment plans, and growth projections within the SCAG 2016–2040 RTP/SCS. In accordance with the procedures established in SCAQMD's *CEQA Air Quality Handbook* and MDAQMD's *CEQA and Federal Conformity Guidelines*, air quality plan consistency analyses should consider the following criteria:

- Would the project:
  - Result in an increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Would the project exceed the assumptions utilized in preparing the AQMP or attainment plans?
  - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;

- Does the project include air quality mitigation measures; or
- To what extent is project development consistent with the AQMP land use policies?

### Cumulatively Considerable Net Increase in Criteria Pollutants

SCAQMD has developed air quality significance thresholds that are applicable to CEQA projects within its jurisdiction. These thresholds were originally published in SCAQMD's *CEQA Air Quality Handbook* (1993) and have since been updated through guidance published on the agency's web portal. The air quality significance thresholds were derived using regional emissions modeling to determine maximum allowable emission quantities that could be generated by individual projects without adversely affecting air quality and creating public health concerns.

Table 3.3-6 presents SCAQMD's recommended regional criteria pollutant thresholds. There are separate thresholds for short-term construction-type activities and longer-term operational-type activities. The thresholds are applicable to regional emissions, which refer to emissions of all regulated pollutants generated both on and off a project site. Construction and maintenance activities could result in a cumulatively considerable contribution to a cumulative air quality impact if maximum daily regional emissions exceed any of the thresholds presented in Table 3.3-6.

**Table 3.3-6. SCAQMD Regional Air Quality Significance Thresholds (maximum pounds per day)**

Pollutant	VOC	CO	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Construction</b>						
Regional Threshold	75	550	100	150	150	55
<b>Operation</b>						
Regional Threshold	55	550	55	150	150	55

Source: SCAQMD 2015

VOC = volatile organic compound

Like SCAQMD, MDAQMD has developed air quality significance thresholds that are applicable to CEQA projects within its jurisdiction. These thresholds are published in MDAQMD's *CEQA and Federal Conformity Guidelines* (MDAQMD 2016). Table 3.3-7 presents MDAQMD's recommended criteria pollutant thresholds. There are separate thresholds for daily and annual activities. Similar to SCAQMD, MDAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions.

**Table 3.3-7. MDAQMD Air Quality Significance Thresholds**

Pollutant <sup>a</sup>	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Daily Threshold (pounds)	137	137	548	137	82	65
Annual Threshold (tons)	25	25	100	25	15	12

Source: MDAQMD 2016

<sup>a</sup> Thresholds presented for criteria pollutants anticipated from the Proposed Project.

VOC = volatile organic compound

### Receptor Exposure to Substantial Pollutant Concentrations

All criteria pollutants that would be generated by implementation of the Proposed Project are associated with some form of health risk (e.g., lower respiratory problems). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over

long distances and affect ambient air quality far from the emissions source. Localized pollutants affect ambient air quality near the emissions source. As noted above, the primary pollutants of concern generated by implementation of the Proposed Project are ozone precursors (ROG and NO<sub>x</sub>), CO, particulate matter, and TACs (DPM). The following sections discuss thresholds and analysis considerations for regional and local project-generated pollutants with respect to their human health implications.

### **Regional Pollutants (Ozone Precursors and Regional Particulate Matter)**

Adverse health effects induced by regional criteria pollutant emissions generated by implementation of the Proposed Project (ozone precursors and particulate matter) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO<sub>x</sub>) contribute to the formation of ground-borne ozone on a regional scale. Emissions of ROG and NO<sub>x</sub> generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollution may be transported over long-distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional particulate matter concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project. Moreover, exposure to regional air pollution does not guarantee that an individual will experience an adverse health effect as there are large individual differences in the intensity of symptomatic responses to air pollutant. These differences are influenced, in part, by the underlying health condition of an individual, which cannot be known.

Nonetheless, emissions generated by implementation of the Proposed Project could increase photochemical reactions and the formation of tropospheric ozone and secondary particulate matter, which at certain concentrations, could lead to increased incidence of specific health consequences, such as various respiratory and cardiovascular ailments. SCAQMD's and MDAQMD's thresholds presented in Table 3.3-6 and Table 3.3-7, respectively, consider existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed from the findings of a wide range of scientific evidence that demonstrates that there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, SCAQMD and MDAQMD consider projects that generate regional criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and to not adversely affect air quality such that the NAAQS or CAAQS would be violated or lead to increased incidence of specific health consequences. Accordingly, projects with criteria pollutant emissions that make only incremental contributions and do not exceed SCAQMD's or MDAQMD's thresholds cannot be traced to significant adverse health outcomes. As further described below, the criteria pollutant emissions associated with the Proposed Project would not exceed SCAQMD's or MDAQMD's thresholds, and, as such, a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

### **Localized Pollutants (Particulate Matter and Toxic Air Contaminants)**

Localized pollutants generated by a project are deposited and potentially affect populations near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. The

localized pollutants of concern associated with the Proposed Project are particulate matter, CO, NO<sub>2</sub>, and TACs (DPM). Following are the applicable thresholds for each pollutant.

### **Criteria Pollutants (Particulate Matter, CO, and NO<sub>2</sub>)**

SCAQMD has developed localized significance thresholds (LST) to evaluate whether project-generated emissions may violate the ambient air quality standards and therefore expose receptors to substantial criteria pollutant concentrations. Applicable LSTs would depend on the location of a Project activity, its proximity to receptors (e.g., 100 meters), and its size (e.g., 1 acre). The Proposed Project could potentially be adjacent to residential and recreational receptors. Therefore, for illustrative purposes, Table 3.3-8 presents the LSTs for Source Receptor Area (SRA) #23 (Metropolitan Riverside County) and SRA #33 (Southwest San Bernardino Valley) for a project located within 80 meters of sensitive receptors and less than 1 acre in size.<sup>2</sup> The LST for each pollutant would be used to evaluate the localized air quality impacts associated with the onsite emissions generated by the Proposed Project. The Proposed Project could result in a significant impact if it generates maximum daily emissions that exceed any of the thresholds presented in Table 3.3-8 (or SCAQMD's other applicable LSTs).

**Table 3.3-8. SCAQMD Localized Significance Thresholds for SRAs #23 and #33 (pounds per day)**

SRA	SRA Name	Project Component	CO	NO <sub>x</sub> <sup>a</sup>	PM <sub>10</sub>	PM <sub>2.5</sub>
#23,	Metropolitan Riverside County,	Construction	602	118	4	3
#33	Southwest San Bernardino Valley	Operations	602	118	1	1

Source: SCAQMD 2009

<sup>a</sup> Localized effect can occur from the conversion of NO<sub>x</sub> to NO<sub>2</sub>, and these effects are assessed through the localized LST analysis for NO<sub>x</sub>.

### **Diesel Particulate Matter**

DPM has been identified as a TAC, and long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous system. Accordingly, SCAQMD has adopted separate thresholds to evaluate receptor exposure to DPM emissions. The "substantial" DPM threshold defined by SCAQMD is the probability of contracting cancer for the maximum exposed individual exceeding 10 in 1 million, or the ground-level concentrations of non-carcinogenic TACs resulting in a hazard index greater than 1 for the maximum exposed individual (SCAQMD 2015). MDAQMD does not have adopted LSTs like SCAQMD. However, MDAQMD recommends using the same cancer and non-cancer risk thresholds as SCAQMD to evaluate receptor exposure to DPM (total cancer risk of 10 in a million and a noncancerous hazard index greater than or equal to 1).

### **Generation of Odor-Causing Emissions**

Per SCAQMD, the potential for significant air quality impacts under threshold AQ-4 is addressed in the context of compliance with SCAQMD Rule 402 (Nuisance). MDAQMD has no published numeric thresholds regarding odors, but generally odors are considered significant if there is a verified odor complaint within the previous 3 years. Accordingly, the potential for significant air quality impacts under threshold AQ-4 is addressed in the context of compliance with SCAQMD Rule 402 (Nuisance),

<sup>2</sup> The LSTs for SRA #23 and SRA #33 would likely be used for a significant portion of the Planning Area. However, alternative LSTs should be used for Covered Activities located in a different SRA.

which forbids the discharge of air contaminants that cause nuisance or annoyance to any considerable number of persons or to the public.

### 3.3.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in the generation of pollutants.
- Identify and evaluate impacts on air quality as a result of implementation of the HCP Conservation Strategy and their effect on sensitive populations in the Planning Area.
- Evaluate the level of significance and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce impacts.

Impacts related to air quality were assessed based on available Proposed Project details, consultation with the Permittees, and review of applicable local government authorities, such as general plans and ordinances for San Bernardino and Riverside Counties and applicable air quality plans. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts related to air quality. Impacts related to construction and operational air quality were assessed based on generally accepted analysis techniques that estimate the air emissions impacts in areas where physical land disturbance is needed to implement the Proposed Project.

Pollutant emissions and associated health and odor impacts are highly dependent on the total amount of distributed area; the type, location, and duration of construction; and the intensity and frequency of maintenance activity. Therefore, effects would vary depending on the Proposed Project action. Because exact details as to the location, construction schedule, and types of construction equipment required for the Proposed Project are not reasonably foreseeable, and because the levels of potential long-term management and maintenance activities that may result from implementation of these measures are also not reasonably foreseeable, a *qualitative* assessment of air quality impacts resulting from the Proposed Project was performed based on the *quantitative* analysis for similar types of actions using typical equipment within the air basins. The qualitative analysis also considers typical construction and operational activities that would be undertaken for implementation of the Proposed Project, as described in Chapter 2, *Project Description*. Where applicable, potential benefits to air quality conditions from implementing the Proposed Project are described.

### 3.3.3.3 Impact Analysis and Mitigation

#### ***Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan?***

Two criteria (see *Plan Consistency* in Section 3.3.3.1) are used to determine whether the Proposed Project would conflict with or obstruct the implementation of the applicable air quality plan. With

respect to the first criterion, the types of emissions that could result from the Proposed Project are analyzed in detail under *Impact AQ-2* below. As described therein, the emissions from the Proposed Project are expected to be similar to other restoration projects associated with the Preserve Area and could exceed thresholds adopted by SCAQMD and MDAQMD and cause or contribute to a violation of ambient air quality standards, which may delay regional attainment goals.

With respect to the second criterion, population, housing, and growth trends used to develop emissions projections for the air quality attainment plans are based on assumptions in SCAG's 2016–2040 RTP/SCS. The Proposed Project would have no direct effect on population or regional housing and is not anticipated to result in substantial new regional employment opportunities, as discussed in Section 3.13, *Population and Housing*. The Proposed Project would also comply with all applicable regulatory standards (e.g., SCAQMD Rule 403, Fugitive Dust) as required by SCAQMD and MDAQMD. For instance, compliance with SCAQMD Rule 403 may include, but is not limited to, application of water to prevent the generation of dust, application of soil binders to uncovered areas, re-establishment of ground cover, utilization of a wheel-washing system, limitation of vehicle speeds on unpaved roads to 15 miles per hour, and maintenance of effective cover over exposed areas. In addition, implementation of AMM-17 (see Chapter 5, *Conservation Strategy*, of the Upper SAR HCP) will require dust control. Mitigation Measures AQ-1, AQ-2, and AQ-3 would reduce emissions (as discussed under Impact AQ-2). However, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable. Accordingly, the Proposed Project may not be consistent with applicable SCAQMD, MDAQMD and SCAG thresholds, rules, and policies. Therefore, the Proposed Project may conflict with or obstruct implementation of applicable air quality plans, and this impact is conservatively assumed to be **significant and unavoidable with mitigation**.

## Mitigation Measures

### AQ-1: Apply Dust Control Measures During Construction

Grading can generate fugitive dust, including PM<sub>10</sub> and PM<sub>2.5</sub>. Proposed Project activities that involve site grading, excavation, or substantial material movement, likely associated with restoration, shall implement the following dust control measures during construction, as applicable, in compliance with applicable air district rules and regulations, including SCAQMD Rules 403, 474, and 1401–1472 and MDAQMD Rules 403.2 and 404.

- Water the grading areas a minimum of twice daily to minimize fugitive dust.
- Stabilize graded areas as quickly as possible to minimize fugitive dust.
- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence.
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.

- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 miles per hour.
- Cover/water onsite stockpiles of excavated material.
- Enforce a 15-mile-per-hour speed limit on unpaved surfaces.
- On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather.
- Hydroseed, landscape, or develop as quickly as possible all disturbed areas and as directed by the applicable air district.
- Limit the daily grading volumes/area.

### **AQ-2: Reduce Equipment and Vehicle Exhaust Emissions During Construction and Operation**

Construction of restoration projects may require equipment such as bulldozers, graders, loaders, scrapers, backhoes, and heavy trucks. Management and maintenance activities include periodic vegetation management, vector control consistent with avoidance and minimization measures, facility painting and upkeep, and excavations; and require haul trucks and some off-road equipment, such as backhoes or chainsaws. Habitat improvement activities shall be conducted utilizing clean-diesel, alternative fuel or other engine controls to reduce equipment and vehicle exhaust emissions during construction. Furthermore, the following control measures, as applicable, shall be implemented to reduce equipment and exhaust related emissions.

- Require equipment to be maintained in good tune and to reduce excessive idling time.
- Utilize alternative fuels, such as compressed natural gas, renewable diesel, and diesel.
- Require the use of equipment that meets EPA Tier 4 or higher (as promulgated) emission standards.
- Require older equipment be retrofitted with advanced engine controls, such as diesel particulate filters, selective catalytic reduction, or cooled exhaust gas recirculation.

### **AQ-3: Evaluate Feasibility of Offsets After All Feasible Mitigation Has Been Applied for Proposed Project Activities**

Should impacts remain significant following the implementation of all feasible onsite mitigation (as described under Mitigation Measures AQ-1 and AQ-2), further evaluation of the feasibility of offsets as a project-specific mitigation measure shall be done by the Permittees. Offsets may include procurements through local air district incentive programs.

***Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?***

The Proposed Project could result in the generation of criteria pollutants from on-road vehicle movement, use of mobile and stationary equipment, and earthmoving (e.g., grading) in the Permit Area. Emissions would vary substantially depending on the level of activity, length of the activity, specific operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Operational activities typically include site inspection, monitoring, surveys, testing, research, upkeep and maintenance, excavations and cleanups, and other components. These activities could generate emissions from mobile and stationary equipment, earthmoving, and on-road vehicles.

The types of project actions and their possible relationship to air quality impacts if implemented include activities that support the restoration and maintenance of habitat values in the Planning Area, construction of Conservation Areas, species surveys, monitoring, research, and adaptive management activities. Exhaust emissions and fugitive dust from equipment, vehicles, employee commutes, and earthmoving activities may be required for the construction of new Conservation Areas. Exhaust emissions and fugitive dust from equipment, vehicles, and employee commutes required for inspections, work areas, repairs, vegetation management, and access road management may also occur.

The Proposed Project is anticipated to result in similar construction and operational criteria pollutant emissions as other restoration projects associated with the Preserve Area, specifically the Upper SAR Tributaries Restoration Project. Like the restoration projects analyzed in the *Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR* (Tributaries EIR) adopted by the San Bernardino Valley Municipal Water District in November 2019,<sup>3</sup> construction activities associated with the Proposed Project are anticipated to occur over a period of 4 to 8 months at various sites with comparable equipment and vehicle durations and intensities. Management and maintenance activities (e.g., vegetation management, monitoring activities, surveys, and research) like those analyzed in the Tributaries EIR would also occur in the Preserve Area with implementation of the Proposed Project. Given that the Upper SAR Tributaries Restoration Project would result in similar construction and operation and maintenance activities as the Proposed Project in terms of their duration, intensity, and magnitude, emissions estimated for the Upper SAR Tributaries Restoration Project in the Tributaries EIR are considered representative of emissions likely to be generated by the Proposed Project. More specifically, the Tributaries EIR assumed up to two sites would be constructed concurrently and up to four sites would require management and maintenance at any given time. As such, construction emissions from the Proposed Project are estimated to be twice the emissions presented in the Tributaries EIR, considering that the Proposed Project would construct up to four sites concurrently. Similarly, the Proposed Project's operational emissions are estimated to increase by 2.5 times the emissions presented in the Tributaries EIR, considering that the Proposed Project would manage and maintain up to 10 Conservation Areas at any given time.

---

<sup>3</sup> The *Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR* analyzed early action projects associated with the Upper SAR HCP, including restoration, management and monitoring, and maintenance activities, which are similar in nature to those under the Proposed Project.



Table 3.3-9 through Table 3.3-12 present estimated criteria pollutant emissions from the Tributaries EIR and the Proposed Project. Estimated emissions from the Proposed Project are used to assess air quality impacts. Table 3.3-9 and Table 3.3-10 present the maximum daily regional and localized criteria pollutant emissions, respectively, anticipated by construction activities. Table 3.3-11 and Table 3.3-12 present the maximum daily regional and localized criteria pollutant emissions, respectively, anticipated by management and maintenance activities.

**Table 3.3-9. Regional Criteria Pollutant Emissions from Construction Activities (pounds per day)**

	VOC	NO <sub>x</sub>	CO <sup>1</sup>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>x</sub> <sup>a</sup>
<b>Peak Daily Emissions</b>						
Tributaries EIR <sup>b</sup>	41	52	147	5	3	<1
Proposed Project <sup>c</sup>	<u>82</u>	<u>104</u>	254	10	6	<2
SCAQMD Threshold	75	100	550	150	55	150
MDAQMD Threshold	137	137	548	82	65	137

Source: Emissions from the *Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR* are presented in this table. Threshold exceedances are underlined.

- <sup>a</sup> While CO and SO<sub>x</sub> have more direct and localized impacts, SCAQMD has adopted a “regional” threshold that considers basin-wide effects of cumulative CO and SO<sub>x</sub> emissions with respect to attainment of the ambient air quality standards.
- <sup>b</sup> Regional criteria pollutant emissions were estimated for the concurrent construction of two restoration sites in the Tributaries EIR. The peak emissions from the analysis are shown in this table.
- <sup>c</sup> The Tributaries EIR assumed up to two restoration sites would be constructed concurrently. The Proposed Project could construct up to four Conservation Areas concurrently. As such, Proposed Project emissions are estimated to be two times the emissions presented in the Tributaries EIR as a conservative estimate.

VOC = volatile organic compound

**Table 3.3-10. Localized Criteria Pollutant Emissions from Construction Activities (pounds per day)**

Location	NO <sub>x</sub> <sup>a</sup>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Peak Daily Emissions</b>				
Tributaries EIR <sup>b</sup>	50	158	4	2
Proposed Project <sup>c</sup>	100	306	<u>8</u>	<u>4</u>
SCAQMD LST <sup>d</sup>	118	602	4	3

Source: Emissions from the *Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR* are presented in this table. Threshold exceedances are underlined.

- <sup>a</sup> Localized effects can occur from the conversion of NO<sub>x</sub> to NO<sub>2</sub>, and these effects are assessed through the localized LST analysis for NO<sub>x</sub>.
- <sup>b</sup> Localized criteria pollutant emissions were estimated for the each of the four restoration sites in the Tributaries EIR. As the project would construct two Conservation Areas concurrently, the top two highest emissions of the four Conservation Areas conservatively shown in this table.
- <sup>c</sup> The Tributaries EIR assumed up to two restoration sites would be constructed concurrently. The Proposed Project would construct up to four Conservation Areas concurrently. As such, Proposed Project emissions are estimated to be two times the emissions presented in the Tributaries EIR.
- <sup>d</sup> SCAQMD LSTs vary depending on the Source Receptor Area. LSTs for the Metropolitan Riverside County and Southwest San Bernardino Valley SRA shown. MDAQMD does not have localized significance thresholds.

**Table 3.3-11. Regional Criteria Pollutant Emissions from Management and Maintenance Activities (pounds per day)**

	VOC	NO <sub>x</sub>	CO <sup>a</sup>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>x</sub> <sup>a</sup>
<b>Peak Daily Emissions</b>						
Tributaries EIR <sup>b</sup>	19	14	185	4	1	<1
Proposed Project <sup>c</sup>	47.5	35	462.5	10	2.5	<2.5
SCAQMD Threshold	55	55	550	150	55	150
MDAQMD Threshold	137	137	548	82	65	137

Source: Emissions from the *Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR* are presented in this table.

- <sup>a</sup> While CO and SO<sub>x</sub> have more direct and localized impacts, SCAQMD has adopted a “regional” threshold that considers basin-wide effects of cumulative CO and SO<sub>x</sub> emissions with respect to attainment of the ambient air quality standards.
- <sup>b</sup> Regional criteria pollutant emissions were conservatively estimated for the concurrent management and monitoring, and maintenance of four restoration sites in the Tributaries EIR. The peak emissions from the analysis are shown in this table.
- <sup>c</sup> The Tributaries EIR assumed four restoration sites would carry out intermittent management and monitoring, and maintenance activities concurrently. The Proposed Project would carry out intermittent management and monitoring, and maintenance activities of 10 Conservation Areas concurrently. As such, Proposed Project emissions are estimated to be 2.5 times the emissions presented in the Tributaries EIR.

VOC = volatile organic compound

**Table 3.3-12. Localized Criteria Pollutant Emissions from Management and Maintenance Activities (pounds per day)**

	NO <sub>x</sub> <sup>a</sup>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Peak Daily Emissions</b>				
Tributaries EIR <sup>b</sup>	6	91	1	<1
Proposed Project <sup>c</sup>	15	227.5	<u>2.5</u>	<u>&lt;2.5</u>
SCAQMD LST <sup>d</sup>	118	602	1	1

Source: Emissions from the *Upper SAR Tributaries Restoration Project and Mitigation Reserve Program EIR* are presented in this table. Threshold exceedances are underlined.

- <sup>a</sup> Localized effects can occur from the conversion of NO<sub>x</sub> to NO<sub>2</sub>, and these effects are assessed through the localized LST analysis for NO<sub>x</sub>.
- <sup>b</sup> Localized criteria pollutant emissions were estimated for the concurrent management and maintenance of four restoration sites in the Tributaries EIR. The peak emissions from the analysis are shown in this table.
- <sup>c</sup> The Tributaries EIR assumed four restoration sites would carry out intermittent management and monitoring, and maintenance activities concurrently. The Proposed Project would carry out intermittent management and maintenance activities of up to 10 Conservation Areas concurrently. As such, Proposed Project emissions are estimated to be 2.5 times the emissions presented in the Tributaries EIR.
- <sup>d</sup> SCAQMD LSTs vary depending on the Source Receptor Area. LSTs for the Metropolitan Riverside County and Southwest San Bernardino Valley SRA shown. MDAQMD does not have localized significance thresholds.

The following sections generally describe the anticipated air quality impacts of the Proposed Project based on the emissions presented in Table 3.3-9 through Table 3.3-12.

The Proposed Project would restore and/or rehabilitate habitats in the Permit Area. Habitat improvement activities would occur on a temporary basis and generally involve limited soil disturbance, vegetation removal and management (e.g., animal grazing, herbicide application, mowing, burning), and grading. Some monitoring and surveys would also take place, along with other management activities. Based on emissions modeling conducted for similar restoration sites (specifically Covered Activities Rest.1, Rest. 4, and Rest. 5 in the Tributaries EIR; see Table 3.3-9 and Table 3.3-10), construction activities associated with these types of activities are not anticipated to

exceed MDAQMD regional thresholds, but are anticipated to result in regional and localized emissions exceeding SCAQMD thresholds and contribute to the degradation of regional and local air quality.

The Proposed Project would carry out management, monitoring, and maintenance activities in the Permit Area associated with the HCP Preserve System. Activities are generally performed periodically and include actions such as minor construction, earth moving, vegetation management, program staff support, and monitoring of habitat success. Construction equipment, including excavators, applicators and compressors, mowers, and tractors, as well as other vehicle use are anticipated, which would result in criteria pollutants from equipment and vehicle exhaust. Earth-moving activities may also generate fugitive dust emissions. Operation and maintenance activities generally include visual inspections, repairs, vegetation management, and access road management. These activities may generate minor amounts of emissions from employee commute and worker truck trips. Repairs and vegetation management may also require off-road equipment, such as backhoes or chainsaws.

Based on management, monitoring, and maintenance emissions modeling conducted for a similar project (specifically the preserve system in the Tributaries EIR; see Table 3.3-11 and Table 3.3-12), management and maintenance activities are not anticipated to exceed MDAQMD regional thresholds, but are anticipated to result in regional and localized emissions exceeding SCAQMD thresholds and contribute to the degradation of regional and local air quality.

Implementation of AMM-17 will require dust control. Implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3 would reduce emissions associated with the Proposed Project. However, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable. As such, emissions levels from the Proposed Project are anticipated to contribute a significant level of air pollution such that regional and local air quality would be degraded. Therefore, the impact is conservatively determined to be **significant and unavoidable with mitigation**.

### Mitigation Measures

Implement Mitigation Measures AQ-1, AQ-2, and AQ-3, as described under *Impact AQ-1*.

#### ***Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations?***

Heavy-duty equipment and vehicles required for construction activities would generate DPM emissions that could expose nearby receptors to increased health risks. However, work at each Conservation Area could last from 4 to 8 months, depending on the complexity of the construction activities, and carcinogenic risks are generally assessed over a period of 30 years. The brief duration of construction work at each Conservation Area is therefore far less than typically associated with chronic health impacts. Moreover, while the Conservation Area sites could be adjacent to existing receptors, equipment and vehicles would be spread throughout each of the sites, and, as such, emissions would not be typically concentrated at one single location, consistent with the analysis for similar restoration projects (for example, the analysis provided for health risks in the Tributaries EIR). Because emissions dissipate as a function of distance, pollutant concentrations and associated health risks would be lower at the nearest sensitive receptors, particularly when activity occurs on the opposing side of proposed Conservation Areas. Moreover, the Proposed Project would be required to comply with any applicable diesel control measures from the State's Diesel Risk Reduction Plan. Given the site characteristics in the Permit Area for the HCP Preserve System and

limited duration of exposure, construction activities would not expose sensitive receptors to substantial DPM concentrations or health risks in excess of SCAQMD or MDAQMD thresholds. In addition, these receptors would not be exposed to increased criteria pollutant concentrations in excess of SCAQMD's LSTs during construction (see Table 3.3-10).

Management, monitoring, and maintenance activities would not introduce any new substantial stationary or mobile sources of DPM emissions. During short-term and long-term management and maintenance activities, a backhoe, trimmer, chainsaw, excavator, all-terrain vehicle, and other small equipment may be needed to remove nonnative invasive species and support native plant establishment. Long term management and maintenance activities would be limited to use of a chainsaw, trimmer, all-terrain vehicle, and various hand tools. Short-term and long-term management and maintenance activities would occur intermittently and would be of short duration. Moreover, the Proposed Project would be required to comply with any applicable diesel control measures from the Diesel Risk Reduction Plan. However, these receptors could be exposed to increased criteria pollutant concentrations in excess of SCAQMD's LSTs (see Table 3.3-12). The amount of DPM emissions and localized criteria pollutants that could be generated during management and maintenance activities could result in health risks exceeding SCAQMD or MDAQMD thresholds and expose sensitive receptors to substantial pollutant concentrations.

Construction of the Proposed Project is not anticipated to result in localized violations of the health-protective CAAQS or NAAQS, and, as such, would not expose sensitive receptors to significant pollutant concentrations or health effects. However, management and maintenance activities could potentially result in health risks exceeding thresholds and expose sensitive receptors to significant pollutant concentrations or health effects. Implementation of Mitigation Measures AQ-2 and AQ-3 would reduce emissions and associated health risks during management and maintenance activities. However, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable. Therefore, impacts of the Proposed Project related to exposing sensitive receptors to substantial pollutant concentrations is conservatively determined to be **significant and unavoidable with mitigation**.

### **Mitigation Measures**

Implement Mitigation Measures AQ-2 and AQ-3, as described under *Impact AQ-1*.

### ***Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?***

There are no quantitative thresholds established to assess construction odor impacts (SCAQMD 2015; MDAQMD 2016). Instead, odor impacts are addressed by SCAQMD and MDAQMD in the context of Rule 402 (Nuisance). For instance, based on complaints received by SCAQMD, the following sources are likely producers of nuisance odors: agriculture (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants (SCAQMD 2005). Conservation Area construction activities would not involve any of these listed sources, nor would they disturb any sources of unexpected odors such as sewer lines. Project construction would involve the use of mobile sources of air quality emissions including off-road construction equipment and on-road mobile sources resulting from worker trips, both of which may emit objectionable odors due to the combustion of diesel fuel, as well as during limited asphalt paving. However, the odor impacts during periods of construction would be intermittent and temporary, and would dissipate rapidly as

a function of distance. Thus, construction is unlikely to expose a substantial number of people to objectionable odors.

Conservation Area construction activities would remove vegetation and excavate soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. The Conservation Areas are composed of primarily well-aerated sandy and gravel soils. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions. Accordingly, construction activities would not result in nuisance odors.

Management, monitoring, and maintenance activities would not involve processes found at any of the above-listed producers of nuisance odors. Maintenance activities may result in minor equipment-based odors, but these would occur infrequently throughout the year and would dissipate rapidly. While the Conservation Area land uses have the potential to generate odors from natural processes, the emissions would be similar in origin and magnitude to the existing land use types in the restored area (e.g., managed wetlands). Accordingly, management, monitoring, and maintenance activities would not result in nuisance odors.

The Proposed Project would not result in other emissions (such as those leading to odors) affecting a substantial number of people, and impacts would be **less than significant**.

#### Mitigation Measures

No mitigation measures are required.

### 3.3.4 Summary of Potential Types of Impacts of Covered Activities

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of air quality impacts that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could result in air quality impacts and potential best practices that could be incorporated into future projects to reduce air quality impacts.

Covered Activities by type and their possible relationship to impacts on air quality if implemented with permit coverage are shown in Table 3.3-13.

**Table 3.3-13. Construction and Operation of Covered Activities and Their Relevance to Air Quality**

Covered Activity	Activities	Relevance
Water Reuse Projects	Construction equipment, vehicles, and employee commutes required for new facilities construction resulting in exhaust emissions and fugitive dust.	Exhaust emissions and fugitive dust from equipment, vehicles, employee commutes, and earthmoving activities required for new facilities. No additional emissions from existing facilities.

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Groundwater Recharge	Construction equipment, vehicles, and employee commutes required for new facilities and geotechnical drilling and testing, new recharge basin construction, and access roads resulting in exhaust emissions and fugitive dust.	Exhaust emissions and fugitive dust from equipment and vehicles required for debris, vegetation, and sediment removal of new facilities, and employee commutes required for levee and access road management, repairs, and debris, vegetation, and sediment removal. Potential increase in emissions from some existing basins, but no additional emissions from other existing facilities.
Wells and Water Conveyance Infrastructure	Equipment and vehicles for wells and pipeline installation, vegetation management, grading, and trenching resulting in exhaust emissions and fugitive dust.	Exhaust emissions and fugitive dust from equipment, vehicles, and employee commutes required for new facilities, repairs, vegetation management, and access road management. No additional emissions from existing facilities.
Solar Energy Development	Solar panel and equipment installation, vegetation management, and grading resulting in exhaust emissions and fugitive dust from equipment and vehicle use.	Exhaust emissions and fugitive dust from equipment, vehicles, and employee commutes required for new panel washing, and vegetation removal.
Routine Operations and Maintenance	Minor or in-kind construction, and vegetation management resulting in exhaust emissions and fugitive dust from equipment and vehicle use.	Exhaust emissions and fugitive dust from equipment, vehicles, and employee commutes required for inspections, work areas, repairs, vegetation management, and access road management.

Potential air quality impacts that could result from implementing the types of Covered Activities identified in Table 3.3-13 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.3-13, air quality impacts associated with constructing, operating, and maintaining these types of Covered Activities could generate short-term and long-term emissions. In some cases, these Covered Activities would generate emissions that would exceed adopted thresholds.

There is the potential for Covered Activities to require land use or zoning amendments to local land use policies for new construction projects; however, the Conservation Strategy is generally included within each Permittee's capital improvement plan or program, which specifically plan for such infrastructure improvements and are programmed into air quality plans based on those uses. Emissions from construction and operations and maintenance of Covered Activities could exceed SCAQMD and MDAQMD thresholds, resulting in a cumulative net increase of criteria pollutant emissions and conflict with or obstruct implementation of applicable air quality plans. Sensitive receptors may also be subject to substantial pollutant concentrations and health risks that exceed adopted thresholds. Finally, odors from water reuse projects, such as wastewater treatment facilities, may result in nuisance odors or complaints.

Recommended best practices to reduce air quality impacts of future Covered Activities include applying dust control measures, reducing equipment and vehicle exhaust emissions, using low-volatile-organic-compound coatings, evaluating feasibility of offsets, preparing health risk assessments, and implementing odor control mechanisms and compliance monitoring programs for construction and operations and maintenance. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity air quality impacts and best practices that could be employed to reduce potential impacts.

## 3.4 Biological Resources

This section describes the existing environmental conditions and regulatory setting for biological resources that occur within the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP or Proposed Project) and provides an analysis of potential impacts on biological resources that could occur with implementation of the Proposed Project. The analysis is based on consultation of existing State and county regulations and guidelines for biological resources and accepted methods for evaluating biological resources impacts. In addition to the required analysis of the Proposed Project, this section also provides a summary of the types of effects on biological resources that could result from implementing Covered Activities (see discussion in Section 3.4.4, *Summary of Potential Types of Impacts of Covered Activities*, below). Details on the Proposed Project definition and a description of the Planning Area and Permit Area are included in Chapter 2, *Project Description*.

### 3.4.1 Environmental Setting

#### 3.4.1.1 Regional Setting

For purposes of this environmental impact report (EIR), *biological resources*, including plants, wildlife, and fish, and their habitats, are protected by statutes, executive orders, and regulations, as stated previously. Implementation of the Proposed Project can result in the loss or degradation of ecosystem function and displacement of wildlife in natural and urban settings. Wetlands and other aquatic resources have been identified by both the Federal government and the State of California as important resources, and their protection is critical for maintaining the physical, chemical, and biological integrity of waters of the United States (U.S.) and waters of the State.

#### 3.4.1.2 Planning Area

This section discusses the biological setting in the Planning Area. As shown on Figure 1-4 and described in Chapter 2, *Project Description*, the Planning Area covers a total of approximately 862,966 acres within San Bernardino and Riverside Counties. The Planning Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water resource agency boundaries extend beyond the Santa Ana River watershed or where the Planning Area is constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Planning Area because the Proposed Project and conservation activities under the Upper SAR HCP are not planned therein.

The Planning Area was designed to encompass the area within which the Proposed Project would be implemented and to provide sufficient land and resources to implement measures to provide for the conservation of Covered Species and habitats affected by the Proposed Project. Conservation actions, including management and monitoring of mitigation sites, could occur within the larger Planning Area. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County.

Much of this section's description of the biological setting was derived from Chapter 3, *Planning Area and Existing Environment*, of the Upper SAR HCP.



## Physical Setting

### Topography

The Planning Area includes the majority of the Upper Santa Ana River watershed and extends from Prado Dam along the San Bernardino County and Los Angeles County line to the north, and then along the Santa Ana River watershed boundary west to east in the San Gabriel and San Bernardino Mountain Ranges, reaching elevations of approximately 2,000 to 8,000 feet in the Planning Area. The Planning Area continues south into Riverside County to the Box Spring Mountains (elevation up to approximately 2,500 feet in the Planning Area), and then southwest through the Moreno Valley to eastern slopes of the Santa Ana Mountains (elevation up to approximately 3,500 feet in the Planning Area) where it runs north again along the Orange County line. Elevation in the valleys ranges from approximately 500 feet at Prado Basin to approximately 2,000 feet at the eastern end of San Bernardino Valley.

### Geology and Soils

Geology and soils can greatly influence vegetation and plant species distribution that, in turn, help determine the distribution of wildlife species. Within the Planning Area, major rock types include sandstone, alluvium, granodiorite, gneiss, mica schist, schist, limestone, tonalite, argillite, gabbro, and felsic volcanic rock (USGS 2007). The majority of the Planning Area consists of alluvium, which is a general term for clay, silt, sand, gravel, or similarly unconsolidated detrital material deposited during comparatively recent geologic time by streams, rivers, and major flooding events. Alluvium is deposited as a sorted or semi-sorted sediment in the bed of the stream or river, on its flood plain or delta, or as a cone or fan at the base of a mountain slope.

Five soil orders have been identified in the Planning Area: entisols, inceptisols, alfisols, mollisols, and vertisols (NRCS 2017). Entisols, alfisols, and mollisols compose the majority of the Planning Area. Entisols exhibit little to no soil development other than the presence of an identifiable topsoil horizon. These soils occur in areas of recently deposited sediments, often in places where deposition is faster than the rate of soil development (e.g., active floodplains) (SSSA 2017). Alfisols are moderately leached soils that have relatively high native fertility. They have mainly formed under forest and have a subsurface horizon in which clays have accumulated. Alfisols are primarily found in temperate humid and sub-humid regions of the world (University of Idaho 2017). Mollisols are prairie or grassland soils that have a dark-colored surface horizon. They are highly fertile and rich in chemical “bases” such as calcium and magnesium. The dark surface horizon comes from the yearly addition of organic matter to the soil from the deep roots of prairie plants. Mollisols are often found in climates with pronounced dry seasons (SSSA 2017).

### Hydrology

The Santa Ana River is the largest watershed in Southern California, covering an area of approximately 2,800 square miles composed of mountains, foothills, and valleys. The watershed contains approximately 50 mapped tributaries and contains parts of Orange, San Bernardino, Riverside, and Los Angeles Counties. The flow of the Santa Ana River begins high in the San Bernardino Mountains and flows over 100 miles southwestward, where it discharges into the Pacific Ocean at the city of Huntington Beach (USGS 2016).

Several major dams are located on the Santa Ana River, including Big Bear Dam, Seven Oaks Dam, and Prado Dam. The surface water of Bear Creek (a tributary to the Santa Ana River) is impounded

high in the mountains by Big Bear Dam beyond the northeast boundary of the Planning Area, which was constructed in 1884 as a reservoir to supply water for surrounding communities. Prado Dam and Seven Oaks Dam were constructed in 1941 and 2000, respectively, for flood control purposes.

Streamflow in the Santa Ana River and its tributaries is highly variable from year to year in response to precipitation patterns, with large floods and long periods of extremely low flow or dry channels. Generally, the largest monthly flows occur in February and March, and the lowest flows occur in August through October. Because the climate in the region is characterized by hot, dry summers and cool winters with intermittent precipitation, under natural conditions, the Santa Ana River and most of its tributaries would be intermittent with little or no flow in the summer months (USGS 2016.). However, they would contain seasonal flows, including large flood flows in the winter and spring and perennial flows in some stream reaches from groundwater upwelling.

Due to urbanization, flood control, inter-basin water transfers, and other water-supply projects throughout the Santa Ana River basin, the natural hydrology of watershed runoff and streamflow for most streams have been substantially altered. Alterations to natural hydrologic conditions, including diversions, constructed drainages, channels, and other impervious surfaces, are especially prevalent in the foothills of the San Bernardino Mountains and the Santa Ana River valley, causing decreased groundwater infiltration and increased runoff from urban areas (Valley District and Western Municipal Water District 2004). Groundwater levels have experienced large declines since the 1800s, and by 1969 water diversions and groundwater pumping had severely diminished natural flow in the Santa Ana River, eliminating perennial flows in much of the river (Kratzer et al. 2011; Valley District 2015). Modification of natural flow patterns also stems from water storage and controlled releases from reservoirs, groundwater withdrawal, hydraulic structures, diversion into groundwater recharge basins, vegetation management, and irrigation runoff and wastewater effluent, which create perennial flow in some streams that would otherwise be dry.

Refer to Section 3.6 of the Upper SAR HCP for detailed information on the Santa Ana River watershed's local and regional hydrology, including surface water features, drainage patterns, and geomorphic conditions.

### **Land Uses**

Existing land uses in the Planning Area include urban areas, farmland, grazing land, national forest, water conservation/water storage facilities, flood control, habitat conservation, open space, aggregate mining/mineral extraction, agriculture/orchards and vineyards, roadways, and airport operations. National Forest and urban areas compose the greatest acreage in the Planning Area.

## **Natural Communities and Land Cover Types**

The Planning Area generally experiences a Mediterranean type of climate, with moist, cool winters and warm, dry summers. The varied landscape in the Planning Area supports a wide variety of native habitats. Urban and agricultural areas are focused in the valleys. Rapid urbanization of San Bernardino and Riverside Counties has reduced native habitat areas and confined them to higher elevations and isolated patches scattered throughout the counties. The dominant natural vegetation type in the Planning Area is shrubland, which is located primarily in the foothills of the San Gabriel, San Bernardino, and Santa Ana Mountains, as well as smaller mountain ranges such as Box Spring Mountains and Estelle Mountains. Riparian and wetland habitats occur primarily along the Santa Ana River and its tributaries. The Planning Area also supports forests and woodlands in the higher

elevation areas of the mountain ranges. These varied habitats support high diversity and abundance of species, including several endemic plant and animal species.

The Planning Area contains 11 macrogroup natural communities and other land cover types. Each macrogroup is composed of several habitat types, each with distinctly different plant species compositions, as depicted in Table 3.4-1. Information on vegetation communities and land cover types was obtained from Chapter 3 of the Upper SAR HCP. This information was based on extensive land cover mapping conducted for the Upper SAR HCP and, therefore, represents the best available landscape-scale data on biological resources in the Planning Area (see Section 3.4.3 for land cover mapping methods and data sources used).

**Table 3.4-1. Vegetation Community and Land Cover Types in the Planning Area**

<b>Natural Community/Land Cover Type</b>	<b>Total Acres in Planning Area</b>
<b>Riparian</b>	<b>14,752 (2% of Planning Area)</b>
Interior Warm and Cool Desert Riparian Forest	14,062
Interior West Disturbed Flooded and Swamp Forest and Woodland	4
Warm Desert Lowland Freshwater Marsh, Wet Meadow, and Shrubland	687
<b>Wetland</b>	<b>2,733 (&lt;1% of Planning Area)</b>
Western North American Freshwater Aquatic Vegetation	205
Western North American Montane-Subalpine-Boreal Marsh, Wet Meadow, and Shrubland	22
Western North American Disturbed Marsh, Wet Meadow, and Shrubland	79
Western North American Temperate and Boreal Freshwater Marsh, Wet Meadow, and Shrubland	2,427
<b>Shrubland (includes alluvial fan sage scrub in parentheses)</b>	<b>283,097 (33% of Planning Area)</b>
Californian Chaparral	170,526
Californian Coastal Scrub	89,346 (8,039)
Cool Interior Chaparral	7,989
Great Basin-Intermountain Dry Shrubland and Grassland	168
Great Basin-Intermountain Tall Sagebrush Steppe and Shrubland	254
Great Basin-Intermountain Xeric-Riparian Scrub	5,973 (3,283)
North American Warm-Desert Xeric-Riparian Scrub	6,309 (4,756)
Warm Interior Chaparral	2,530
<b>Woodland</b>	<b>56,019 (6% of Planning Area)</b>
Californian Forest and Woodland	54,185
California Disturbed Forest	703
Intermountain Singleleaf Pinyon-Utah Juniper-Western Juniper Woodland	1,130
<b>Grassland</b>	<b>55,475 (6% of Planning Area)</b>
Californian Annual and Perennial Grassland <sup>a</sup>	55,359
Californian Disturbed Grassland, Meadow, and Scrub	115

<b>Natural Community/Land Cover Type</b>	<b>Total Acres in Planning Area</b>
Forests	33,343 (4% of Planning Area)
Rocky Mountain Subalpine–High Montane Conifer Forest	4,027
Southern Vancouverian Montane–Foothill Forest	29,316
Rock Outcrop	2,857 (<1% of Planning Area)
North American Warm Semi-Desert Cliff, Scree, and Rock Vegetation	82
Western North American Cliff, Scree, and Rock Vegetation	2,775
Water (includes alluvial fan sage scrub in parentheses)	28,596 (3% of Planning Area)
Permanent Water	4,575
Water in Existing Basins	618
Dry Channel/Shrubland	23,403 (5,440)
<b>NATURAL COMMUNITIES SUBTOTAL</b>	<b>476,872</b>
Agriculture	50,387 (6% of Planning Area)
Herbaceous Agricultural Vegetation	48,097
Woody Agricultural Vegetation	2,290
Barren	2 (<1% of Planning Area)
Barren	2
Developed	335,704 (39% of Planning Area)
Developed and Urban	335,704
<b>TOTAL</b>	<b>862,966</b>

Source: Table 3-13 in the Upper SAR HCP.

<sup>a</sup> While this habitat type is defined by a high native species richness, this habitat is predominantly nonnative grassland species within the Planning Area.

Descriptions of the macrogroup natural community and other land cover types occurring within the Planning Area are provided below and illustrated on Figure 3.4-1. These descriptions contain information summarized from Chapter 3 of the Upper SAR HCP, which contains additional detailed information about these communities and their habitat types. Figures depicting the individual habitat types of each macrogroup can be found in the Upper SAR HCP.

### Riparian

The riparian natural communities within the Planning Area are composed of Interior Warm and Cool Desert Riparian Forest; Interior West Disturbed Flooded and Swamp Forest and Woodland; and Warm Desert Lowland Freshwater Marsh, Wet Meadow, and Shrubland. Riparian habitats within the Planning Area occur primarily along the Santa Ana River and its tributaries, as well as within washes located in the foothills and ranges of the San Gabriel, San Bernardino, Santa Ana, Estelle, and Box Spring Mountains (Figure 3.4-1).

The dominant vegetation in the riparian natural community can consist of either mature, tall trees or small trees and shrubs. Typical overstory species consist of Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), red willow (*Salix laevigata*), Goodding's black willow (*S. gooddingii*), arroyo willow (*S. lasiolepis*), western sycamore (*Platanus racemosa*), Southern California walnut (*Juglans californica*), and white alder (*Alnus rhombifolia*). In addition to immature overstory species, the understory can contain shrubs and woody vines, such as narrow-leaved willow (*Salix exigua*), California blackberry (*Rubus ursinus*), wild grape (*Vitis girdiana*), Emory's baccharis (*Baccharis*

*salicina*), and mule fat (*Baccharis salicifolia*). Herbaceous species, such as castor bean (*Ricinus communis*), poison hemlock (*Conium maculatum*), white sweet clover (*Melilotus indica*), stinging nettle (*Urtica dioica*), golden crownbeard (*Verbesina encelioides*), and annual sunflower (*Helianthus annuus*), may also be present in the understory of the riparian natural community.

### **Wildlife Habitat**

Riparian forest and scrub communities provide wildlife with dispersal and migration corridors and foraging areas, cover, and breeding habitat. Many species of birds, mammals, reptiles, and amphibians are known to use riparian communities and other woody vegetation communities near watercourses. Riparian trees provide suitable nesting and roosting habitat for a variety of raptors, egrets, herons, songbirds, and bats. Birds known to nest in these communities include red-tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipiter cooperii*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), Nuttall's woodpecker (*Picoides nuttallii*), downy woodpecker (*Picoides pubescens*), western scrub-jay (*Aphelocoma californica*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), black phoebe (*Sayornis nigricans*), least Bell's vireo (*Vireo bellii pusillus*), common yellowthroat (*Geothlypis trichas*), yellow warbler (*Setophaga petechia*), yellow-breasted chat (*Icteria virens*), house wren (*Troglodytes aedon*), bushtit (*Psaltriparus minimus*), and song sparrow (*Melospiza melodia*).

Bats species known to use riparian habitats for roosting include California myotis (*Myotis californicus*), Yuma myotis (*Myotis yumanensis*), hoary bat (*Lasiurus cinereus*), western red bat (*Lasiurus blossevillii*), western yellow bat (*Lasiurus xanthinus*), and pallid bat (*Antrozous pallidus*). Other mammal species known to use these communities include American beaver (*Castor canadensis*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), mule deer (*Odocoileus hemionus*), and raccoon (*Procyon lotor*). Reptiles, including common garter snake (*Thamnophis sirtalis*), western fence lizard (*Sceloporus occidentalis*), and southwestern pond turtle (*Emys pallida*), and amphibians, including Baja California treefrog (*Pseudacris hypochondriaca*), California treefrog (*Pseudacris cadaverina*), western toad (*Anaxyrus boreas*), and bullfrog (*Lithobates catesbeianus*), are also associated with these communities.

Fish such as Santa Ana sucker (*Catostomus santaanae*) and arroyo chub (*Gila orcuttii*) utilize stream reaches that have riparian vegetation. Overhanging riparian vegetation along watercourses provides rearing areas, cover, and food resources.

### **Wetland**

The wetland natural community in the Planning Area consists of Western North American Freshwater Aquatic Vegetation; Western North American Montane-Subalpine-Boreal Marsh, Wet Meadow, and Shrubland; Western North American Disturbed Marsh, Wet Meadow, and Shrubland; and Western North American Temperate and Boreal Freshwater Marsh, Wet Meadow, and Shrubland. Wetland habitats within the Planning Area occur primarily along the Santa Ana River and its tributaries, as well as within washes located in the foothills and ranges of the San Gabriel, San Bernardino, Santa Ana, Estelle, and Box Spring Mountains (Figure 3.4-1).

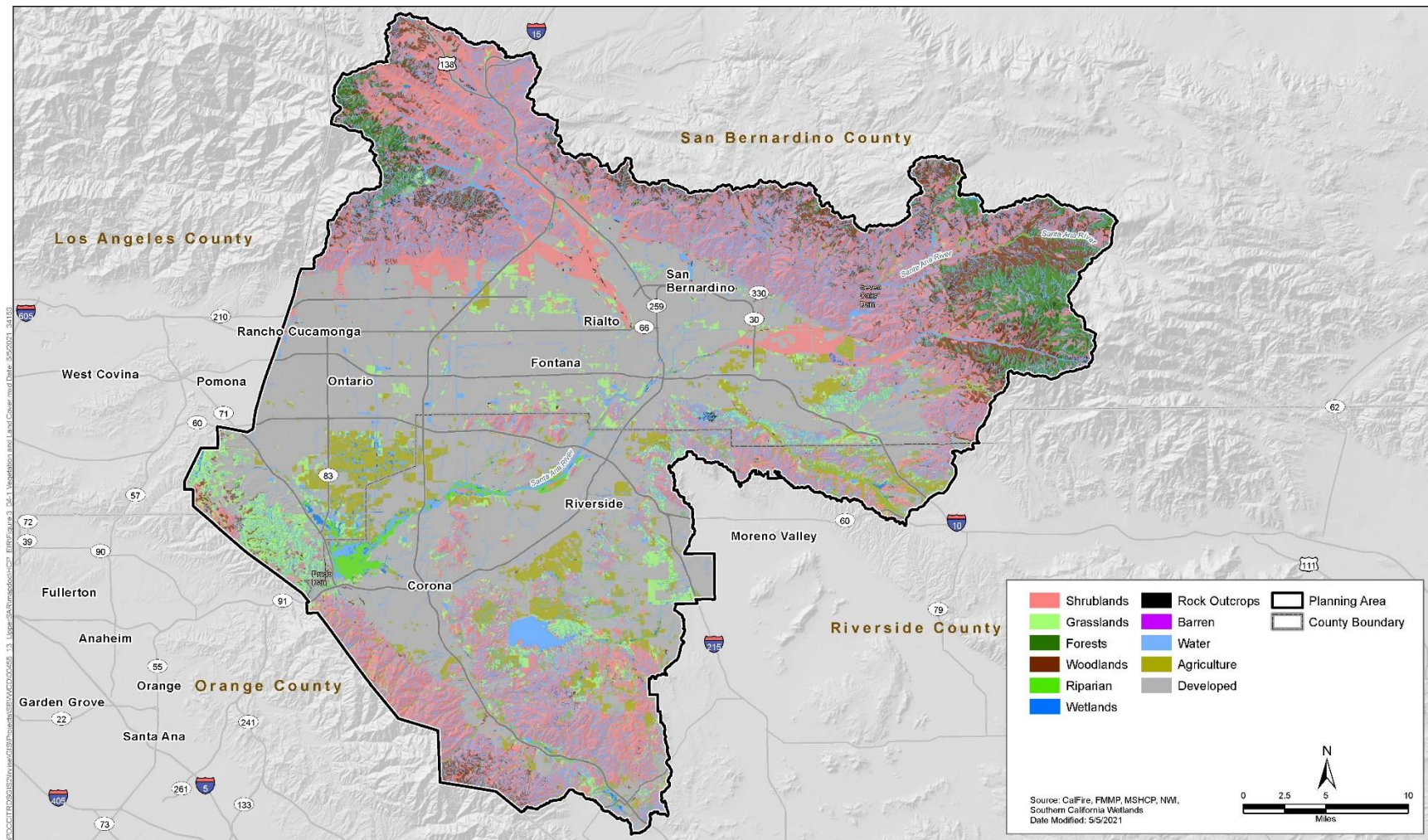


Figure 3.4-1. Vegetation Communities and Land Cover Types in the Planning Area

Freshwater aquatic vegetation typically consists of rooted and floating freshwater aquatic herbaceous vegetation, including mosquitofern (*Azolla* spp.), pondweed (*Stuckenia* spp.), water-lily (*Nymphaea* sp.), and duckweed (*Lemna* sp.). Marsh, wet meadow, and shrubland vegetation contains a combination of open water and vegetation, including California bulrush (*Schoenoplectus californicus*), willow smart-weed (*Persicaria lapathifolium*), sedges (*Cyperus* spp. and *Carex* spp.), cattails (*Typha* spp.), white water-cress (*Nasturtium officinale*), spike rush (*Eleocharis macrostachya*), northern giant horsetail (*Equisetum telmateia*), rushes (*Juncus* spp.), and willows (*Salix* spp.). Ruderal wetland areas are disturbed natural wetland habitats that are strongly dominated by nonnative and sometimes weedy or generalist native species.

### **Wildlife Habitat**

Wetlands provide cover and breeding habitat for amphibians, including Baja California treefrog, California treefrog, coast range newt (*Taricha torosa*), western toad, and bullfrog, and reptiles, including two-striped garter snake (*Thamnophis hammondi*) and south coast garter snake (*Thamnophis sirtalis infernalis*). Characteristic birds that nest in (or are associated with) wetlands in the Planning Area include Virginia rail (*Rallus limicola*), American coot (*Fulica americana*), pied-billed grebe (*Podilymbus podiceps*), red-winged blackbird (*Agelaius phoeniceus*), and tricolored blackbird (*Agelaius tricolor*). Mammals known to use emergent wetlands in the Planning Area include a variety of shrews (*Sorex* spp.) and foraging bats.

### **Water**

The water natural community type within the Planning Area is composed of open water that is of a permanent, intermittent, or seasonal nature, which includes alluvial fan sage scrub. Areas mapped as open water are more or less free of vegetation and occur associated with Prado Dam, Seven Oaks Dam, Lake Mathews, and the Santa Ana River and its tributaries, as well as reservoirs, recharge basins, canals, ponds, and water treatment plants (Figure 3.4-1). Some areas of open water support patches of duckweed.

### **Wildlife Habitat**

Streams and river waters within the Planning Area provide habitat for native fish species, including unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), arroyo chub, Santa Ana sucker, and speckled dace (*Rhinichthys osculus* ssp. 3). Nonnative fish species also occur, including largemouth bass (*Micropterus salmoides*), western mosquitofish (*Gambusia affinis*), green sunfish (*Lepomis cyanellus*), bluegill (*Lepomis macrochirus*), common carp (*Cyprinus carpio*), bullhead (*Ameiurus* spp.), and channel catfish (*Ictalurus punctatus*). Nonnative warmwater fish species, such as bass (*Micropterus* spp.), sunfish (*Lepomis* spp.), and crappie (*Pomoxis* spp.), could occur within the ponds and reservoirs in the Planning Area.

In addition to providing resources for fish, open water habitat provides foraging, cover, and reproductive sites for a variety of wildlife species. Open water areas provide essential aquatic habitat for wading birds (e.g., snowy egret [*Egretta thula*], green heron [*Butorides virescens*], black-crowned night-heron [*Nycticorax nycticorax*], great blue heron, great egret); waterfowl (e.g., northern pintail [*Anas acuta*], green-winged teal [*Anas crecca*], ring-necked duck [*Aythya collaris*], American wigeon [*Anas americana*], northern shoveler [*Anas clypeata*]); water birds (e.g., eared grebe [*Podiceps nigricollis*], double-crested cormorant [*Phalacrocorax auritus*], pied-billed grebe); and land birds (e.g., osprey [*Pandion haliaetus*], belted kingfisher [*Megasceryle alcyon*]). Reptiles and



amphibians, including south coast garter snake, southwestern pond turtle, common garter snake, two-striped garter snake, Pacific treefrog, western toad, and bullfrog, breed and/or forage in open water areas. Bats, including California myotis, Yuma myotis, hoary bat, western red bat, and pallid bat, forage for insects over open water. Terrestrial mammals, including mule deer, raccoon, striped skunk, and Virginia opossum, use rivers and streams as water sources. American beaver occurs in open water habitats within the higher elevations of the San Bernardino Mountains.

### **Shrubland**

The shrubland natural communities within the Planning Area are composed of Californian chaparral, Californian Coastal Scrub, Cool Interior Chaparral, Great Basin-Intermountain Dry Shrubland and Grassland, Great Basin-Intermountain Tall Sagebrush Steppe and Shrubland, Great Basin-Intermountain Xeric-Riparian Scrub, North American Warm-Desert Xeric-Riparian Scrub, and Warm Interior Chaparral. These habitats occur primarily within the foothills and higher elevations of the Estelle, Box Spring, San Gabriel, San Bernardino, and Santa Ana Mountains, with small patches of coastal scrub scattered throughout the valley. Coastal scrub typically occurs at lower elevations, with chaparral occurring at higher elevations of the mountain ranges (Figure 3.4-1).

The coastal scrub habitats within the Planning Area are composed of drought-deciduous shrubs and characteristic obligate-seeding or resprouting evergreen shrubs, including California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), deerweed (*Acmispon glaber*), sticky monkey-flower (*Diplacus aurantiacus*), and sages (*Salvia* spp.). The chaparral habitats within the Planning Area are characterized by dense shrubs and small trees, dominated by ceanothus (*Ceanothus* spp.), manzanita (*Arctostaphylos* spp.), oaks (*Quercus* spp.), and chamise (*Adenostoma fasciculatum*). Other common species include toyon (*Heteromeles arbutifolia*), mountain mahogany (*Cercocarpus betuloides*), and California buckwheat.

A subcomponent of the coastal scrub occurs on alluvial floodplains. Alluvial scrub is a rare plant community composed of many of the same species that make up the coastal scrub plant community, but it also includes scalebroom (*Lepidospartum squamatum*) as a component. Plant species found in alluvial scrub include both drought-deciduous and evergreen shrubs (phreatophytes) that do well in deep, well-drained soils. The desert riparian scrub habitat within the Planning Area is composed of open to intermittent desert shrub species, including fourwing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), and big sagebrush (*Artemisia tridentata* ssp. *tridentata*). There are also portions of the alluvial fan sage scrub mapped within the desert riparian scrub habitat.

### **Wildlife Habitat**

Shrubland provides habitat for a variety of common reptiles, birds, and mammals. Numerous rodent species, mule deer, and other herbivores are common in coastal scrub and chaparral communities. Chaparral provides important winter range foraging areas for mule deer. Shrubland also provides habitat for gopher snake (*Pituophis catenifer*), California kingsnake (*Lampropeltis getulus californicae*), western fence lizard, California quail (*Callipepla californica*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), coastal California gnatcatcher (*Polioptila californica californica*), brush mouse (*Peromyscus boylii*), pocket mice (*Chaetodipus* spp. and *Perognathus* spp.), woodrats (*Neotoma* spp.), and kangaroo rats (*Dipodomys* spp.).



## Grassland

The grasslands natural community in the Planning Area is composed of two types: Californian Annual and Perennial Grassland; and Californian Disturbed Grassland, Meadow, and Scrub. Grasslands within the Planning Area are dominated by the Californian Annual and Perennial Grassland habitat type and occur throughout the valley, as well as in the Santa Ana, Estelle, and Box Spring Mountains, with a few scattered patches in the San Gabriel and San Bernardino Mountain Ranges. Only a few areas of Californian Ruderal Grassland, Meadow, and Scrub occur and are located in the valley near the Santa Ana River and in the Box Springs Mountains (Figure 3.4-1).

The vegetation in grasslands consists primarily of nonnative annual grasses, including ripgut brome (*Bromus diandrus*), red brome (*B. madritensis*), cheat grass (*B. tectorum*), smilo grass (*Stipa miliaceum*), Mediterranean schismus (*Schismus barbatus*), and wild oats (*Avena* spp.). Native perennial grasses, native forbs, and nonnative forbs also occur in grasslands. Nonnative forbs include London rocket (*Sisymbrium irio*), summer mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), horehound (*Marrubium vulgare*), longbeak filaree (*Erodium botrys*), Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), and Russian thistle (*Salsola tragus*). Representative native species that are known to occur in grasslands include purple needlegrass (*Nassella pulchra*), Indian ryegrass (*Oryzopsis hymenoides*), fiddleneck (*Amsinckia* spp.), California poppy (*Eschscholzia californica*), and wild heliotrope phacelia (*Phacelia distans*).

## Wildlife Habitat

Grasslands provide food and cover for abundant small mammals, including California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus maniculatus*), California vole (*Microtus californicus*), and black-tailed jackrabbit (*Lepus californicus*). Consequently, raptors such as Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), American kestrel (*Falco sparverius*), and red-tailed hawk forage in annual grasslands. Other characteristic wildlife species include southern pacific rattlesnake (*Crotalus oreganus helleri*), gopher snake, western kingbird (*Tyrannus verticalis*), western bluebird (*Sialia mexicana*), and western meadowlark (*Sturnella neglecta*). Burrowing owl (*Athene cunicularia*) and American badger (*Taxidea taxus*) may use these areas for denning and foraging.

## Woodland

The woodland natural community is composed of Californian Forest and Woodland; Californian Disturbed Forest; and Intermountain Singleleaf Pinyon–Utah Juniper–Western Juniper Woodland. Within the Planning Area, woodland habitat consists principally of California Forest and Woodland and is mostly confined to the mountainous regions, with small patches of primarily Californian Ruderal Forest scattered throughout the valley (Figure 3.4-1).

The vegetation in the woodland community is dominated by warm-temperate oak and conifer species, including canyon live oak (*Quercus chrysolepis*), interior live oak (*Quercus wislizeni*), black oak (*Quercus kelloggii*), coast live oak (*Quercus agrifolia*), Coulter pine (*Pinus coulteri*), ponderosa pine (*Pinus ponderosa*), sugar pine (*Pinus lambertiana*), single leaf pinyon pine (*Pinus monophylla*), and bigcone douglas fir (*Pseudotsuga macrocarpa*). Where present, the shrub understory contains species such as coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), bay laurel (*Umbellularia californica*), toyon, and ceanothus. The herbaceous understory is dominated by nonnative annual grasses and forbs but also contains native grasses and forbs. The intermountain

woodland is characterized by an open to closed tree canopy composed of junipers (*Juniperus* spp.), pinyon species (*Pinus* spp.), and curl-leaf mountain-mahogany (*Cercocarpus ledifolius*). The ruderal woodland habitat is composed of groves of escaped or naturalized cultivars, including tree-of-heaven (*Ailanthus altissima*), acacias (*Acacia* spp.), eucalyptus (*Eucalyptus* spp.), common fig (*Ficus carica*), ngaio tree (*Myoporum laetum*), Aleppo pine (*Pinus halepensis*), black locust (*Robinia pseudoacacia*), peppertree (*Schinus molle*), and Brazilian peppertree (*Schinus terebinthifolius*).

### **Wildlife Habitat**

Oak woodlands provide nesting, foraging, and cover for a variety of species. Acorn woodpecker (*Melanerpes formicivorus*), northern mockingbird (*Mimus polyglottos*), northern flicker (*Colaptes auratus*), and western scrub-jay are known to nest and forage in these habitats. In the higher elevational pinyon and juniper woodlands, species such as Stellar's jay (*Cyanocitta stelleri*) and Clark's nutcracker (*Nucifraga columbiana*) occur. Reptiles, including coast horned lizard (*Phrynosoma blainvillii*), western fence lizard, gopher snake, and California kingsnake, frequent woodland habitats. Woodlands provide cover and foraging opportunities for numerous mammals, including gray fox (*Urocyon cinereoargenteus*), Virginia opossum, striped skunk, mule deer, and raccoon, as well as nesting opportunities for western gray squirrel (*Sciurus griseus*).

### **Forests**

The forest natural community in the Planning Area is composed of Rocky Mountain Subalpine–High Montane Conifer Forest and Southern Vancouverian Montane–Foothill Forest. In the Planning Area, forest habitats are limited to the higher elevations of the San Gabriel and San Bernardino Mountains as shown on Figure 3.4-1.

The forest habitats in the Planning Area are characterized by a conifer-dominated, open to closed tree canopy. Species typically include western juniper (*Juniperus occidentalis*), balsam fir (*Abies concolor*), white fir (*Abies concolor* var. *concolor*), incense cedar (*Calocedrus decurrens*), Jeffrey pine (*Pinus jeffreyi*), singleleaf pinyon pine, sugar pine, and ponderosa pine.

### **Wildlife Habitat**

Conifer forests provide habitat for a large number of wildlife species. The wide variety of plant species in conifer forests provides a diversity of food and cover for wildlife. Mature forests are valuable habitat for cavity-nesting birds. Wildlife species common in this habitat type include brown creeper (*Certhia americana*), red-breasted nuthatch (*Sitta canadensis*), hairy woodpecker (*Picoides villosus*), mountain chickadee (*Parus gambeli*), Steller's jay, Clark's nutcracker, black bear (*Ursus americanus*), mule deer, gray fox, and western gray squirrel.

### **Rock Outcrop**

The rock outcrop natural community type in the Planning Area is composed of North American Warm Semi-Desert Cliff, Scree, and Rock Vegetation and Western North American Cliff, Scree, and Rock Vegetation. These are areas that consist of a variety of near barren and sparsely vegetated substrates within the rocky slopes, cliffs, and outcrops of the San Gabriel, San Bernardino, Santa Ana, Estelle, and Box Springs foothill and mountain ranges (Figure 3.4-1).

**Wildlife Habitat**

Habitat for wildlife is limited within rock outcrops, but this natural community type does provide suitable cover and shelter habitat for reptiles, rodents and other small mammals and roosting bats.

**Barren**

Barren lands include quarries and gravel pits associated with mining activities located in the valley portion of the Planning Area.

**Wildlife Habitat**

Barren lands provide little to no habitat for wildlife.

**Agricultural**

The agricultural land cover type in the Planning Area is composed of Herbaceous Agricultural Vegetation and Woody Agricultural Vegetation and occurs throughout the valley (Figure 3.4-1).

Vegetation in the agricultural land cover type consists of field crops, orchards, and vineyards. Field crops include irrigated pasture, alfalfa, oats, wheat, sorghum, and strawberries. Orchard and vineyard crops include citrus, apples, avocados, pears, and grapes.

**Wildlife Habitat**

Orchards and vineyards provide very little value for wildlife, although birds such as American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), and rock pigeon (*Columba livia*) may nest or forage in these areas. San Bernardino kangaroo rat (SBKR) (*Dipodomys merriami parvus*) have been occasionally found to occupy citrus orchards.

Row and field crops provide foraging opportunities for a variety of raptors, including red-tailed hawk, Swainson's hawk, white-tailed kite, American kestrel, burrowing owl, northern harrier, great horned owl, barn owl, and other migratory and resident birds (e.g., Brewer's blackbird [*Euphagus cyanocephalus*], red-winged blackbird, tricolored blackbird, American crow, European starling, western meadowlark, and mourning dove). Birds such as burrowing owl, northern harrier, and western meadowlark are known to nest in or adjacent to these areas.

Mammals known to occur in all types of agricultural lands include coyote (*Canis latrans*), gray fox, black-tailed jackrabbit, California ground squirrel, Botta's pocket gopher, deer mouse, and California vole. Reptiles such as western fence lizard, gopher snake, and California kingsnake may also be found in association with agricultural areas.

**Developed**

The developed land cover type consists of developed and urban areas in the Planning Area and includes the cities of Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa in San Bernardino County and the cities of Beaumont, Calimesa, Corona, Eastvale, Jurupa Valley, Lake Elsinore, Moreno Valley, Norco, and Riverside in Riverside County. Developed areas consist of roadways, buildings, residential housing, commercial businesses, industrial and mining areas, and other permanent structures, as well as public parks and other urban open spaces. This land use type

is found throughout the valley portion of the Planning Area and typically contains ornamental vegetation (Figure 3.4-1).

### ***Wildlife Habitat***

Habitat for wildlife in developed areas is limited. Wildlife species typically occurring in these areas are those that are adapted to urban environments, such as rock pigeon, doves, house sparrow, California ground squirrel, coyote, Virginia opossum, skunks, and raccoons. Burrowing owl could nest in public parks and urban open spaces where California ground squirrels are present.

## **Special-Status Species**

Special-status species are defined as plants and animals that are legally protected under the Federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), or other regulations and species that are considered sufficiently rare by the scientific community to qualify for such listing. Special-status species are defined as species in any of the categories listed below.

- Species that are listed or proposed for listing as threatened or endangered under the FESA (50 Code of Federal Regulations [CFR] § 17.11 for listed animals and various notices in the Federal Register [FR] for proposed species).
- Species that are candidates for possible future listing as threatened or endangered under the FESA (75 FR 69222).
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA (14 Cal. Code Regs. § 670.5).
- Species that meet the definitions of rare or endangered under the California Environmental Quality Act (CEQA) (State CEQA Guidelines § 15380).
- Animals listed as California species of special concern on California Department of Fish and Wildlife's (CDFW) Special Animals List (CDFW 2019).
- Animals that are fully protected in California under the California Fish and Game Code (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code §§ 1900 et seq.).
- Plants considered by CDFW and the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B, and 2) (CNPS 2019).

The State CEQA Guidelines state that the lead agency preparing an EIR must consult with and receive written findings from CDFW concerning project impacts on species listed as threatened or endangered.

Database queries of the above listed resources were conducted for the U.S. Geological Survey 7.5-Minute topographic quadrangles containing the Planning Area. Quadrangles queried included Alberhill, Beaumont, Big Bear Lake, Black Star Canyon, Butler Peak, Cajon, Corona North, Corona South, Cucamonga Peak, Devore, El Casco, Fawnskin, Fontana, Forest Falls, Guasti, Harrison Mountain, Keller Peak, Lake Elsinore, Lake Mathews, Moonridge, Mount San Antonio, Mount Baldy, Ontario, Perris, Phelan, Prado Dam, Redlands, Riverside East, Riverside West, San Bernardino North, San Bernardino South, San Dimas, San Gorgonio Mountain, Santiago Peak, Silverwood Lake, Steele

Peak, Sunnymead, Telegraph Peak, Yorba Linda, and Yucaipa. Additionally, species were added, as appropriate, as a result of professional knowledge or experience with prior projects in the vicinity.

### **Special-Status Plants**

Based on the U.S. Fish and Wildlife Service (USFWS) (2020) species list, the California Natural Diversity Database (CNDDDB) (CDFW 2019) records search, and the CNPS (2019) inventory search for the Planning Area, 238 special-status plant species were identified as having the potential to occur in the Planning Area. Of those, 208 of these species were determined to occur or potentially occur within the natural community types in the Planning Area, including the two species that are proposed for coverage under the Upper SAR HCP. The remaining 30 species were determined to be unlikely to occur in the Planning Area because they inhabit natural communities (e.g., tidal marshes) that are not proposed for coverage under the Upper SAR HCP, their elevation ranges are outside of the elevations in the Planning Area, or known extant population ranges occur outside of the Planning Area. These 30 species are not discussed further in this EIR.

Accordingly, the special-status plants addressed in this section comprise the two that are proposed for coverage under the Upper SAR HCP and the 208 that are not covered but that have potential to occur in the Planning Area (Table 3.4-2).

### **Special-Status Wildlife**

Based on the USFWS (2020) species list and CNDDDB records search (2019) for the Planning Area, 75 special-status wildlife species were identified as having the potential to occur within the Planning Area. Of those, 62 of these species were determined to occur or potentially occur within the natural community types in the Planning Area, including the 20 species that are proposed for coverage under the Upper SAR HCP. The remaining 13 species were determined to be unlikely to occur in the Planning Area because they inhabit natural communities (e.g., tidal marshes) that do not occur within the Planning Area or known extant population ranges occur outside of the Planning Area. These 13 species are not discussed further in this EIR.

Accordingly, the special-status wildlife species addressed in this section comprise the 20 that are proposed for coverage under the Upper SAR HCP and the 42 that are not covered but that have potential to occur in the Planning Area (Table 3.4-3).

**Table 3.4-2. Special-Status Plant Species Potentially Occurring in the Planning Area**

<b>Common/Scientific Name</b>	<b>Status Fed/ State/ CRPR</b>	<b>Common/Scientific Name</b>	<b>Status Fed/ State/ CRPR</b>
<b>Covered Species</b>		Malibu baccharis ( <i>Baccharis malibuensis</i> )	-/-/1B.1
slender-horned spineflower ( <i>Dodecahema leptoceras</i> )	E/E/1B.1	Nevin's barberry ( <i>Berberis nevini</i> )	E/E/1B.1
Santa Ana River woolly-star ( <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> )	E/E/1B.1	pinyon rockcress ( <i>Boechera dispar</i> )	-/-/2B.3
<b>Non-Covered Species</b>		Parish's rockcress ( <i>Boechera parishii</i> )	-/-/1B.2
chaparral sand-verbena ( <i>Abronia villosa</i> var. <i>aurita</i> )	-/-/1B.1	San Bernardino rockcress ( <i>Boechera peirsonii</i> )	-/-/1B.2
Parish's oxytheca ( <i>Acanthoscyphus parishii</i> var. <i>parishii</i> )	-/-/4.2	upswept moonwort ( <i>Botrychium ascendens</i> )	-/-/2B.3
Yucaipa onion ( <i>Allium marvinii</i> )	-/-/1B.2	scalloped moonwort ( <i>Botrychium crenulatum</i> )	-/-/2B.2
Munz's onion ( <i>Allium munzii</i> )	E/T/1B.1	thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	T/E/1B.1
singlewhorl burrobrush ( <i>Ambrosia monogyra</i> )	-/-/2B.2	Brewer's calandrinia ( <i>Calandrinia breweri</i> )	-/-/4.2
San Diego ambrosia ( <i>Ambrosia pumila</i> )	E/-/1B.1	Catalina mariposa lily ( <i>Calochortus catalinae</i> )	-/-/4.2
California androsace ( <i>Androsace elongata</i> ssp. <i>acuta</i> )	-/-/4.2	slender mariposa-lily ( <i>Calochortus clavatus</i> var. <i>gracilis</i> )	-/-/1B.2
white-margined everlasting ( <i>Antennaria marginata</i> )	-/-/2B.3	Palmer's mariposa lily ( <i>Calochortus palmeri</i> var. <i>palmeri</i> )	-/-/1B.2
San Gabriel manzanita ( <i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i> )	-/-/1B.2	Plummer's mariposa lily ( <i>Calochortus plummerae</i> )	-/-/4.2
interior manzanita ( <i>Arctostaphylos parryana</i> ssp. <i>tumescens</i> )	-/-/4.3	intermediate mariposa-lily ( <i>Calochortus weedii</i> var. <i>intermedius</i> )	-/-/1B.2
rock sandwort ( <i>Arenaria lanuginosa</i> var. <i>saxosa</i> )	-/-/2B.3	pygmy pussypaws ( <i>Calyptridium pygmaeum</i> )	-/-/1B.2
Bear Valley sandwort ( <i>Arenaria ursina</i> )	T/-/1B.2	lucky morning-glory ( <i>Calystegia felix</i> )	-/-/3.1
San Diego sagewort ( <i>Artemisia palmeri</i> )	-/-/4.2	Lewis' evening-primrose ( <i>Camissoniopsis lewisii</i> )	-/-/3
Mojave milkweed ( <i>Asclepias nyctaginifolia</i> )	-/-/2B.1	white pygmy-poppy ( <i>Canbya candida</i> )	-/-/4.2
western spleenwort ( <i>Asplenium vespertinum</i> )	-/-/4.2	Buxbaum's sedge ( <i>Carex buxbaumii</i> )	-/-/4.2
crested milk-vetch ( <i>Astragalus bicristatus</i> )	-/-/4.3	western sedge ( <i>Carex occidentalis</i> )	-/-/2B.3
Braunton's milk-vetch ( <i>Astragalus brauntonii</i> )	E/-/1B.1	ash-gray paintbrush ( <i>Castilleja cinerea</i> )	T/-/1B.2
Horn's milk-vetch ( <i>Astragalus hornii</i> var. <i>hornii</i> )	-/-/1B.1	San Bernardino Mountains owl's-clover ( <i>Castilleja lasiorhyncha</i> )	-/-/1B.2
San Antonio milk-vetch ( <i>Astragalus lentiginosus</i> var. <i>antoni</i> )	-/-/1B.3	Heckard's paintbrush ( <i>Castilleja montigena</i> )	-/-/4.3
Big Bear Valley milk-vetch ( <i>Astragalus lentiginosus</i> var. <i>sierra</i> )	-/-/1B.2	Mojave paintbrush ( <i>Castilleja plagiotoma</i> )	-/-/4.3
Big Bear Valley woollypod ( <i>Astragalus leucolobus</i> )	-/-/1B.2	Payson's jewel-flower ( <i>Caulanthus simulans</i> )	-/-/4.2
Jaeger's milk-vetch ( <i>Astragalus pachypus</i> var. <i>jaegeri</i> )	-/-/1B.1	southern tarplant ( <i>Centromadia parryi</i> ssp. <i>australis</i> )	-/-/1B.1
San Jacinto Valley crownscale ( <i>Atriplex coronata</i> var. <i>notatior</i> )	E/-/1B.1	smooth tarplant ( <i>Centromadia pungens</i> ssp. <i>laevis</i> )	-/-/1B.1
Parish's brittlescale ( <i>Atriplex parishii</i> )	-/-/1B.1	Peninsular spineflower ( <i>Chorizanthe leptotheca</i> )	-/-/4.2
Davidson's saltscale ( <i>Atriplex serenana</i> var. <i>davidsonii</i> )	-/-/1B.2	San Fernando Valley spineflower ( <i>Chorizanthe parryi</i> var. <i>fernandina</i> )	CT/E/1B.1
Mexican mosquito fern ( <i>Azolla microphylla</i> )	-/-/4.2	Parry's spineflower ( <i>Chorizanthe parryi</i> var. <i>parryi</i> )	-/-/1B.1

Common/Scientific Name	Status Fed/ State/ CRPR	Common/Scientific Name	Status Fed/ State/ CRPR
long-spined spineflower ( <i>Chorizanthe polygonoides</i> var. <i>longispina</i> )	-/-/1B.2	Palomar monkeyflower ( <i>Erythranthe diffusa</i> )	-/-/4.3
white-bracted spineflower ( <i>Chorizanthe xanti</i> var. <i>leucotheca</i> )	-/-/1B.2	San Bernardino Mountains monkeyflower ( <i>Erythranthe exigua</i> )	-/-/1B.2
California saw-grass ( <i>Cladium californicum</i> )	-/-/2.2	little purple monkeyflower ( <i>Erythranthe purpurea</i> )	-/-/1B.2
Peirson's spring beauty ( <i>Claytonia lanceolata</i> var. <i>peirsonii</i> )	-/-/3.1	hot springs fimbriistylis ( <i>Fimbristylis thermalis</i> )	-/-/2B.2
San Miguel savory ( <i>Clinopodium chandleri</i> )	-/-/1B.2	pine green-gentian ( <i>Frasera neglecta</i> )	-/-/4.3
summer holly ( <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> )	-/-/1B.2	San Antonio Canyon bedstraw ( <i>Galium angustifolium</i> ssp. <i>gabrielense</i> )	-/-/4.3
small-flowered morning-glory ( <i>Convolvulus simulans</i> )	-/-/4.2	Alvin Meadow bedstraw ( <i>Galium californicum</i> ssp. <i>primum</i> )	-/-/1B.2
Peruvian dodder ( <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> )	-/-/2B.2	Johnston's bedstraw ( <i>Galium johnstonii</i> )	-/-/4.3
snake cholla ( <i>Cylindropuntia californica</i> var. <i>californica</i> )	-/-/1B.1	Fremont's gentian ( <i>Gentiana fremontii</i> )	-/-/2B.3
Mojave tarplant ( <i>Deinandra mohavensis</i> )	-/E/1B.3	San Bernardino gilia ( <i>Gilia leptantha</i> ssp. <i>leptantha</i> )	-/-/1B.3
paniculate tarplant ( <i>Deinandra paniculata</i> )	-/-/4.2	Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	-/-/4.2
Colorado Desert larkspur ( <i>Delphinium parishii</i> ssp. <i>subglobosum</i> )	-/-/4.3	Los Angeles sunflower ( <i>Helianthus nuttallii</i> ssp. <i>parishii</i> )	-/-/1A
Mt. Pinos larkspur ( <i>Delphinium parryi</i> ssp. <i>purpureum</i> )	-/-/4.3	Tecate cypress ( <i>Hesperocyparis forbesii</i> )	-/-/1B.1
Cleveland's bush monkeyflower ( <i>Diplacus clevelandii</i> )	-/-/4.2	Abrams' alumroot ( <i>Heuchera abramsii</i> )	-/-/4.3
Johnston's monkeyflower ( <i>Diplacus johnstonii</i> )	-/-/4.3	urn-flowered alumroot ( <i>Heuchera caespitosa</i> )	-/-/4.3
wedgeleaf woodbeauty ( <i>Drymocallis cuneifolia</i> var. <i>cuneifolia</i> )	-/-/1B.1	Parish's alumroot ( <i>Heuchera parishii</i> )	-/-/1B.3
male fern ( <i>Dryopteris filix-mas</i> )	-/-/2B.3	vernal barley ( <i>Hordeum intercedens</i> )	-/-/3.2
San Bernardino Mountains dudleya ( <i>Dudleya abramsii</i> ssp. <i>affinis</i> )	-/-/1B.2	mesa horkelia ( <i>Horkelia cuneata</i> var. <i>puberula</i> )	-/-/1B.1
many-stemmed dudleya ( <i>Dudleya multicaulis</i> )	-/-/1B.2	Barton Flats horkelia ( <i>Horkelia wilderae</i> )	-/-/1B.1
sticky dudleya ( <i>Dudleya viscida</i> )	-/-/1B.2	San Gabriel Mountains sunflower ( <i>Hulsea vestita</i> ssp. <i>gabrielensis</i> )	-/-/4.3
Big Bear Valley sandwort ( <i>Eremogone ursina</i> )	T/-/1B.2	Parry's sunflower ( <i>Hulsea vestita</i> ssp. <i>parryi</i> )	-/-/4.3
San Jacinto Mountains daisy ( <i>Erigeron breweri</i> var. <i>jacinteus</i> )	-/-/4.3	pygmy hulsea ( <i>Hulsea vestita</i> ssp. <i>pygmaea</i> )	-/-/1B.3
vanishing wild buckwheat ( <i>Eriogonum evanidum</i> )	-/-/1B.1	California satintail ( <i>Imperata brevifolia</i> )	-/-/2B.1
southern alpine buckwheat ( <i>Eriogonum kennedyi</i> var. <i>alpigenum</i> )	-/-/1B.3	silver-haired ivesia ( <i>Ivesia argyrocoma</i> var. <i>argyrocoma</i> )	-/-/1B.2
Southern Mtn wild-buckwheat ( <i>Eriogonum kennedyi</i> var. <i>austromontanum</i> )	T/-/1B.2	Southern California black walnut ( <i>Juglans californica</i> )	-/-/4.2
Johnston's buckwheat ( <i>Eriogonum microthecum</i> var. <i>johnstonii</i> )	-/-/1B.3	Duran's rush ( <i>Juncus duranii</i> )	-/-/4.3
Bear Lake buckwheat ( <i>Eriogonum microthecum</i> var. <i>lacus-ursi</i> )	-/-/1B.1	knotted rush ( <i>Juncus nodosus</i> )	-/-/2B.3
Inyo Mountains buckwheat ( <i>Eriogonum microthecum</i> var. <i>lapidicola</i> )	-/-/4.3	Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )	-/-/1B.1
Cushenbury buckwheat ( <i>Eriogonum ovalifolium</i> var. <i>vineum</i> )	E/-/1B.1	heart-leaved pitcher sage ( <i>Lepechinia cardiophylla</i> )	-/-/1B.2
alpine sulfur-flowered buckwheat ( <i>Eriogonum umbellatum</i> var. <i>minus</i> )	-/-/4.3	fragrant pitcher sage ( <i>Lepechinia fragrans</i> )	-/-/4.2
S. Sierra woolly sunflower ( <i>Eriophyllum lanatum</i> var. <i>obovatum</i> )	-/-/4.3	Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	-/-/4.3
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	E/E/1B.1	short-sepaled lewisia ( <i>Lewisia brachycalyx</i> )	-/-/2B.2

Common/Scientific Name	Status Fed/ State/ CRPR	Common/Scientific Name	Status Fed/ State/ CRPR
ocellated Humboldt lily ( <i>Lilium humboldtii</i> ssp. <i>ocellatum</i> )	-/-/4.2	Tehachapi ragwort ( <i>Packera ionophylla</i> )	-/-/4.3
lemon lily ( <i>Lilium parryi</i> )	-/-/1B.2	San Bernardino grass-of-Parnassus ( <i>Parnassia cirrata</i> var. <i>cirrata</i> )	-/-/1B.3
San Gabriel linanthus ( <i>Linanthus concinnus</i> )	-/-/1B.2	California beardtongue ( <i>Penstemon californicus</i> )	-/-/1B.2
Baldwin Lake linanthus ( <i>Linanthus killipii</i> )	-/-/1B.2	Allen's pentachaeta ( <i>Pentachaeta aurea</i> ssp. <i>allenii</i> )	-/-/1B.1
silky lupine ( <i>Lupinus elatus</i> )	-/-/4.3	Parish's yampah ( <i>Perideridia parishii</i> ssp. <i>parishii</i> )	-/-/2B.2
Peirson's lupine ( <i>Lupinus peirsonii</i> )	-/-/1B.3	Transverse Range phacelia ( <i>Phacelia exilis</i> )	-/-/4.3
Parish's bush-mallow ( <i>Malacothamnus parishii</i> )	-/-/1A	Hubby's phacelia ( <i>Phacelia hubbyi</i> )	-/-/4.2
white bog adder's-mouth ( <i>Malaxis monophyllos</i> var. <i>brachypoda</i> )	-/-/2B.1	Santiago Peak phacelia ( <i>Phacelia keckii</i> )	-/-/1B.3
small-flowered microseris ( <i>Microseris douglasii</i> ssp. <i>platycarpha</i> )	-/-/4.2	Mojave phacelia ( <i>Phacelia mohavensis</i> )	-/-/4.3
gray monardella ( <i>Monardella australis</i> ssp. <i>cinerea</i> )	-/-/4.3	Brand's star phacelia ( <i>Phacelia stellaris</i> )	-/-/1B.1
Jokerst's monardella ( <i>Monardella australis</i> ssp. <i>jokerstii</i> )	-/-/1B.1	Big Bear Valley phlox ( <i>Phlox dolichantha</i> )	-/-/1B.2
intermediate monardella ( <i>Monardella hypoleuca</i> ssp. <i>intermedia</i> )	-/-/1B.3	San Bernardino Mtns bladderpod ( <i>Physaria kingii</i> ssp. <i>bernardina</i> )	E/-/1B.1
felt-leaved monardella ( <i>Monardella hypoleuca</i> ssp. <i>lanata</i> )	-/-/1B.2	woolly chaparral-pea ( <i>Pickeringia montana</i> var. <i>tomentosa</i> )	-/-/4.3
Hall's monardella ( <i>Monardella macrantha</i> ssp. <i>hallii</i> )	-/-/1B.3	chaparral rein orchid ( <i>Piperia cooperi</i> )	-/-/4.2
Pringle's monardella ( <i>Monardella pringlei</i> )	-/-/1A	narrow-petaled rein orchid ( <i>Piperia leptopetala</i> )	-/-/4.3
rock monardella ( <i>Monardella saxicola</i> )	-/-/4.2	San Bernardino bluegrass ( <i>Poa atropurpurea</i> )	E/-/1B.2
California muhly ( <i>Muhlenbergia californica</i> )	-/-/4.3	Fish's milkwort ( <i>Polygala cornuta</i> var. <i>fishiae</i> )	-/-/4.3
crowned muilla ( <i>Muilla coronata</i> )	-/-/4.2	white rabbit-tobacco ( <i>Pseudognaphalium leucocephalum</i> )	-/-/2B.2
little mousetail ( <i>Myosurus minimus</i> ssp. <i>apus</i> )	-/-/3.1	Bear Valley pyrrocoma ( <i>Pyrrocoma uniflora</i> var. <i>gossypina</i> )	-/-/1B.2
mud nama ( <i>Nama stenocarpa</i> )	-/-/2B.2	San Gabriel oak ( <i>Quercus durata</i> var. <i>gabrielensis</i> )	-/-/4.2
spreading navarretia ( <i>Navarretia fossalis</i> )	T/-/1B.1	Engelmann oak ( <i>Quercus engelmannii</i> )	-/-/4.2
Baja navarretia ( <i>Navarretia peninsularis</i> )	-/-/1B.2	shrub live oak ( <i>Quercus turbinella</i> )	-/-/4.3
prostrate vernal pool navarretia ( <i>Navarretia prostrata</i> )	-/-/1B.1	Parish's gooseberry ( <i>Ribes divaricatum</i> var. <i>parishii</i> )	-/-/1A
Robbins' nemacladus ( <i>Nemacladus secundiflorus</i> var. <i>robbinsii</i> )	-/-/1B.2	Coulter's matilija poppy ( <i>Romneya coulteri</i> )	-/-/4.2
chaparral nolina ( <i>Nolina cismontana</i> )	-/-/1B.2	Parish's rupertia ( <i>Rupertia rigida</i> )	-/-/4.3
short-joint beavertail ( <i>Opuntia basilaris</i> var. <i>brachyclada</i> )	-/-/1B.2	Sanford's arrowhead ( <i>Sagittaria sanfordii</i> )	-/-/1B.2
California Orcutt grass ( <i>Orcuttia californica</i> )	E/E/1B.1	Latimer's woodland-gilia ( <i>Saltugilia latimeri</i> )	-/-/1B.2
woolly mountain-parsley ( <i>Oreonana vestita</i> )	-/-/1B.3	black bog-rush ( <i>Schoenus nigricans</i> )	-/-/2B.2
Rock Creek broomrape ( <i>Orobanche valida</i> ssp. <i>valida</i> )	-/-/1B.2	southern mtns skullcap ( <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i> )	-/-/1B.2
Cushenbury oxytheca ( <i>Oxytheca parishii</i> var. <i>goodmaniana</i> )	E/-/1B.1	Davidson's stonecrop ( <i>Sedum niveum</i> )	-/-/4.2
rock-loving oxytrope ( <i>Oxytropis oreophila</i> var. <i>oreophila</i> )	-/-/2B.3	chaparral ragwort ( <i>Senecio aphanactis</i> )	-/-/2B.2
San Bernardino ragwort ( <i>Packera bernardina</i> )	-/-/1B.2	San Gabriel ragwort ( <i>Senecio astephanus</i> )	-/-/4.3



<b>Common/Scientific Name</b>	<b>Status Fed/ State/ CRPR</b>	<b>Common/Scientific Name</b>	<b>Status Fed/ State/ CRPR</b>
Parish's checkerbloom ( <i>Sidalcea hickmanii</i> ssp. <i>parishii</i> )	-/-/1B.2	Greata's aster ( <i>Symphyotrichum greatae</i> )	-/-/1B.3
Bear Valley checkerbloom ( <i>Sidalcea malviflora</i> ssp. <i>dolosa</i> )	-/-/1B.2	Lemmon's syntrichopappus ( <i>Syntrichopappus lemmonii</i> )	-/-/4.3
salt spring checkerbloom ( <i>Sidalcea neomexicana</i> )	-/-/2B.2	California taraxacum ( <i>Taraxacum californicum</i> )	E/-/1B.1
bird-foot checkerbloom ( <i>Sidalcea pedata</i> )	E/E/1B.1	woven-spored lichen ( <i>Texosporium sancti-jacobi</i> )	-/-/3
chickweed oxytheca ( <i>Sidotheca caryophylloides</i> )	-/-/4.3	slender-petaled mustard ( <i>Thelypodium stenopetalum</i> )	E/E/1B.1
Krantz's catchfly ( <i>Silene krantzii</i> )	-/-/1B.2	Sonoran maiden fern ( <i>Thelypteris puberula</i> var. <i>sonorensis</i> )	-/-/2B.2
timberland blue-eyed grass ( <i>Sisyrinchium longipes</i> )	-/-/2B.2	rigid fringedpod ( <i>Thysanocarpus rigidus</i> )	-/-/1B.2
prairie wedge grass ( <i>Sphenopholis obtusata</i> )	-/-/2B.2	California screw moss ( <i>Tortula californica</i> )	-/-/1B.2
Laguna Mountains jewelflower ( <i>Streptanthus bernardinus</i> )	-/-/4.3	Wright's trichocoronis ( <i>Trichocoronis wrightii</i> var. <i>wrightii</i> )	-/-/2B.1
southern jewelflower ( <i>Streptanthus campestris</i> )	-/-/1B.3	grey-leaved violet ( <i>Viola pinetorum</i> ssp. <i>grisea</i> )	-/-/1B.2
San Bernardino aster ( <i>Symphyotrichum defoliatum</i> )	-/-/1B.2	golden violet ( <i>Viola purpurea</i> ssp. <i>aurea</i> )	-/-/2B.2

Status - CRPR = California Rare Plant Rank; E = Endangered; T = Threatened; CT = Candidate Threatened

**Table 3.4-3. Special-Status Wildlife Species Potentially Occurring in the Planning Area**

<b>Common/Scientific Name</b>	<b>Status: Federal/ State</b>	<b>Common/Scientific Name</b>	<b>Status: Federal/ State</b>
<b>Covered Species</b>		San Diego banded gecko ( <i>Coleonyx variegatus abbotti</i> )	-/CSC
Delhi sands flower-loving fly ( <i>Rhaphiomidas terminatus abdominalis</i> )	E/-	red-diamond rattlesnake ( <i>Crotalus ruber</i> )	-/CSC
Santa Ana sucker ( <i>Catostomus santaanae</i> )	T/-	coast horned lizard ( <i>Phrynosoma blainvillii</i> )	-/CSC
arroyo chub ( <i>Gila orcuttii</i> )	-/CSC	coast patch-nosed snake ( <i>Salvadora hexalepis virgulata</i> )	-/CSC
Santa Ana speckled dace ( <i>Rhinichthys osculus</i> ssp. 3)	-/CSC	two-striped garter snake ( <i>Thamnophis hammondi</i> )	-/CSC
arroyo toad ( <i>Anaxyrus californicus</i> )	E/CSC	grasshopper sparrow ( <i>Ammodramus savannarum</i> )	-/CSC
southern mountain yellow-legged frog ( <i>Rana muscosa</i> )	E/E	golden eagle ( <i>Aquila chrysaetos</i> )	-/FP
western spadefoot ( <i>Spea hammondi</i> )	-/CSC	long-eared owl ( <i>Asio otus</i> )	-/CSC
California glossy snake ( <i>Arizona elegans occidentalis</i> )	-/CSC	Swainson's hawk ( <i>Buteo swainsoni</i> )	-/T
south coast garter snake ( <i>Thamnophis sirtalis</i> sp.)	-/CSC	northern harrier ( <i>Circus hudsonius</i> )	-/CSC
southwestern pond turtle ( <i>Emys pallida</i> )	-/CSC	black swift ( <i>Cypseloides niger</i> )	-/CSC
tricolored blackbird ( <i>Agelaius tricolor</i> )	-/CSC	white-tailed kite ( <i>Elanus leucurus</i> )	-/FP
burrowing owl ( <i>Athene cunicularia</i> )	-/CSC	bald eagle ( <i>Haliaeetus leucocephalus</i> )	D/E, FP
coastal cactus wren ( <i>Campylorhynchus brunneicapillus sandiegensis</i> )	-/CSC	loggerhead shrike ( <i>Lanius ludovicianus</i> )	-/CSC
western yellow-billed cuckoo ( <i>Coccyzus americanus occidentalis</i> )	T/E	purple martin ( <i>Progne subis</i> )	-/CSC
southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	E/E	yellow warbler ( <i>Setophaga petechia</i> )	-/CSC
yellow-breasted chat ( <i>Icteria virens</i> )	-/CSC	pallid bat ( <i>Antrozous pallidus</i> )	-/CSC
coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	T/CSC	Dulzura pocket mouse ( <i>Chaetodipus californicus femoralis</i> )	-/CSC
least Bell's vireo ( <i>Vireo bellii pusillus</i> )	E/E	northwestern San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	-/CSC
San Bernardino kangaroo rat ( <i>Dipodomys merriami parvus</i> )	E/C	pallid San Diego pocket mouse ( <i>Chaetodipus fallax pallidus</i> )	-/CSC
Los Angeles pocket mouse ( <i>Perognathus longimembris brevinasus</i> )	-/CSC	Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	-/CSC
<b>Non-Covered Species</b>		Stephens' kangaroo rat ( <i>Dipodomys stephensi</i> )	E/T
vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	T/-	western mastiff bat ( <i>Eumops perotis californicus</i> )	-/CSC
Quino checkerspot butterfly ( <i>Euphydryas editha quino</i> )	E/-	San Bernardino flying squirrel ( <i>Glaucomys oregonensis californicus</i> )	-/CSC
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	E/-	western yellow bat ( <i>Lasiurus xanthinus</i> )	-/CSC
unarmored threespine stickleback ( <i>Gasterosteus aculeatus williamsoni</i> )	E/E, FP	San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	-/CSC
California red-legged frog ( <i>Rana draytonii</i> )	T/CSC	San Diego desert woodrat ( <i>Neotoma bryanti intermedia</i> )	-/CSC
coast range newt ( <i>Taricha torosa</i> )	-/CSC	pocketed free-tailed bat ( <i>Nyctinomops femorosaccus</i> )	-/CSC
Southern California legless lizard ( <i>Anniella stebbinsi</i> )	-/CSC	big free-tailed bat ( <i>Nyctinomops macrotis</i> )	-/CSC

<b>Common/Scientific Name</b>	<b>Status: Federal/ State</b>	<b>Common/Scientific Name</b>	<b>Status: Federal/ State</b>
coastal whiptail ( <i>Aspidoscelis tigris stejnegeri</i> )	-/CSC	southern grasshopper mouse ( <i>Onychomys torridus ramona</i> )	-/CSC
southern rubber boa ( <i>Charina umbratica</i> )	-/T	desert bighorn sheep ( <i>Ovis canadensis nelson</i> )	-/FP
white-eared pocket mouse ( <i>Perognathus alticolus alticolus</i> )	-/CSC	American badger ( <i>Taxidea taxus</i> )	-/CSC

E = Endangered; T = Threatened; C = Candidate; FP = Fully Protected; D = Delisted; CSC = California Species of Concern

## Jurisdictional Resources

### Upper Mainstem Santa Ana River

The Santa Ana River watershed spans approximately 2,600 square miles and ranges in elevation from 11,500 feet to sea level (SAWA 2012). This watershed lies between the San Gabriel and Santa Margarita River watersheds and includes parts of San Bernardino, Riverside, Orange, and Los Angeles Counties (DWR 1959). The Santa Ana River watershed originates in the San Gabriel, San Bernardino, and San Jacinto Mountains and meanders toward Huntington Beach and Newport Beach where it connects with the Pacific Ocean (DWR 1959). A large portion of the flow in the Santa Ana River, approximately 200,000 acre-feet annually, is diverted to ponds and basins, where it recharges underlying aquifers that supply water for approximately 2 million people (USGS 1998). However, in recent decades, base flow in the Santa Ana River has been augmented due to increased discharge of treated municipal wastewater, such as the San Bernardino/Colton Rapid Infiltration and Extraction Facility, and runoff from urbanized areas. As described in the Upper SAR HCP, because of bed infiltration of surface water and inputs of groundwater, the initial reduction at the Rapid Infiltration and Extraction Facility and from the Rialto Wastewater Treatment Plant dwindles with increasing distance downstream as wastewater discharges make up less of the total volume of water in the channel, and groundwater makes up more. Therefore, currently, baseflow within the Santa Ana River is strongly supported by the influx of groundwater, as opposed to primarily being supported by surface flow composed of precipitation and snow melt. And although the discharge of treated wastewater is creating habitat for wildlife species, such as the Santa Ana sucker, it is the perennial supply of cool groundwater that has sustained habitat for aquatic species.

While a jurisdictional delineation survey of the Santa Ana River was not conducted for the project, this river is considered a Relatively Permanent Water by the U.S. Army Corps of Engineers (USACE) and would be subject to USACE jurisdiction under Section 404 of the Clean Water Act (CWA) due to a Federal nexus with the Pacific Ocean. Additionally, the Santa Ana River would be subject to the jurisdiction of CDFW and the Regional Water Quality Control Board (RWQCB) for any project-related impacts.

### Santa Ana River Tributaries

The Santa Ana River includes over 20 significant tributaries (e.g., a stream or river that flows into a larger stream or mainstem), 11 of which occur within the Planning Area.

- **Mill Creek.** Mill Creek is a 17.8-mile-long stream that originates in the San Bernardino Mountains and has a confluence with the Santa Ana River just downstream of the mouth of the upper Santa Ana Canyon. This creek is in relatively better condition than lower portions of the Santa Ana watershed because its drainage area is less urbanized. This creek is the site of two hydroelectric plants owned by Southern California Edison.
- **City Creek.** City Creek is a 7.5-mile stream that originates in the San Bernardino National Forest and rises in two forks of similar length and size: West Fork City Creek and East Fork City Creek. The two forks combine in a steep ravine under a bridge of California State Route 330 (City Creek Road) and flows through a deep gorge between McKinley and Harrison Mountains, where it drops into the plains near the city of Highland.
- **Plunge Creek.** Plunge Creek is a 13-mile-long stream that originates in the San Bernardino Mountains as a high gradient single-thread stream and continues southwest to the Santa Ana

River just east of the San Bernardino International Airport. The stream widens into braided channels for approximately 6 miles of its length from the San Andreas Rift Zone southwest of Greenspot Road to the airport. Portions of the stream are scheduled for restoration within the Wash Plan HCP Planning Area.

- **Mission Creek.** Mission Creek is an approximately 5-mile stream that has a confluence with Mill Creek before it continues to the west where it meets the Santa Ana River. It is located just north of the Crafton Hills in a relatively low topography area within the Planning Area east of the town of Mentone. The entirety of this creek is channelized.
- **San Timoteo Wash.** San Timoteo Wash is formed by the confluence of Little San Antonio Creek and Noble Creek west of the city of Beaumont in Riverside County. This wash flows northwest through San Timoteo Canyon, north of the Badlands in the southern hills of the city of Redlands. It joins the Santa Ana River near the Interstate (I-) 10 and I-215 interchange. The creek flowed intermittently in the past; however, today it flows nearly year-round due to agricultural runoff and secondary treatment discharge from a water plant in Yucaipa.
- **East Twin Creek.** East Twin Creek originates southwest of Strawberry Creek and is joined by West Twin Creek, which is tributary to Warm Creek, which is, in turn, tributary to the Santa Ana River.
- **Lytle Creek.** Lytle Creek is approximately 18 miles long and originates in southwestern San Bernardino County near the city of San Bernardino. It is a tributary of Warm Creek, which feeds into the Santa Ana River 1 mile after Warm Creek joins the Santa Ana River. Southern California Edison operates a hydroelectric plant on Lytle Creek at Miller Narrows.
- **Cajon Wash.** Cajon Wash is an approximately 20-mile-long tributary to Lytle Creek. It is a braided channel that originates in the northwestern portion of the Planning Area within Cajon Canyon and extends south to Lytle Creek at West Foothill Boulevard.
- **Rialto Channel.** Rialto Channel is a concrete conveyance channel that flows south for approximately 9 miles before meeting the Santa Ana River. The flow in this channel is outflow from the Rialto wastewater treatment plant.
- **San Sevaine Creek.** San Sevaine Creek is a concrete conveyance channel that runs south for approximately 11 miles through San Bernardino County, which is joined by Day Creek and ultimately connects with the Santa Ana River.
- **Day Creek.** Day Creek or Day Canyon Wash originates in the San Gabriel Mountains as a high gradient single-thread stream and becomes a concrete conveyance channel as it continues south to its confluence with the Santa Ana River.
- **Chino Creek.** Chino Creek is approximately 12.7 miles long and originates in the San Gabriel Mountains from an underground stormwater channel and flows south from southern Pomona in eastern Los Angeles County. The channelized stream enters southwestern San Bernardino County and runs southeast across the Chino Valley between the Chino Hills to the south and the city of Chino to the northeast. From there, the creek flows parallel to State Route 71 through industrial and agricultural areas of Chino and joins the Santa Ana River north of Prado Dam.
- **Temescal Wash.** Temescal Wash is approximately 29 miles long and is the largest tributary of the Santa Ana River. Temescal Wash originates in the Elsinore Spillway Channel, an overflow channel that is confined to Lake Elsinore and passes northwest into the Warm Springs Valley. The wash flows through the rain shadow zone of the Santa Ana Mountains. Where it emerges

from Temescal Canyon, north of El Cerrito, it enters a second reservoir from which point it is channelized before entering into the Prado Flood Control Basin, which consists of a series of wetlands where Temescal Wash merges with the Santa Ana River. Temescal Wash is diverted heavily for human use and, as a result, is ephemeral for most of its length, except in areas where runoff from housing and agricultural development return flows.

## Habitat Connectivity and Wildlife Movement Corridors

Wildlife corridors are defined as habitat linkages that connect suitable wildlife habitat areas in a region otherwise fragmented by development, disturbance, rugged terrain, or changes in vegetation. Many wildlife species require large areas of habitat to forage, find burrowing/denning or nesting sites, and for breeding. Corridors linking areas of suitable habitat are important because they provide access to mates, food, and water, they allow the dispersal of individuals away from high population density areas, and they facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Corridors are often used by juveniles dispersing to new territories, which avoids intraspecific competition in existing habitats and allows the recolonization of areas from which animals have become extirpated. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife movement, as do engineered structures such as culverts and flood control channels.

Three Essential Connectivity Areas (ECAs) identified by the California Essential Habitat Connectivity Project (CEHC) occur with the Planning Area (Spencer et al. 2010). The Sugarloaf Mountain/Keller Peak - San Gabriel/Cucamonga ECA occurs along the north and north eastern border of the Planning Area. This ECA connects the San Gabriel Mountains in the north of the Planning Area to the San Bernardino Mountains in the east of the Planning Area, ultimately connecting to the San Jacinto Mountains to the east. The Badlands West - Box Springs Mountains ECA occurs along the southeastern border of the Planning Area and connects the Box Springs Mountains in the west to the Badlands Mountains in the east. The Estelle Mountain - Lake Mathews ECA occurs entirely within the southern portion of the Planning Area. It connects the open areas and lowlands surrounding Lake Mathews to the Estelle Mountains to the south.

Although not officially designated as a corridor under the CEHC, the Santa Ana River and its tributaries function as corridors for both terrestrial and aquatic wildlife within the Planning Area and surrounding region. The Santa Ana River is one of the largest functioning riparian systems in Southern California. Development within the valley portion of the Planning Area has greatly reduced the amount of wildlife habitat in the region, but the Santa Ana River has remained relatively open and passable. Within the Planning Area, the Santa Ana River and its tributaries serves as a wildlife movement corridor that provides year round water, cover, foraging and breeding areas, and connections to open space in the surrounding region. They provide a linkage between the San Bernardino Mountains and all open space between there and the Pacific Ocean, which is important for fish species (e.g., Santa Ana sucker, arroyo chub), semi-aquatic species (e.g., coast range newt, and south coast garter snake), and terrestrial wildlife species (e.g., California glossy snake, neo-tropical migratory birds, waterfowl, coyote, Virginia opossum, raccoon, striped skunk).

Additionally, although they may not provide foraging or breeding habitat, other water infrastructure such as flood control channels, culverts, and bridges also provide connection points for terrestrial wildlife between urban areas and native habitats along the Santa Ana River and its tributaries, facilitating wildlife movement between urban and natural, open space areas.

## Critical Habitat

Designated critical habitat for 13 Federally listed species totaling 71,349 acres occurs within the Planning Area, including critical habitat for six threatened and/or endangered plant species, Santa Ana sucker, arroyo toad (*Anaxyrus californicus*), mountain yellow-legged frog (*Rana muscosa*), southwestern willow flycatcher, least Bell's vireo, coastal California gnatcatcher, and SBKR (USFWS 2020) (Table 3.4-4). The majority of the critical habitat areas occur along the Santa Ana River and mountain tributaries, the alluvial fans of the San Bernardino Mountains, within the Estelle Mountains, and along the foothills of the Santa Ana Mountains (Figure 3.4-2).

**Table 3.4-4. Critical Habitat for Covered Species in the Planning Area**

Critical Habitat	Total Acres in Planning Area
Santa Ana sucker	6,450
Arroyo toad	1,777
Mountain yellow-legged frog	2,216
Southwestern willow flycatcher	4,431
Least Bell's vireo	9,900
Coastal California gnatcatcher	13,589
San Bernardino kangaroo rat	27,745

## 3.4.2 Regulatory Framework

### 3.4.2.1 Federal Regulations

#### Federal Endangered Species Act of 1973

Administered by USFWS and National Oceanographic and Atmospheric Administration, National Marine Fisheries Service (NMFS), FESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Pursuant to FESA (7 United States Code [USC] § 136, 16 USC §§ 1531 et seq.), USFWS and NMFS have regulatory authority over species listed as endangered or threatened as well as habitat of such species that has been designated as critical (i.e., critical habitat). Under FESA, authorization is required to “take” a listed species or adversely modify critical habitat. Take is defined under FESA Section 3 as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Under Federal regulation (50 CFR §§ 17.3, 222.102), “harm” is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Designated critical habitat for endangered and threatened species is defined as a specific geographic area that is essential for species recovery and conservation of a threatened or endangered species and that may require special management and protection. Critical habitat is designated when a species is listed pursuant to the FESA. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

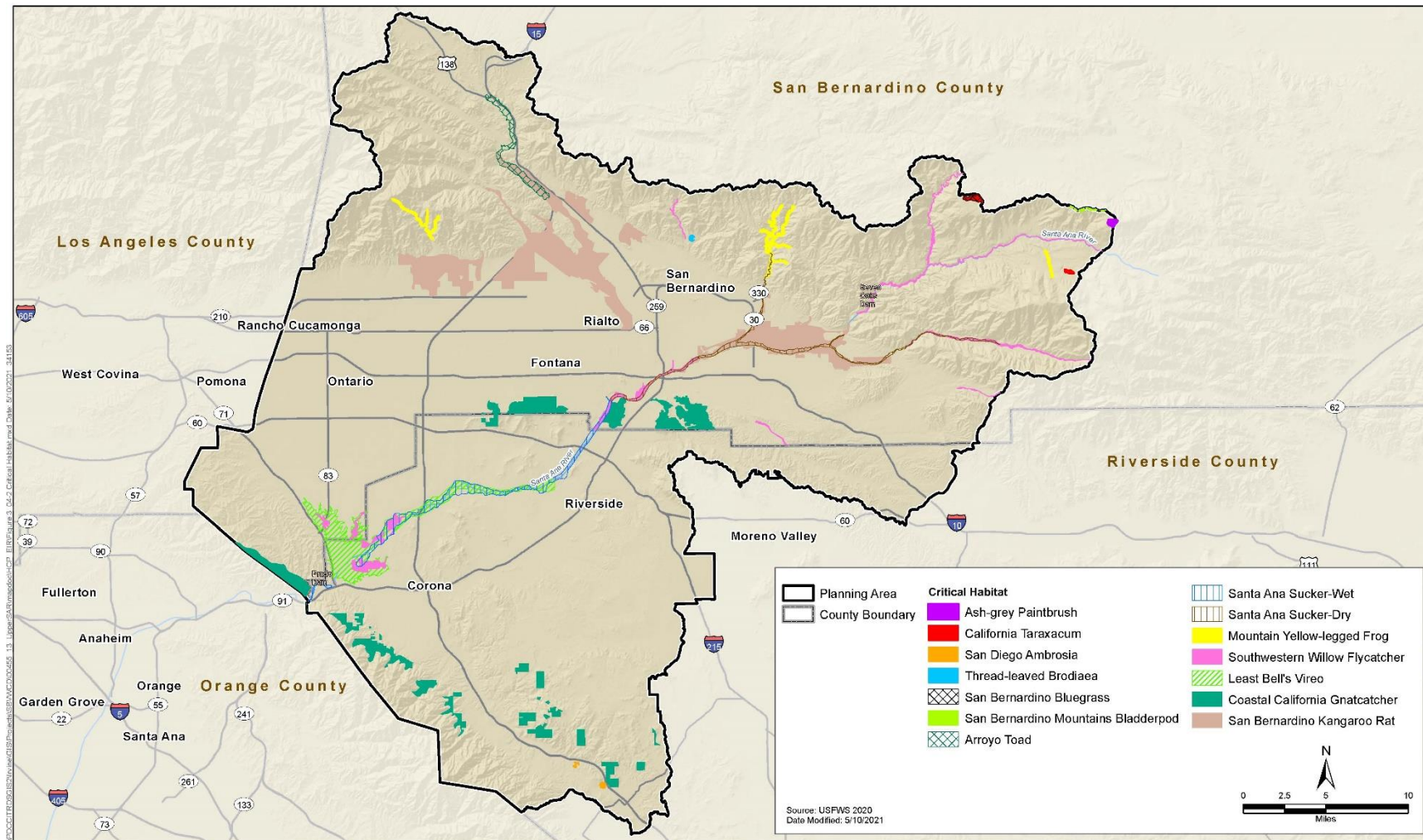


Figure 3.4-2. Critical Habitat in the Planning Area



Specifically, Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. FESA Section 7 outlines procedures for Federal interagency cooperation to conserve Federally listed species and designated critical habitat. Section 7(a)(2) and its implementing regulations require Federal agencies to consult with USFWS and/or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Critical habitat designations are not made for every species listed under FESA. The designation process also considers economic, national security, and other impacts and may result in the exclusion of some habitat areas from critical habitat designation (16 USC § 1533(b)(2)). Military installations are generally excluded from critical habitat designations; however, they are required by the Sikes Act (16 USC § 670a–670f, as amended) to prepare Integrated Natural Resource Management Plans.

For projects where Federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit (ITP) under FESA Section 10(a). Section 10(a) allows issuance of permits for incidental take of endangered or threatened species. The term “incidental” applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. A habitat conservation plan (HCP) demonstrating how the taking would be minimized and what steps taken would ensure the species’ survival must be submitted for issuance of Section 10(a) permits.

### **Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) domestically implements a series of international treaties that provide for migratory bird protection (16 USC §§ 703 et seq.). The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, “to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, [...] any migratory bird, or any part, nest, or egg of any such bird” (16 USC § 703(a)). Species protected under the MBTA are listed in 50 CFR § 10.13. Most native birds in the San Bernardino and Riverside Counties regions are protected under the MBTA. USFWS issues permits under the MBTA to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, educational, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal; USFWS does not issue permits for “incidental take” of migratory birds that results from otherwise lawful activities such as infrastructure, transportation projects, facility structures, or other activities.

### **Protection of Migratory Bird Populations (Executive Order 13186)**

Executive Order (EO) 13186 (FR, Volume 66, Number 11 [January 17, 2001], p. 4) requires Federal agencies to develop a comprehensive strategy for the conservation of migratory birds by the Federal government, thereby fulfilling the government’s duty to lead in the protection of this international resource. Each Federal agency is required to enter into a Memorandum of Understanding with USFWS outlining how the agency will promote conservation of migratory birds. The EO also requires Federal agencies to incorporate migratory bird conservation measures into their agency activities. The EO does not affect Federal-aid projects because actions delegated to or assumed by nonfederal entities, or carried out by nonfederal entities with Federal assistance, are not subject to the EO, although such actions continue to be subject to the MBTA itself.

## **Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act (BGEPA) is the primary law protecting eagles, including individuals, and their nests and eggs (16 USC §§ 668 et seq.). It defines “take” to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb” (16 USC § 668c). “Disturb” is defined by regulation at 50 CFR § 22.3 in 2007 as “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 productivity..., or (3) nest abandonment...” Under the BGEPA Eagle Permit Rule (50 CFR § 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

## **Invasive Species (Executive Order 13112)**

EO 13112 requires Federal agencies to “prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health effects that invasive species cause.” An invasive species is defined by the EO as “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Alien species are defined, with respect to a particular ecosystem, as any species (including its seeds, eggs, spores, or other biological material capable of propagating that species) that is not native to that ecosystem.

## **Clean Water Act**

The principal law that serves to protect the nation’s waters is the 1948 Federal Water Pollution Control Act. This legislation, more commonly referred to as the CWA, underwent significant revision when Congress, in response to the public’s growing concern of widespread water pollution, passed the Federal Water Pollution Control Act Amendments of 1972. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. for the conservation of the nation’s potable water sources. Under the current regulatory definition, waters of the U.S. include navigable waters of the U.S., territorial seas, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries (33 CFR § 328.3(a)).

### **Clean Water Act, Section 404**

Section 404 of the CWA (33 USC §§ 401 et seq.; 33 USC § 1344; USC § 1413; and Department of Defense, Department of the Army, Corps of Engineers 33 CFR Part 323), as implemented by USACE, requires authorization by USACE for the discharge of dredged and/or fill material into waters of the U.S. (as defined at 33 CFR § 328.3(a)). Dredged material means material that is excavated or dredged from waters of the U.S. Fill material means material placed in waters of the U.S. where the material has the effect of replacing any portion of a waters of the U.S. with dry land or changing the bottom elevation of waters of the U.S. Examples of fill material include rock, sand, soil, clay, plastics, woodchips, concrete, and materials used to create any structure or infrastructure in waters of the U.S.

### **Clean Water Act, Section 401**

Section 401 of the CWA requires a water quality certification or waiver thereof before any Federal permit can be issued “to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge.” Therefore, projects requiring

authorization by USACE pursuant to Section 404 of the CWA and/or Section 10 of the Rivers and Harbors Act may need to obtain water quality certification. The State Water Resources Control Board (State Water Board), RWQCB, and U.S. Environmental Protection Agency (EPA) are responsible for issuing Section 401 Water Quality Certifications.

### **National Pollutant Discharge Elimination System Permit Program, Section 402**

Finally, under the CWA, EPA has implemented pollution control programs 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 was obtained. EPA's National Pollutant Discharge Elimination System permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need a National Pollutant Discharge Elimination System permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

### **Floodplain Management (Executive Order 11988)**

EO 11988 requires Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. This EO provides an eight-step process that agencies carry out as part of their decision-making process for projects that have potential impacts on or within a floodplain.

### **Protection of Wetlands (Executive Order 11990)**

Pursuant to EO 11990, each Federal agency is responsible for preparing implementing procedures for carrying out the provisions of the EO. The purpose of this EO is to "minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands." Each agency, to the extent permitted by law, must avoid undertaking, or providing assistance for, any activity located in wetlands, unless the head of the agency finds that there is no practical alternative to such activity, and the proposed action includes all practical measures to minimize harm to wetlands that may result from such actions. In making this finding, the head of the agency may consider economic, environmental, and other pertinent factors. Each agency must also provide opportunity for early public review of any plans or proposals for new construction in wetlands.

## **3.4.2.2 State Regulations**

### **California Endangered Species Act**

CESA provides a process by which plants and animals can be recognized as being endangered or threatened with extinction. Pursuant to the CESA, a permit from CDFW is required for projects that could result in the taking of a plant or animal species that is State-listed as threatened or endangered or candidate for listing as threatened or endangered (California Fish and Game Code §§ 2050 et seq.). Under CESA, "take" means to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code § 86). The CESA definition of take does not include "harm" or "harass," as the FESA definition does. As a result, the threshold for take is

higher under CESA than under FESA. Authorization for take of State-listed species may be obtained through a California Fish and Game Code Section 2080.1 consistency determination (for applicants who have already obtained a Federal incidental take statement or permit for the same species) or a Section 2081 ITP.

### **Natural Community Conservation Planning Act**

The California Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species that began under the State's NCCP Act of 1991. The FESA Section 4(d) special rule for interim take of coastal California gnatcatchers was promulgated in response to the NCCP Act of 1991 and the initiation of NCCP Plans targeting coastal sage scrub (gnatcatcher habitat). The NCCP Act authorized the State to engage in regional multiple species conservation planning with local jurisdictions and property owners.

The NCCP Act and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003. The NCCP Act of 2003 provides for the preparation and approval of NCCPs. NCCPs identify and provide for the regional or area-wide protection of plants and animals, including their habitats, and are intended to preserve local and regional biological diversity, reconcile urban development and wildlife needs, as well as "conserve" State-listed species to the point where they can be delisted, and maintain or enhance conditions for Covered Species such that listing will not become necessary (California Fish and Game Code Section 2800 et seq.). The NCCP Act was amended again in 2011 to allow CDFW to authorize incidental take of "fully protected" species if they are "covered species" under an approved NCCP.

### **Lake or Streambed Alteration (California Fish and Game Code Section 1602)**

Under Section 1600 et seq. of the California Fish and Game Code, CDFW is responsible for the protection and conservation of the State's fish and wildlife resources. CDFW regulates projects that affect the flow, bed, channel, or banks of rivers, streams, and lakes. Section 1602 requires public agencies, utilities, and private individuals, to notify CDFW prior to commencing any activity that may do one or more of the following: "divert or obstruct the natural flow of, or change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake." CDFW identifies that "any river, stream, or lake" includes those that are episodic or perennial, including ephemeral streams, desert washes and watercourses with subsurface flow. Activities undertaken within the floodplain may also apply.

Following receipt of a complete notification CDFW will determine if the proposed activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration Agreement is required. A Lake and Streambed Alteration Agreement will include measures necessary to protect existing fish and wildlife resources.

### **Protection of Birds, Nests, and Raptors (California Fish and Game Code Sections 3503 and 3503.5)**

California Fish and Game Code Section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including

their nests or eggs. Typical violations of these codes include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. These code sections do not provide for the issuance of any type of ITP.

### **California Native Plant Protection Act**

The Native Plant Protection Act of 1977 (California Fish and Game Code Section 1900 et seq.) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take.

### **Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)**

The State Water Board and RWQCB, as appropriate, have the responsibility to implement and enforce the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which regulates waste discharge into water of the State. In the Porter-Cologne Act, the legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation" (California Water Code Section 13000). Porter-Cologne grants the RWQCB the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface water of the State. The RWQCB regulates the "discharge of waste" to waters of the State. The term "discharge of waste" is also broadly defined in Porter-Cologne, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly affect waters of the State relative to implementation of Section 401 of the CWA.

Specifically, Porter-Cologne requires each RWQCB to formulate and adopt water quality plans for all areas within their region (also referred to as "Basin Plans"). Basin Plans establish beneficial uses, water quality standards, and water quality objectives for major watershed areas (i.e., RWQCB boundaries) throughout the state. Under Porter-Cologne, all parties proposing to discharge waste that could affect the quality of waters of the State, other than into a community sewer system, are required to file with the appropriate RWQCB a Report of Waste Discharge containing such information and data as may be required by RWQCB. RWQCB will then respond to the Report of Waste Discharge by issuing a waste discharge requirement (WDR) in a public hearing or by waiving WDRs (with or without conditions) for that proposed discharge. RWQCB has a statutory obligation to prescribe WDRs except where RWQCB finds that a waiver of WDRs for a specific type of discharge is in the public interest. Therefore, all parties proposing to discharge waste that could affect waters of the State, but do not affect Federal waters (which requires a CWA Section 404 permit and CWA Section 401 Certification), must file a Report of Waste Discharge with the appropriate RWQCB.

RWQCB collaborates with other agencies, such as CDFW and USACE, on the enforcement of the act. While 401 certification is typically issued by RWQCB staff, WDRs must be issued by the RWQCB. Generally, when staff issue or waive 401 certification, WDRs are simultaneously waived. However, for large or multiyear projects that are being reviewed under Section 401 of the CWA, staff may determine that WDRs should also be issued, whereby additional review by RWQCB and a public hearing would be necessary.

### 3.4.2.3 Regional and Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to biological resources. The Proposed Project would not supersede any of these plans; rather, these plans would provide a basis for context regarding the regulations applicable to activities within the Planning Area. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties' general plans and other local plans, policies, ordinances, and programs related to biological resources. Appendix B includes relevant local plans, policies, ordinances and programs related to biological resources.

#### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) provides goals, policies, and programs designed to protect and conserve biological resources while minimizing impacts of land use development on the environment. The Land Use Element seeks to enforce regulations that will limit development in environmentally sensitive areas. The Conservation Element seeks to maintain, preserve and enhance natural resources, biological diversity and healthy ecosystems that contribute to the quality of life within the County, including programs to preserve rare and endangered species and protect areas of special habitat value, include conditions of approval that may be required for specific future development proposals and require mitigation measures for impacts. The Open Space Element aims to improve and preserve open space corridors throughout the County.

#### San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical General Plan it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan of the San Bernardino Countywide Plan takes into land-use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County Government, and includes the seven required elements of a general plan in California. The Business Plan of the San Bernardino Countywide Plan directs the integration of Countywide Plan goals, policies, and actions into the way the County operates and develops its budget. Lastly, the Community Action Guidelines of the San Bernardino Countywide Plan communicate the unique values and priorities of each unincorporated community.

The relevant goals, policies, and programs presented in the Natural Resources Element aim to provide an interconnected landscape of open spaces and habitat areas that promote biodiversity and healthy ecosystems through coordinated habitat planning.

#### County of San Bernardino Tree Policy (Chapter 88.01 Plant Protection and Management)

This ordinance regulates the removal of trees, obtaining approval of a development permit or a Tree or Plant Removal Permit.

## County of Riverside General Plan

The Multipurpose Open Space Element of Riverside County's General Plan (County of Riverside 2015) contains policies that are relevant to the preservation of biological resources and are summarized below.

### **Floodplain and Riparian Area Management**

Goals and policies seek to substantially alter floodways or implement other channelization only as a "last resort," and limit their alteration, preserve and enhance existing native riparian habitat, identify and conserve remaining upland habitat areas adjacent to wetland and riparian areas.

### **Wetlands**

Policies seek to ensure compliance with the CWA Section 404 in terms of wetlands mitigation, concerning fill material in jurisdictional wetlands; preserve buffer zones around wetlands and to consider wetlands for use as natural water treatment areas.

### **Vegetation**

Policies state that the County will update the Vegetation Map for Western Riverside County in consultation with CDFW, the CNDDB, the United States Forest Service, and other knowledgeable agencies; conserve the oak tree resources and important traditional Native American plant gathering resource areas.

### **Multiple Species Habitat Conservation Plans**

Policies state that the County will enforce the provisions of applicable Multiple Species Habitat Conservation Plans (MSHCPs), and implement related Riverside County policies when conducting review of possible legislative actions and development project. Every stand-alone application shall require an initial Habitat Evaluation and Acquisition Negotiation Process assessment.

### **Environmentally Sensitive Lands**

Preserve and protect multi-species habitat resources through the implementation and enforcement of applicable MSHCPs and related Riverside County policies.

### **Open Space, Parks, and Recreation**

Preserve and maintain open space that protects County environmental and other nonrenewable resources and maximizes public health and safety in areas where significant environmental hazards and resources exist.

## County of Riverside Tree Removal Ordinance (No. 559)

Ordinance regulates the removal of trees without first obtaining a permit to do so in certain natural resource areas.

## County of Riverside Oak Tree Management Guidelines

Guidelines are intended to provide long-term protection and conservation of oak trees and oak woodlands and provide guidance on establishing baseline oak tree data to develop adequate avoidance, minimization, and/or compensation for impacts on this natural resource.

## Habitat Conservation Plans and Natural Community Conservation Plans

In the Riverside and San Bernardino region, NCCPs and HCPs are designed to provide an umbrella of protection for multiple Covered Species, which are those species for which incidental take is authorized under an approved HCP and/or NCCP. The following sections describe approved and adopted Subarea or Subregional Plans under the HCP and/or NCCP within Riverside and San Bernardino Counties. Figure 3.4-3 shows the HCPs and/or NCCPs that cover certain portions of the project area.

### Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (WRC MSHCP), a comprehensive regional HCP, was adopted in June 2003. Major participants in the regional planning effort included, but were not limited to, the California Department of Transportation, CDFW, USFWS, Riverside County, Riverside County Transportation Commission, 18 cities, and interested individuals and groups. The purpose of the plan was to develop methods and procedures that provide for development while protecting environmental resources in the western Riverside County area over a 75-year period (WRCRCA 2003). The County signed the Implementation Agreement on December 15, 2003.

The WRC MSHCP, among other things, provides impact mitigation for future Covered Activities by the Permittees of the WRC MSHCP within western Riverside County. Participation by the Permittees of the WRC MSHCP is intended to streamline the environmental process for future Covered Activities in western Riverside County (e.g., through pre-mitigation) and save money over the long term.

The southern portion of the Upper SAR HCP Planning Area occurs within the boundaries of the WRC MSHCP plan area (Figure 3.4-3) and contains numerous WRC MSHCP designated Conservation Areas, including Habitat Management Units, Area Plans and Subunits, and Cores and Linkages (Table 3.4-5). The Plan also overlaps with Public/Quasi-Public (PQP) conserved lands, consisting of 1,319 PQP Object IDs, and 447 Criteria Cells throughout the WRC MSHCP plan area.



**Table 3.4-5. WRC MSHCP Conservation Areas within the Upper SAR HCP Planning Area**

<b>WRC MSHCP Conservation Area Type</b>	<b>WRC MSHCP Conservation Areas Occurring within the Upper SAR HCP Planning Area</b>
Habitat Management Units	River, San Timoteo, Gavilan, San Jacinto, Santa Ana Mountains, Forest Service Trabuco, Badlands, Menifee
Area Plans and Subunits	<p><u>Cities of Riverside and Norco Area Plan</u>: Subunit 1 Santa Ana River South, Subunit 2 Sycamore Canyon/Box Springs West</p> <p><u>Eastvale Area Plan</u>: Subunit 1 Santa Ana River Central</p> <p><u>Elsinore Area Plan</u>: Subunit 1 Estelle Mountain/Indian Canyon, Subunit 2 Alberhill, Subunit 3 Elsinore, Subunit 5 Ramsgate, Subunit 6 Steele Peak</p> <p><u>Highgrove Area Plan</u>: Subunit 1 Sycamore Canyon/Box Springs Central, Subunit 2 Springbrook Wash North</p> <p><u>Jurupa Area Plan</u>: Subunit 1 Santa Ana River North, Subunit 2 Jurupa Mountains, Subunit 3 Delhi Sands Area</p> <p><u>Lake Mathews/Woodcrest Area Plan</u>: Subunit 1 Lake Mathews East, Subunit 2 Temescal Wash East, Subunit 3 Gavilan Hills West, Subunit 4 Good Hope West</p> <p><u>Mead Valley Area Plan</u>: Subunit 2 Gavilan Hills East, Subunit 3 Good Hope East</p> <p><u>Reche Canyon/Badlands Area Plan</u>: Subunit 1 Sycamore Canyon/Box Springs East, Subunit 2 Reche Canyon, Subunit 3 Badlands North</p> <p><u>Temescal Canyon Area Plan</u>: Subunit 1 Santa Ana River/Santa Ana Mountains, Subunit 2 Prado Basin, Subunit 3 Temescal Wash West, Subunit 4 Sierra Hills/Lake Mathews West, Subunit 5 Temescal/Santa Ana Mountains</p> <p><u>The Pass Area Plan</u>: Subunit 1 Potrero/Badlands, Subunit 2 Badlands/San Bernardino National Forest, Subunit 3 San Timoteo Creek</p>
Cores and Linkages	CL-1, CL-2, CL-3, CL-4, CL-5, CL-6, CL-7, CL-8, CL-23, Core-1, Core-3, Core-A, Core-B, Core-C, Core-D, Core-E, ECE-1, ECE-2, L-1, L-2, L-3, L-4, L-5, L-6, L-7, L-8, L-12, NCH-1, NCH-2, NCH-3, NCH-A

Portions of the Proposed Project also occur within the following WRC MSHCP survey areas:

- Narrow Endemic survey areas 1, 2, 7, and 8
- Criteria Area species survey areas 1, 6, and 8
- Burrowing Owl survey area
- Mammal survey areas 2 and 3

Although survey areas for least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) are not provided by the WRC MSHCP, if potential habitat is present and potential direct and/or indirect effects could occur, focused surveys are required (WRC MSHCP Volume I, Section 6.1.2). A full review of potential riparian-riverine and vernal pool resources is also required by the WRC MSHCP.

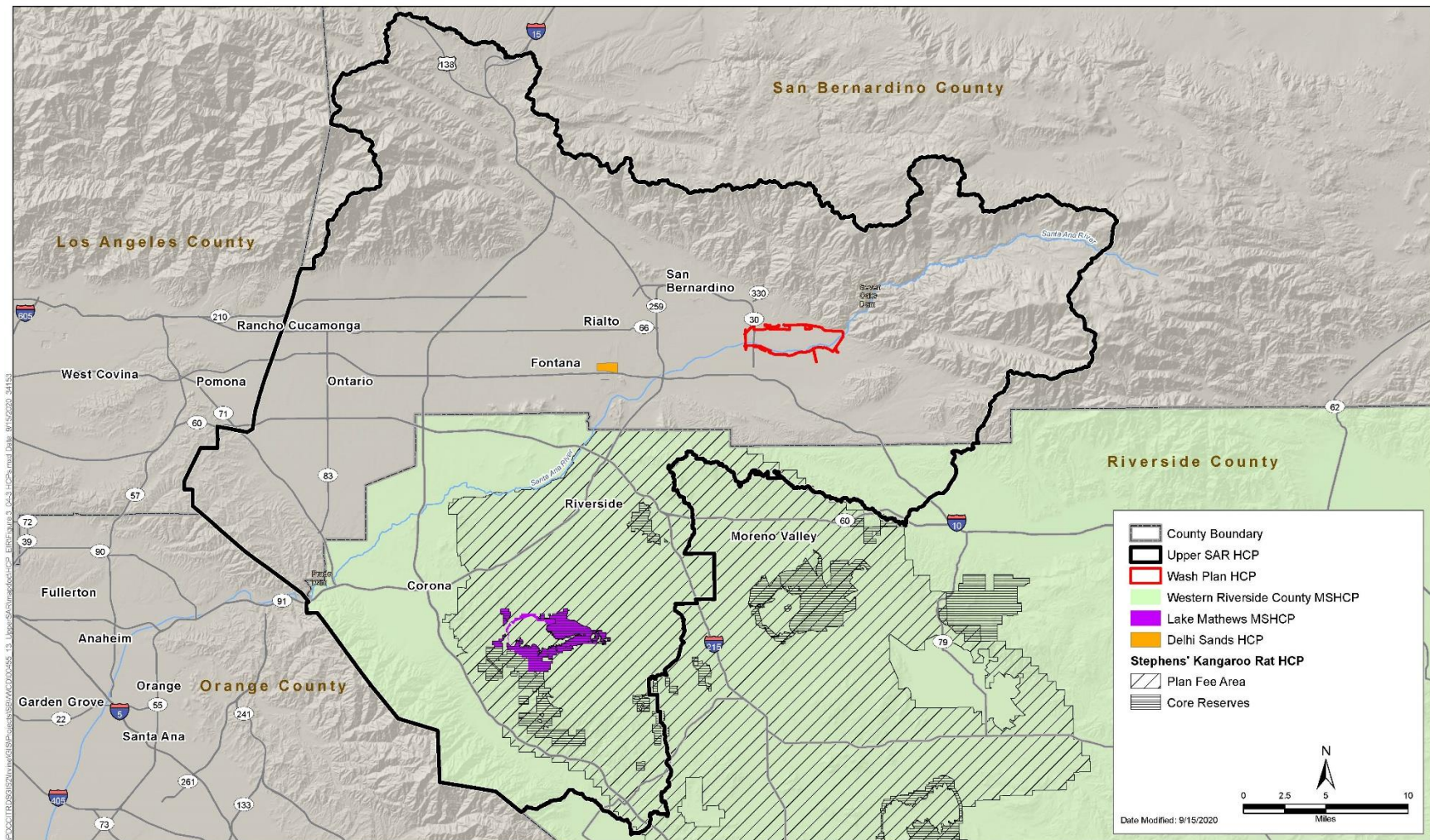


Figure 3.4-3. Habitat Conservation Plans within the Planning Area

Wildlife crossing design considerations and guidelines specified in WRC MSHCP Section 7.5.2, *Guidelines for Construction of Wildlife Crossings*, specify the general approach to analyzing project area connectivity and the number and frequency, design guidelines and standards, and species-specific considerations for wildlife crossings.

The WRC MSHCP requires Covered Activities under the plan to fulfill the requirements presented in WRC MSHCP Volume I, Sections 6.1.2, 6.1.3, 6.1.4, 6.3.2, 7.5.1, and 7.5.3 and follow the best management practices (BMPs) in Appendix C of the WRC MSHCP.

### **Lake Mathews Multiple Species Habitat Conservation Plan**

The Lake Mathews Multiple Species Habitat Conservation Plan (Lake Mathews MSHCP) is a joint conservation effort initiated by the Metropolitan Water District and the Riverside County Habitat Conservation Agency (RCHCA) in cooperation with USFWS and CDFW. The Lake Mathews MSHCP provides take of Federally and State-listed species covered under the plan and the measures necessary to minimize and mitigate for such take. The Lake Mathews MSHCP also provides take of species that are candidates for Federal or State listing; bird species protected by the MBTA or BGEPA; species of special concern in California, as identified by CDFW; species on the California Rare Plant Inventory, which lists the CRPR list of sensitive plants; species on the NCCP list of sensitive coastal sage scrub species; and species of special local concern because of rarity or unique biological value. There are 65 listed and non-listed species covered under the Lake Mathews MSHCP (MWD/RCHCA 1995).

The Lake Mathews MSHCP occurs entirely within the Upper SAR HCP Planning Area, as shown on Figure 3.4-3. It consists of approximately 6,000 acres of open land surrounding Lake Mathews in northwestern Riverside County. La Sierra Avenue runs north/south along the Lake Mathews shore near the western boundary of the Lake Mathews MSHCP, Cajalco Road runs east/west near the southern shore and boundary of the Lake Mathews MSHCP, and El Sobrante Road runs east/west along the northern shore and boundary of the Lake Mathews MSHCP.

### **Stephens' Kangaroo Rat Habitat Conservation Plan**

RCHCA sought and obtained ITPs from USFWS and CDFW for Stephens' kangaroo rat (SKR) (*Dipodomys stephensi*) within the Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP) area. The purpose of the SKR HCP was to streamline the permitting process for otherwise lawful activities resulting in the incidental take of SKR while also meeting FESA and CESA requirements without seeking individual permits and agreements with USFWS and CDFW. Conservation goals for SKR were incorporated into the SKR HCP to ensure full mitigation for all habitat occupied by SKR that would be incidentally taken (RCHCA 1996).

One of these goals included the acquisition and conservation of SKR habitat within a regional reserve system. The SKR HCP provides take authorization for SKR within its boundaries through the establishment of core reserves. The SKR HCP establishes conservation of 15,000 acres in core reserves within the plan's boundary for SKR. The loss of habitat and individuals under this HCP are offset by the establishment of a "core reserve" system consisting of seven reserves managed to maintain the long-term survival of the species. The Upper SAR HCP Planning Area encompasses three SKR HCP Core Reserve areas: Lake Mathews/Estelle Core Reserve, Steele Peak Core Reserve, and Sycamore Canyon Core Reserve, as shown on Figure 3.4-3.

Riverside County Ordinance No. 663.10 was established to implement the mitigation provisions of the SKR HCP, which includes a mitigation fee for new development in western Riverside County. The southern portion of the Planning Area occurs within the SKR Plan Fee Area (approximately 165,290 acres; Figure 3.4-3).

### **Upper Santa Ana River Wash Plan Habitat Conservation Plan**

The Santa Ana River Wash Plan Habitat Conservation Plan (Wash Plan HCP), an HCP independent from the Upper SAR HCP, was approved in July 2020. The Upper Santa Ana River Wash Plan HCP includes several of the same participating water agencies. The Wash Plan HCP authorizes incidental take and coverage for the following plant and animal species.

- Coastal California gnatcatcher (*Polioptila californica californica*)
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*)
- Cactus wren (*Campylorhynchus brunneicapillus*)
- Santa Ana River woolly-star (*Eriastrum densifolium* ssp. *sanctorum*)
- Slender-horned spineflower (*Dodecahema leptoceras*)

The Wash Plan HCP proposes to balance various project activities with natural community and species conservation. These projects include various Covered Activities, including transportation, mining, trails, and water infrastructure and conservation. The Wash Plan HCP Preserve includes three Preserve Area types (i.e., District Conserved Lands, District Managed Lands, and San Bernardino County Flood Control District Conserved Lands), which are identified as the mitigation lands that will offset the impacts of the Proposed Project (San Bernardino Valley Water Conservation District 2018).

The Wash Plan HCP occurs entirely within the Upper SAR HCP Planning Area (Figure 3.4-3). It is geographically located within the Upper Santa Ana River floodplain and includes the area from approximately 1 mile downstream of the Seven Oaks Dam to approximately 6 miles westward from Greenspot Road in the city of Highland to Alabama Street in the city of Redlands (encompassing approximately 4,892 acres).

Given the overlap of participating water agencies and the similar name and geographic location, the two HCPs may be confused. While some portions of the Proposed Project occur within the boundaries of both HCPs, the Proposed Project and associated ITPs of the Wash Plan HCP are independent of the Proposed Project and ITPs of the Upper SAR HCP.

### **Delhi Sands Flower-Loving Fly West Valley Habitat Conservation Plan**

The City of Colton sought and obtained an ITP from USFWS for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) within the West Valley Habitat Conservation Plan (West Valley HCP) plan area. The purpose of the West Valley HCP is to fulfill the permit requirements for proposed activities under the plan in areas containing occupied and suitable habitat for Delhi Sands flower-loving fly in order to maximize economic development in the city of Colton while also conserving the fly. The West Valley HCP focuses on preserving populations of the species north of I-10. The goals of the plan include preserving large blocks of habitat, protecting populations of Delhi Sands flower-loving fly, providing connections between local populations, and providing long-term conservation management of populations (RBF 2014).

The West Valley HCP occurs entirely within the Upper SAR HCP Planning Area as shown on Figure 3.4-3. The Planning Area consists of 416.3 acres, of which approximately 148.5 acres are potentially suitable habitat for Delhi Sands flower-loving fly. There are five Conservation Areas organized into four distinct management units within the plan area, which are managed and monitored by the Riverside Land Conservancy.

#### **Lytle Creek Conservation Bank and Cajon Creek Conservation Bank**

The Lytle Creek Conservation Bank and Cajon Creek Conservation Bank are in the alluvial floodplain and active channels of Lytle Creek and Cajon Creek, respectively, near the confluence of Lytle and Cajon Creeks (north of I-210 and west of I-215). Both banks have habitat mitigation credits available to mitigate impacts on SBKR and Santa Ana River woolly-star, if needed.

### **3.4.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate biological resources impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures, when required, to reduce significant impacts on biological resources. A discussion of potential types of impacts related to construction and operation of Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### **3.4.3.1 Significance Criteria**

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS? (Impact BIO-1 through BIO-4)
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS? (Impact BIO-5)
- Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means? (Impact BIO-6)
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? (Impact BIO-7)
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (Impact BIO-8)
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan? (Impact BIO-9)

### 3.4.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures.

The following steps were taken to analyze the potential biological resources impacts of the Proposed Project.

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on biological resources.
- Identify and evaluate the net biological resources impacts resulting from implementation of the HCP Conservation Strategy and Covered Activities in the Permit Area.
- Evaluate the level of significance of impact and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.

Impacts related to biological resources were assessed based on the Proposed Project, consultation with the Permittees and review of applicable local government authorities, such as general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts related to biological resources. Impacts related to construction and operational impacts on biological resources were assessed based on generally accepted analysis techniques.

Because the Proposed Project was designed to minimize and mitigate for incidental take of Covered Species associated with estimated impacts of Covered Activities, this biological resources analysis provides a summary of the potential Permit Area effects that could occur as a result of HCP implementation during the HCP Permit term, assuming implementation of all of Covered Activities and the Proposed Project together. The analysis provides a brief discussion of the potential biological resources impacts that could result from Covered Activities and a description of how the Proposed Project would offset the Covered Activities impacts. A detailed description of these effects is also provided in Chapter 4, *Effects Analysis*, of the Upper SAR HCP, and a detailed description of Covered Activities is provided in Chapter 2 of the Upper SAR HCP.

Implementation of the Proposed Project and Covered Activities could result in direct, indirect, and cumulative impacts on biological resources. *Direct impacts* are those effects of a project that occur at the same time and place as project implementation, such as removal of habitat through ground disturbance. *Indirect impacts* are those effects that occur either later in time or at a distance from project activities, but are reasonably foreseeable, such as downstream loss of aquatic species from effects on water quality. Direct and indirect impacts can be permanent or temporary. *Cumulative impacts*, addressed in Chapter 4, *Cumulative Impacts*, are those incremental effects of a project that, even if less than significant themselves, could significantly affect biological resources in combination with the effects of other projects.

Direct and indirect impacts of implementation of the Proposed Project could result from the following.

- Removal of vegetation during habitat restoration and rehabilitation activities
- Temporary disturbance associated with management and maintenance of conservation measures



- Conversion of one habitat type to another through restoration, rehabilitation, or creation activities
- Habitat restoration and rehabilitation activities (e.g., soil disturbance, removal of undesirable plants, limited grading)
- Creation and restoration or rehabilitation of in-stream habitat (e.g., sediment removal, gabion construction, channel manipulation, flow and substrate management)
- Vegetation management as a part of habitat rehabilitation, restoration, and creation using sheep grazing, manual labor, herbicide application, or prescribed burning
- Disturbance to native aquatic and semi-aquatic animal species during the control and removal of nonnative fishes and amphibious predators
- Increased human presence as part of surveys or monitoring
- Disturbance to biological resources through active or passive relocations of individuals

These types of biological effects associated with the Proposed Project are a result of the Conservation Strategy to minimize and mitigate for biological impacts of the current and future Covered Activities. Please refer to Section 3.4.4, *Summary of Potential Types of Impacts of Covered Activities*, below for a brief discussion of the types of biological impacts that could result from Covered Activities.

The approach to analyzing impacts is programmatic due to the geographic scope, range of Covered Activities, and duration of the permit term. Therefore, the acres of impacts presented in this chapter represent the maximum impact that will be allowable under the Plan and associated ITP. All impact estimates are conservative and will function as a maximum amount of incidental take not to be exceeded by Covered Activities without an HCP amendment. Actual impacts will be monitored, tracked, and reported throughout HCP implementation to ensure that impacts do not exceed the maximum established by this analysis and in the ITPs.

Anticipated impacts from the implementation of the Proposed Project on natural vegetation communities were evaluated quantitatively. The analysis involved overlaying geographic information system (GIS) layers for areas of potential development onto the GIS layers for land cover mapping developed for the Proposed Project in order to determine the amount of each land cover that would be affected. Land cover mapping used for the Proposed Project was based on the California Department of Forestry and Fire Protection (CAL FIRE 2018), as well as the Farmland Mapping and Monitoring Program (California Department of Conservation 2014), USFWS National Wetlands Inventory (USFWS 2017), Southern California Wetlands Inventory (State of California 2007), and the Wash Plan HCP (San Bernardino Valley Water Conservation District 2018). Details of the methods used for mapping land cover are described in Section 3.4.1 of the Upper SAR HCP.

The incidental take analysis for Covered Species uses the amount of area (acres) of natural vegetation communities (Covered Species habitat) proposed for impact as the metric to estimate the amount of incidental take that may be caused by the implementing Covered Activities and the Conservation Strategy during the permit term. Habitat suitability modeling and occurrence data were used to estimate the distribution of Covered Species habitats in the Planning Area and is described in the Upper SAR HCP. Expert-based species distribution modeling using Boolean “and/or” relationships to formulate habitat distribution for all Covered Species with the exception of Santa Ana sucker. For this species, potentially suitable habitat was predicted using an approach that incorporated components of the USFWS Instream Flow Incremental Methodology (Bovee et al.

1998) and Physical Habitat Simulation System (Milhous & Waddle 2012) methodologies. Habitat suitability was then modeled in a Two-Dimensional Sedimentation and River Hydraulics model, as described in the Upper SAR HCP. The estimated acres of Covered Species with permanent or temporary impacts establishes the allowable incidental take limit for each Covered Species. These tasks were completed for the Upper SAR HCP and are summarized in this EIR.

The Delhi Sands flower-loving fly and arroyo toad are Covered Species that were analyzed during the development of the HCP, but were identified as species that will be fully avoided. Avoidance measures were developed for these species to eliminate the potential for adverse effects. Therefore, Covered Activities are not anticipated to result in incidental take of these species. See Chapter 5, *Conservation Strategy*, of the Upper SAR HCP for the avoidance measures for these species. Because it is anticipated that Covered Activities will fully avoid these species, they are not listed in Table 3.4-6.

The evaluation of impacts on non-covered special-status species potentially occurring within the Planning Area relied on a combination of the available natural community and land cover mapping as presented in the Upper SAR HCP, as well as species ranges and occurrence information (compiled from CNDDDB, USFWS, and CNPS data). Because the scope and scale of the Proposed Project prohibited performing field surveys, including detailed vegetation mapping and special-status species surveys, high-level analyses were based on overlaying GIS layers of existing data and determinations of species' potential to occur within the Planning Area.

The analysis for impacts on wildlife movement corridors and other HCPs involved overlaying GIS layers for the Proposed Project onto the GIS layers for wildlife corridors and other HCP Conservation Areas and plan boundaries in order to determine the areas that would be affected. The potential effects on migration corridors in the Planning Area were evaluated qualitatively using map data from the CEHC (Spencer et al. 2010). This information was used to determine if implementation of the Proposed Project combined with estimated Covered Activity effects would result in barriers across natural lands that serve as known or potential wildlife corridors. The CEHC identified natural blocks of habitat across California and areas that potentially provide linkages and ECAs between these blocks. ECAs are defined as lands likely to be important to wildlife movement between large, mostly natural areas at the statewide level. The ECAs form a functional network of wildlands that are considered important to the continued support of California's diverse natural communities. Map data for potential impacts on other HCPs was obtained from the WRC MSHCP (WRCRCA 2018), Lake Mathews MSHCP (County of Riverside 2016), SKR HCP (County of Riverside 2016), Wash Plan HCP (San Bernardino Valley Water Conservation District 2018), and West Valley HCP (RBF 2014).

The assessment of impacts on potentially jurisdictional wetlands and other waters relied on assumptions in the Upper SAR HCP for wetland densities within the Planning Area (see Chapter 3 of the Upper SAR HCP). For the purposes of this EIR, potential jurisdictional wetlands and other waters were classified based on the wetland and waters natural communities that were identified as a part of the land cover mapping for the Upper SAR HCP. Independent jurisdictional delineations will be performed on a project-specific level to determine potentially jurisdictional wetlands, other waters, and CDFW streambed and riparian habitat during the independent environmental review process for activities that fall within the Proposed Project.



### 3.4.3.3 Impacts Analysis and Mitigation

#### Impact Approach and Mechanisms

Specific impacts on Covered Species and other biological resources resulting from construction and operation of specific Covered Activities under the Upper SAR HCP will be evaluated on a project-by-project basis pursuant to CEQA, and potentially significant impacts of those specific activities would be identified and mitigated pursuant to the requirements of applicable laws and regulations (refer to Section 3.4.2, *Regulatory Framework*). Therefore, impacts of project-specific construction and operation activities on biological resources are not specifically identified or assessed in this section.

Impacts on covered plant and wildlife species and other biological resources were analyzed by assessing the overall net effect of implementing the Proposed Project assuming all Covered Activities are implemented in the Permit Area, including construction and operation activities permitted under the HCP, as well as implementation of the Conservation Strategy. Additionally, potential impacts associated with the implementation of the Conservation Strategy on Covered plant and wildlife species and other biological resources were also analyzed.

Table 3.4-6 summarizes the overall permanent and temporary impacts expected from all Covered Activities on habitats that occur within the Planning Area. Impacts on aquatic habitats are shown as a result of changes in hydrology. Calculations of permanent impacts on modeled habitat are inclusive of existing water recharge/flood control basins subject to regular operations and maintenance (O&M) activities. Though included in permanent impact calculations, these areas offer limited habitat value to Covered Species because they are maintained to prevent re-establishment of vegetation. Given the limited value of existing water recharge/flood control basins to Covered Species, permanent impacts on modeled habitat within existing basins are also presented separately, in parentheses, next to each permanent impact value in the tables that follow. Because the area of suitable habitat predicted by the models is inclusive of acreage in existing water recharge/flood control basins subject to regular O&M activities, and is much larger than the area of occupied habitat at any given moment in time, the actual impacts on occupied habitat will be substantially less.

Table 3.4-7 summarizes the overall permanent and temporary impacts expected from all Covered Activities on Covered Species modeled habitat as a surrogate for the take estimated to occur. Impacts on aquatic species from changes in hydrology are calculated in terms of changes in acreage of aquatic habitat.

Effects on Covered Species are organized by association with shrubland and grassland habitats (Group 1), riparian and wetland habitats (Group 2), and aquatic species (Group 3). These groups are organized to synthesize potential impacts on Covered Species associated with loss or changes to Permitting Area habitat. Effects on other biological resources will also be addressed by identifying potential impacts associated with loss or changes vegetation communities within the Permitting Area. This section provides an overview of the groups, overall construction and operations impacts estimated for Covered Activities, and the Proposed Project mitigation strategy to offset potential habitat impacts. Please refer also to the Upper SAR HCP description of *Covered Activities* (Chapter 3), *Effects Analysis* (Chapter 4) and *Conservation Strategy* (Chapter 5).

**Table 3.4-6. Impacts on Natural Vegetation Communities and Land Cover Types**

Vegetation Community and Land Cover Type	Acres of Impact		
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary	Total
<b>Riparian</b>			
Interior Warm and Cool Desert Riparian Forest	50.1 (3.6)	36.1	86.2
Warm Desert Lowland Freshwater Marsh, Wet Meadow, and Shrubland	1.0	3.8	4.8
<i>Riparian Subtotal</i>	<i>51.1 (3.6)</i>	<i>39.9</i>	<i>91.0</i>
<b>Wetlands</b>			
Western North American Freshwater Aquatic Vegetation	6.7 (6.7)	1.9	8.6
Western North American Montane-Subalpine-Boreal Marsh, Wet Meadow, and Shrubland	0.2	0.1	0.3
Western North American Disturbed Marsh, Wet Meadow, and Shrubland	2.9	0.3	3.2
Western North American Temperate and Boreal Freshwater Marsh, Wet Meadow, and Shrubland	71.8 (65.0)	9.0	80.8
<i>Wetlands Subtotal</i>	<i>81.6 (71.7)</i>	<i>11.2</i>	<i>92.8</i>
<b>Water</b>			
Permanent Water	68.3 (27.2)	7.8	76.1
Water in Existing Basins	618.4 (618.4)	0.3	618.7
Dry Channel/Shrubland	67.9 (22.8)	34.5	102.4
<i>Water Subtotal</i>	<i>754.7 (668.4)</i>	<i>42.5</i>	<i>797.2</i>
<b>Shrublands</b>			
Alluvial Fan Sage Scrub	465.3 (196.2)	57.9	523.2
Californian Chaparral	25.1	12.7	37.8
Californian Coastal Scrub	210.5 (39.5)	73.0	283.5
Great Basin and Intermountain Xeric-Riparian Scrub	2.3 (0.1)	2.3	4.6
North American Warm-Desert Xeric-Riparian Scrub	3.1 (1.4)	1.3	4.4
<i>Shrublands Subtotal</i>	<i>706.3 (237.1)</i>	<i>147.3</i>	<i>853.6</i>
<b>Grasslands</b>			
Californian Annual and Perennial Grassland	282.3 (38.9)	71.2	353.5
Californian Disturbed Grassland, Meadow, and Scrub	0.0	0.1	0.1
<i>Grasslands Subtotal</i>	<i>282.3 (38.9)</i>	<i>71.3</i>	<i>353.6</i>
<b>Woodlands</b>			
Californian Forest and Woodland	1.4	0.9	2.3
Californian Disturbed Forest	2.8 (2.3)	1.6	4.4
Intermountain Singleleaf Pinyon-Utah Juniper-Western Juniper Woodland	0.1	0.5	0.6

Vegetation Community and Land Cover Type	Acres of Impact		
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary	Total
<i>Woodlands Subtotal</i>	4.3 (2.3)	3.0	7.3
<b>Rock Outcrops</b>			
<i>Rock Outcrops Subtotal</i>	17.5 (7.1)	3.7	21.2
<b>Agriculture</b>			
Herbaceous Agricultural Vegetation	103.7 (14.0)	116.5	220.2
Woody Agricultural Vegetation	2.2	2.4	4.6
<i>Agriculture Subtotal</i>	105.9 (14.0)	118.9	224.8
<b>TOTAL</b>	<b>2,003.6 (1,043.1)</b>	<b>437.8</b>	<b>2,441.4</b>

<sup>a</sup> Impacts acreages in parentheses are for existing water recharge/flood control basins subject to regular O&M activities and are a subset of total acreage. For example, for Woodlands Subtotal, of the 4.3 acres of permanent impacts 2.3 acres occur within existing basins; consequently, impacts outside of existing basins are 4.3 - 2.3 = 2.0 acres. The acreages in parentheses are a subset of the amount of permanent impact acreage, e.g., for Wetlands Subtotal 71.7 acres of permanent impacts out of a total of 81.6 occur within existing basins, and 9.9 acres of permanent impacts occur outside of existing basins.

**Table 3.4-7. Estimated Impacts on Covered Species Modeled Habitat and Designated Critical Habitat**

Covered Species	Acres of Impact	
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary
<b>Slender-Horned Spineflower</b>		
Current Occupied Habitat (modeled)	0.0	0.0
Historic Occupied Habitat (modeled)	<0.1	0.0
Potentially Suitable Habitat	311.2 (30.6)	114.0
<b>Santa Ana River Woolly-Star</b>		
Potentially Suitable Habitat	406.6 (31.9)	57.8
<b>Santa Ana Sucker</b>		
Preferred Habitat	1.3	0
Designated Critical Habitat Wet <sup>c</sup>	13.5	4.8
Designated Critical Habitat Dry <sup>c</sup>	42.3	14.2
<b>Arroyo Chub</b>		
Potentially Preferred Habitat	2.4	0
<b>Santa Ana Speckled Dace</b>		
Potentially Suitable Habitat (Wetted Area <sup>b,d</sup> )	<0.1	0
<b>Mountain Yellow-Legged Frog</b>		
Potentially Suitable Aquatic Habitat <sup>b,d</sup>	5.9 (5.4)	0.3
Refugia/Foraging/Dispersal Habitat	176.0 (151.3)	12.8
Designated Critical Habitat	0.0	0.0
<b>Western Spadefoot</b>		
Potentially Suitable Habitat	704.5 (304.1)	111.7

Covered Species	Acres of Impact	
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary
<b>California Glossy Snake</b>		
Potentially Suitable Habitat	801.3 (145.2)	173.5
<b>South Coast Garter Snake</b>		
Potentially Suitable Habitat	14.7	43.5
<b>Southwestern Pond Turtle</b>		
Aquatic Habitat <sup>b,d</sup>	0.9	4.8
Potentially Suitable Upland Habitat	18.5	53.9
<b>Tricolored Blackbird</b>		
Occupied Colony Habitat	0.0	0.0
Suitable Colony Habitat	55.2 (50.3)	10.7
Breeding Season Foraging – Natural	157.6 (7.6)	43.6
Breeding Season Foraging – Agriculture	67.0	101.0
Non-Breeding Season Foraging – Natural	0.4	0.3
Non-Breeding Season Foraging – Agriculture	0.1	0.9
<b>Burrowing Owl</b>		
Potentially Suitable Habitat	736.3 (181.6)	242.6
<b>Cactus Wren</b>		
Known Suitable Nesting	14.6	0.3
Potential Nesting and Foraging Habitat	681.7 (186.0)	180.2
Recently Burned (2008–2018)	1.6	6.4
<b>Yellow-Breasted Chat</b>		
Potentially Suitable Habitat	126.7 (68.5)	44.7
<b>Western Yellow-Billed Cuckoo</b>		
High Value Breeding Habitat	<0.1	0.8
Other Potentially Suitable Breeding Habitat	8.7	8.2
<b>Southwestern Willow Flycatcher</b>		
Core Southwestern Willow Flycatcher Habitat	15.5	3.7
Very High Value Habitat	<0.1	0.4
High Value Habitat	<0.1	0.2
Moderate Value Habitat	<0.1	0.1
Other Potentially Suitable Habitat	111.2 (68.5)	40.2
Designated Critical Habitat	95.9	12.7
<b>Coastal California Gnatcatcher</b>		
Very High Value Habitat	40.5 (13.8)	6.0
High Value Habitat	46.3 (8.4)	17.0
Moderate Value Habitat	55.6 (18.3)	21.0
Low Value Habitat	188.9 (95.7)	65.0
Other Suitable Habitat	71.6 (1.3)	4.1
Designated Critical Habitat	2.9	2.6

Covered Species	Acres of Impact	
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary
<b>Least Bell's Vireo</b>		
Core Breeding Habitat	0.2	17.2
Other Breeding Habitat	126.5 (68.5)	27.5
Designated Critical Habitat	1.9	55.8
<b>Los Angeles Pocket Mouse</b>		
Potentially Suitable Habitat	657.0 (181.9)	144.2
<b>San Bernardino Kangaroo Rat</b>		
Suitable Habitat	681.4 (377.2)	72.7
Refugia <sup>e</sup>	149.9 (118.6)	46.4
Assumed Occupied <sup>f</sup>	681.6 (57.5)	94.4
Designated Critical Habitat	656.3 (109.4)	110.1

<sup>a</sup> Impact acreages in parentheses are within existing water recharge/flood control basins subject to regular O&M activities and are a subset of the total acres. For example, of the 681.4 acres of permanent impacts on SBKR, 377.2 acres occur within existing basins. Consequently, impacts outside of basins are: 681.4 - 377.2 = 304.2 acres.

<sup>b</sup> Impacts from changes to hydrology, not from ground-disturbance (see Upper SAR HCP Section 3.6.4).

<sup>c</sup> Designated critical habitat for Santa Ana sucker was split into two portions: dry and wet. Designated critical habitat dry includes unoccupied intermittently flowing portions of the Santa Ana River designated as critical habitat as a source of coarse sediment to be supplied to downstream-occupied reaches, where the fish depend on coarse substrate for feeding and spawning. Designated critical habitat wet includes the downstream occupied reaches of the Santa Ana River.

<sup>d</sup> The difference between wetted area impact estimates and aquatic habitat impact estimates are due to two separate analytical methods. Wetted area is calculated based on three-dimensional hydrology models, while aquatic habitat is calculated based on regional land cover mapping.

<sup>e</sup> SBKR refugia habitat is composed of modeled habitat that occurs outside of the 100-year floodplain.

<sup>f</sup> "Assumed Occupied" is not a modeled dataset; it is a separate data layer that was estimated to indicate all areas that are assumed to be currently occupied by SBKR. The layer was generated from review of available trapping data (positive and negative) and known extant occurrences and estimates of likely occupied areas where data were absent. It provides a conservative estimate of all areas where SBKR has the potential to be found.

## Group 1: Covered Special-Status Species associated with Shrubland and Grassland Habitats

### Construction Impacts

*Removal of Vegetation/Ground Disturbance.* Activities that may create ground disturbance or significant vibrational impacts within shrubland and grassland habitats have the potential to affect Covered Species, including SBKR, Los Angeles pocket mouse, burrowing owl, coastal cactus wren, coastal California gnatcatcher, glossy snake, spadefoot toad, Santa Ana River woolly-star and slender-horned spineflower. Incidental take authorization may be needed during construction activities associated with habitat restoration or rehabilitation projects.

### Operations and Maintenance Impacts

*Removal of Vegetation/Ground Disturbance.* Activities that may scrape or clear the ground to remove vegetation within shrubland and grassland habitats have the potential to affect Covered Species that prefer areas of high disturbance. Noise or vibrational impacts may affect other wildlife at distance from maintenance areas. Incidental take authorization may be needed for routine maintenance activities along dirt road surfaces, groundwater recharge basins, wells and water conveyance

infrastructure, solar energy development projects, habitat restoration or rehabilitation, or long-term management of the Preserve System.

*Reduced Stormflow.* Activities that may divert surface water from tributary streams within shrubland habitats have the potential to affect Covered Species that require flood disturbance to modify their habitats, hydraulic sediment transport, or mountain tributary stream habitats. These species include the SBKR, Los Angeles pocket mouse, Santa Ana River woolly-star, Santa Ana speckled dace, and Santa Ana sucker. Diversion of surface flow removes a portion of the total stream flow, reducing the potential for the remaining flow to transport sediment, and degrading environmental functions downstream. The flow that is diverted into groundwater recharge basins contains sediment as well as aquatic species that may wash down from mountains streams. Incidental take authorization may be needed for the operation of groundwater recharge basins.

## **Group 2: Covered Special-Status Species associated with Riparian and Wetland Habitats**

### ***Construction Impacts***

*Removal of Vegetation/Ground Disturbance.* Activities that may create ground disturbance within riparian habitats have the potential to affect Covered Species, including least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, tricolored blackbird, south coast garter snake, southwestern pond turtle, and mountain yellow-legged frog. South coast garter snake, southwestern pond turtle, and mountain yellow-legged frog are also included in Group 3 (see below). Incidental take authorization may be needed during the construction of habitat restoration or rehabilitation projects.

### ***Operations and Maintenance Impacts***

*Reduced Discharge.* Activities that may reduce perennial base flow in the mainstem Santa Ana River may reduce the total acreage of riparian and wetland habitats in the watershed through drying and type conversion of the habitat to xeric shrubland. This action would have the potential to adversely affect Covered Species including least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, tricolored blackbird, south coast garter snake, southwestern pond turtle, and mountain yellow-legged frog. Incidental take authorization may be needed for the operation of water reuse projects.

*Vegetation Removal.* Activities that may remove vegetation within riparian and wetland habitats would have the potential to affect Covered Species including like the least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, tricolored blackbird, south coast garter snake, southwestern pond turtle, and mountain yellow-legged frog. Incidental take authorization may be needed for habitat restoration or rehabilitation, or management and monitoring activities.

## **Group 3: Covered Special-Status Aquatic Species**

### ***Construction Impacts***

*Removal of Vegetation/Ground Disturbance.* Activities that may create ground disturbance within aquatic habitats on the mainstem Santa Ana River have the potential to affect Covered Species, including Santa Ana sucker, arroyo chub, Santa Ana speckled dace, south coast garter snake, southwestern pond turtle, and mountain yellow-legged frog. South coast garter snake, southwestern pond turtle, and mountain yellow-legged frog are also included in Group 2 (see above). Incidental

take authorization may be needed during the construction of habitat restoration or rehabilitation projects.

#### ***Operations and Maintenance Impacts***

*Reduced Discharge.* Activities that may reduce perennial base flow in the mainstem Santa Ana River may reduce the amount and quality of aquatic habitats that could affect Covered Species including Santa Ana sucker and arroyo chub. Incidental take authorization may be needed for operation of water reuse projects.

*Reduced Stormflow.* Activities that may divert surface water from tributaries streams have the potential to affect Covered Species that occur downstream in aquatic habitats. These species include the Santa Ana sucker and arroyo chub. Diversion of surface flow removes a portion of the total stream flow, reducing the potential for the remaining flow to transport sediment, and degrading downstream environmental functions. The flow that is diverted into groundwater recharge basins contains water, sediment, and nutrients that are removed from the natural system. Incidental take authorization may be needed for the operation of groundwater recharge basins.

#### **Critical Habitats**

##### ***Construction Impacts***

*Removal of Vegetation/Ground Disturbance.* Activities in the Permit Area that propose to create ground disturbance may adversely affect designated critical habitat of the SBKR and coastal California gnatcatcher. These activities include the construction of groundwater recharge basins, wells and water conveyance infrastructure, or solar energy development projects.

##### ***Operations and Maintenance Impacts***

*Reduced Discharge.* Activities in the Permit Area that propose to reduce perennial flow in the mainstem Santa Ana River may adversely affect designated critical habitat of the Santa Ana sucker, least Bell's vireo, and southwestern willow flycatcher. These activities include water reuse.

*Capture of Stormflow.* Activities in the Permit Area that propose to divert storm flow may adversely affect designated critical habitat of the SBKR and Santa Ana sucker. These activities include the operation of groundwater recharge basins.

*Removal of Vegetation/Ground Disturbance.* Activities in the Permit Area that propose to remove vegetation have the potential to adversely affect designated critical habitats for SBKR, Santa Ana sucker, coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher. These activities include the routine maintenance activities along dirt road surfaces, groundwater recharge basins, wells and water conveyance infrastructure, solar energy development projects, habitat restoration or rehabilitation, or long-term management of the Preserve System.

#### **Mitigation Strategy**

Biological goals and objectives are required elements of an HCP and form the Conservation Strategy of the Proposed Project. Biological goals are broad, guiding principles based on the conservation needs of the Covered Species. Biological objectives are expressed as conservation targets or desired future conditions and are designed to achieve the biological goals. Biological objectives should be specific and commensurate with the impacts and duration of the impacts they are intended to offset and may be either habitat or species based (65 FR 106: 35242–35257). To the extent practicable,

objectives are written to be “SMART” (Specific, Measurable, Achievable, Result-Oriented, Time-Fixed).

The biological goals of the Proposed Project will be accomplished within the Upper SAR HCP Preserve System and are as follows.

- Conserve Covered Species and manage their habitats to contribute to the recovery of listed species or those that may become listed under FESA.
- Maintain or stimulate ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- Maintain or increase habitat connectivity in the Upper SAR HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.
- Actively manage lands within the Upper SAR HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations of Covered Species.

Additional details regarding the Upper SAR HCP Preserve System are provided below.

### ***HCP Preserve System***

The Upper Santa Ana River Sustainable Resource Alliance (Alliance) as the HCP Implementing Entity will provide for the permanent conservation of approximately 1,349 acres of natural habitat within the HCP Preserve System. The HCP Preserve System will be assembled through a combination of property acquisitions and/or establishment of conservation easements. All habitat improvement will occur on land within the HCP Preserve System. The HCP Preserve System will be managed and monitored through the Comprehensive Adaptive Management and Monitoring Program (CAMMP) that will be implemented by the Alliance.

All conserved lands planned for within the HCP Preserve System are generally contiguous with existing open space and protected areas within the Planning Area (Figure 2-1) and will become an important component of the network of preserved lands that include other HCPs and NCCPs (e.g., Wash Plan HCP, WRC MSHCP), open space parks and wildlife areas (e.g., County parks and CDFW lands), and other public lands (e.g., U.S. Forest Service and Bureau of Land Management lands). As can be seen on Figure 2-1, the HCP Preserve System includes Conservation Areas that are generally well-connected to other existing protected areas.

The HCP Preserve System is composed of Conservation Areas that are planned to implement habitat improvement actions as mitigation for the HCP (Figures 5-2 through 5-4 in the Upper SAR HCP), all Conservation Areas that are conserved through acquisition and/or easements and managed as mitigation for the HCP (Figures 5-2 through 5-4 in the Upper SAR HCP), and the Santa Ana Sucker Translocation Streams (Figure 5-5 in the Upper SAR HCP). These areas of the HCP Preserve System will be adaptively managed together for the long-term protection of the Covered Species and the habitats that support them. The Conservation Areas are shown in detail on Figures 5-2 through 5-5 in the Upper SAR HCP.

The HCP Preserve System is divided into five main preserve units, as listed below (Figure 2-1). Preserve unit boundaries generally follow Hydrologic Unit Code 12 watershed boundaries, except the Santa Ana River Preserve Unit, which includes the natural habitat along the mainstem of the Santa Ana River and Prado Basin down to Prado Dam.



- **Santa Ana River Preserve Unit.** The Santa Ana River Preserve Unit includes all the major tributary and riparian floodplain restoration/rehabilitation areas, the mainstem of the Santa Ana River, and several additional Conservation Areas to be acquired and/or established as conservation easements. The Santa Ana River Preserve Unit will protect and enhance habitat values for aquatic and riparian habitats for Covered Species and aquatic resources along the Santa Ana River and tributaries, improving habitat condition and habitat connectivity.
- **Alluvial Fan Preserve Unit A.** The Santa Ana Wash Preserve Unit A includes a mix of alluvial fan sage scrub Conservation Areas to be acquired and/or establish conservation easements. The Santa Ana Wash Preserve Unit includes Conservation Areas adjacent to the Woolly-star Preserve Area, the Wash Plan HCP, and tributaries connecting up to the large areas of protected lands in the San Bernardino National Forest that provide important connectivity for both alluvial fan sage scrub, aquatic, and riparian Covered Species, habitats, and ecological processes.
- **Alluvial Fan Preserve Unit B.** The Alluvial Fan Preserve Unit B includes alluvial fan sage scrub, shrubland, woodland, and riparian Conservation Areas to be acquired and/or establish conservation easements. Similar to the Alluvial Fan Preserve Unit A, this Preserve Unit also includes preservation that provide important connectivity for both alluvial fan sage scrub, aquatic, and riparian species along the tributaries connecting up to the large areas of protected lands in the San Bernardino National Forest. The Alluvial Fan Preserve Unit B also includes the Lytle Creek Conservation Bank and the Cajon Creek Conservation Bank (neither of which would be formally incorporated into the HCP Preserve System if credits were purchased as mitigation). Additional lands that are not currently identified to be acquired and/or established under conservation easements may be added as Conservation Areas in this unit in the future.
- **Santa Ana Sucker Translocation Preserve Units A and B.** The Santa Ana Sucker Translocation streams are higher gradient headwater streams and may include the Santa Ana River upstream of Seven Oaks Dam, as well as Plunge, Hemlock, Mill, Bear, Alder and Mountain Home creeks. The Santa Ana Sucker Translocation Preserve Unit A also includes Conservation Areas to be acquired and/or established as conservation easements, which will provide important connectivity for both alluvial fan sage scrub, aquatic, and riparian species along these tributaries connecting up to the large areas of protected lands in the San Bernardino National Forest.

Chapter 5 of the HCP provides a matrix identifying potential Covered Activity impacts and specific Upper SAR HCP measures to compensate for those impacts. These measures are found in the Upper SAR HCP and are noted within the appendix. Table 3.4-8 provides a summary of the Proposed Project Conservation Strategy to offset the anticipated impacts from Covered Activities, organized by association with shrubland and grassland habitats (Group 1), riparian habitats (Group 2), and aquatic species (Group 3).

The HCP's Up-Front and Stay-Ahead Provisions require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. The Alliance will ensure that HCP implementation complies with the Up-Front and Stay-Ahead Provisions by monitoring and tracking the establishment and management of the HCP Preserve System along with tracking of Covered Activity impacts. To ensure that mitigation is "In-Step" (Rough-Step) and ahead of impacts (i.e., similar or superior Covered Species habitat is being acquired, restored and/or rehabilitated, and managed, compared to those affected by Covered Activities), the Up-Front and Stay-Ahead Provisions will track mitigation and impacts by vegetation communities and by modeled species habitat. Furthermore, for SBKR and Santa Ana River woolly-star, mitigation and impacts will be

tracked by Alluvial Fan Preserve Unit (i.e., Unit A or B), to ensure that mitigation is being acquired, restored and/or rehabilitated, and managed within the same Alluvial Fan Unit as Covered Activity impacts. In addition to land acquisition (via fee title or easements), restoration and/or rehabilitation, and management, the Up-Front and Stay-Ahead Provisions, can be achieved by the purchase of credits from a USFWS-approved conservation or mitigation bank operating within the same Preserve Unit as Covered Activity impacts, where credits are available for the Covered Species being affected.

Compliance with and status of the Up-Front and Stay-Ahead Provisions will be implemented through the consistency review process for Covered Activities (see the *Project Consistency Review* in Chapter 6, Section 6.5.2, *Implementing Entity Responsibilities*, in the HCP) and via the submission of annual reports. Furthermore, an HCP Implementation Compliance and Concurrence Procedure will be instituted between the Alliance and USFWS for each phase of HCP implementation. The procedure will require the Alliance to quantify and demonstrate that the Conservation Strategy, and progress toward assembly and management of the HCP Preserve System, is ahead of Covered Activity impacts by a minimum of 10% and that mitigation is in step with impacts.

**Table 3.4-8. HCP Conservation Strategy to Offset Estimated Covered Activity Impacts**

<b>Impact Type</b>	<b>Conservation Strategy</b>	<b>Benefit Compared to Existing Conditions</b>
<b>Group 1: Shrubland and Grassland Plant Communities (Scalebroom Scrub, Coastal Sage Scrub, Annual and Perennial Grassland Habitats)</b>		
Removal of habitat (construction or maintenance of groundwater recharge basins, wells and water conveyance infrastructure, or solar energy development)	Upper SAR HCP Reserve System. The conservation and preservation of over 875.1 acres of shrubland habitats and 152.5 acres of grassland habitats will provide enhanced habitat for Covered Species. The Habitat Management and Monitoring Plan (HMMP) will provide rehabilitation, restoration, or creation performance criteria to ensure values are maintained for Covered Species benefits.	Increases the distribution of Covered Species into restored and conserved lands. Reduces impacts on Covered Species within areas of ground disturbance by replacing in kind habitat values on the landscape.
Reduction in sediment supply (operation of stormflow capture)	Replacement of Sediment to the River. High quality sediment captured in groundwater recharge basins from stormflow diversion projects will be replaced to the active floodplain of the Santa Ana River and tributaries.	Enhances habitats where sediment is replaced and increases the supply of high-quality sediment in sediment replacement areas as well as downstream of these locations.
Reduction in frequency of moderate-sized storm flow events (operation of stormflow capture)	Conservation and Restoration of Corridors Connecting Suitable Shrubland Habitats. The HMMP will provide adaptive management to maintain suitable habitats for Covered Species associated with Shrubland habitats and create and maintain corridors between patches of suitable habitats.	Provides long-term connectivity between occupied habitats for use and dispersal of fossorial Covered Species.

<b>Impact Type</b>	<b>Conservation Strategy</b>	<b>Benefit Compared to Existing Conditions</b>
<b>Group 2: Riparian Habitats and Wetlands</b>		
Removal of habitat (construction and maintenance of habitat enhancement projects)	Upper SAR HCP Reserve System. The conservation and preservation of 208.3 acres of riparian habitats and 39.0 acres of wetland habitats will provide enhanced habitat for Covered Species. Nonnative Plant Management Program. The HMMP will include a Nonnative Plant Management Program targeting the removal of nonnative species such as giant reed, tamarisk, castor bean, tree of heaven, etc. The HMMP will include an annual maintenance and performance goal for nonnative plant removal within the upper reaches of the affected river segment.	Establishes reliable funding for on-going nonnative invasive plant species removal which promotes the health and function of the native vegetation and supports the vitality of the riparian community and all riparian-associated migratory birds listed as Covered Species.
Gradual decline in the function of portions of the native riparian community along the Santa Ana River due to reduced perennial surface flow (operation of water reuse) and the subsequent effects on local and/or regional groundwater levels	Establish Mitigation Account or permittee responsible mitigation program – Restoration and/or rehabilitation of four mainstem tributary streams. The replacement of riparian habitat values will occur at a minimum on four streams along the mainstem Santa Ana River. Dedication of permanent water supply to these tributaries. The HMMP will describe the maintenance activities that will occur at each restored stream.	Provides new habitats for riparian-associated species as well as other Covered Species associated with wetlands and/or ponds.
<b>Group 3: Riverine (Aquatic Habitats)</b>		
Loss of deep scour pool habitat and a general increase in shallow water conditions due to the reduction of flows (operation of water reuse)	Microhabitat Enhancements or re-wetting of distributary channels. The HMMP will identify and implement microhabitat enhancements within the upstream reach of the affected river segment using natural materials to increase scour and pool formation. This could include placement of large boulders and/or large woody debris to increase velocity of flow and gravel bar patches, deep pool refugia areas and/or stream bifurcation to re-wet distributary channels.	Establishes managed and funded new habitat features within a critical river segment that will enhance aquatic habitats for Covered Species.

Impact Type	Conservation Strategy	Benefit Compared to Existing Conditions
General slowing and shallowing conditions in the river and potential effect of increased habitat suitability for nonnative aquatic predators such as bullfrog, sunfish, bass, and catfish (operation of water reuse)	Aquatic Predator Control Program. The HMMP will include an Aquatic Predator Control Program to be implemented within the upstream reach of the affected river segment that will target and remove nonnative fish, amphibians, and reptiles immediately prior to the Santa Ana sucker spawning season.	Establishes reliable funding for on-going predator control which encourages successful recruitment of aquatic Covered Species.
Loss of occupied habitat (operation of water reuse)	Supplemental Water. Permittee Agencies will increase habitat availability in Rialto Channel during the warm season months (portions of summer and fall) by providing cool supplemental water from nearby groundwater source or an alternative source to lower the water temperature in this tributary. Supplemental water will be added to the Rialto Channel when water temperatures reach 85 degrees. Supplemental water could be pumped groundwater or other water source. The discharge into the Rialto Channel will require a discharge permit from the RWQCB.	Improves water quality conditions within Rialto Channel to create year-round suitable tributary habitat for all aquatic Covered Species.
Reduction in gravel/cobble substrate availability due to lower velocity flows and reduced sand transport (operation of stormflow capture)	Artificial High Flow Pulse Events or a functionally similar alternative measure. The HMMP will identify means to create high flow pulse events as needed based on substrate conditions, up to 2 times per year. The high flow pulse events would be implemented through a cooperative agreement with the City of San Bernardino Municipal Water Department.	Establishes ongoing substrate maintenance, which increases the temporal availability of appropriate substrate for Santa Ana sucker spawning and foraging habitat in the targeted river segment to help improve reproductive success and recruitment, as well as enhanced habitats for all other aquatic Covered Species.

Impact Type	Conservation Strategy	Benefit Compared to Existing Conditions
Cumulative effects on the Santa Ana River population resulting from an incremental decrease in surface water and the associated degradation in quantity or quality of habitat that may result in reduced reproduction, fitness, recruitment, and/or survivorship of individuals	Captive Headstarting and Translocation - Upper Watershed SAS Population Establishment. The HMMP will outline a plan for establishing at least three populations of Santa Ana sucker in suitable Santa Ana River Watershed tributary streams. Translocation will occur in coordination with Wildlife Agencies. The HMMP will identify measures to increase the amount of suitable and occupied habitats in the Santa Ana River watershed and distribute the risk of a catastrophic event between multiple locations. The HMMP will identify the goals and success criteria of the establishment plan and will identify the amount of financial assistance to be provided by Valley District for the regionally beneficial population establishment program.	Contributes to regional recovery by increasing the number of Santa Ana sucker in the Santa Ana River population, distributing the risk of a catastrophic event between multiple locations.

***Impact BIO-1: Have a Substantial Adverse Effect, Either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive, or Special-Status Species in Local or Regional Plans, Policies, or Regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service: Impacts on Group 1 HCP Covered Species and Habitat due to Implementation of HCP***

Implementation of Covered Activities under the Proposed Project, as well as the Conservation Strategy, may result in direct and indirect impacts on covered special-status plant and wildlife species and their habitat. Impact acreages were based on a worst-case scenario where all of the suitable habitats, outside of the existing water recharge/flood control basins, that have the potential to be affected are assumed to be affected.

Implementing the Proposed Project would allow direct and indirect impacts on alluvial fan and other shrubland habitat and grassland habitat used by Group 1 Covered Species from construction of water reuse, groundwater recharge wells, water conveyance infrastructure and solar development, as well as routine O&M and habitat improvement, management, and monitoring (Covered Activities) that would occur in the Permitting Area. Alluvial fan and other shrubland habitat losses or disturbance that could occur during the Permit Term from Covered Activities is estimated to be approximately 616.5 acres; grassland loss and disturbance is estimated to be approximately 314.7 acres (refer to Table 3.4-6). The Covered Activities effects include temporary and permanent loss of shrubland and grassland habitats available to Group 1 Covered Species, potential for reduced shrubland habitat quality associated with a reduction in sediment supply from stormflow diversion projects and reduction of moderate-sized stormflow events from stormflow capture projects. Detailed analyses of impacts on shrubland and grassland plant communities and Covered Species from Covered Activities is also provided in the Upper SAR HCP in Chapter 4, *Take Assessment and Impact Analysis*.

### Covered Plant Species

Covered Activity impacts on shrubland habitat could create impacts on Group 1 Covered plant species (Santa Ana River woolly-star and slender-horned spineflower) that occupy these areas. These plants could be exposed to direct disruption or conversion of shrubland habitat from construction and maintenance, soil compaction, and disruption of seedbanks in areas where plant populations occur. Such activities could result in plant damage, increased mortality, and reduction of viability of a population. Loss of suitable and occupied habitat could result in less available habitat to support special-status plant species in the region and losses in previously occupied areas.

The estimated direct effects on Group 1 Covered Plant Species include mortality of individual plants, plant injury, and alteration of plant community structure from earth-disturbing activities associated with Covered Activities. Use of construction equipment, machinery, and vehicles could cause injury or mortality to individual plants, and increased human presence and ongoing O&M activities could increase the potential for trampling of individual plants. Damaged plants could display reduced reproduction due to injury-induced physiological stressors. Vegetation management and grading activities could disturb and compress soils, potentially damaging and destroying seed banks and preventing or reducing these species' future utilization of the area by inhibiting root penetration. Plant injury, mortality, and damage to seed banks could result in impacts on Group 1 Covered plant species. Construction could also increase the potential for fire in the area, which could directly and indirectly impact any covered special-status plant species present.

Indirect impacts may consist of dust, erosion, chemical spills, introduction of nonnative invasive species, and altered hydrology. Exposure of covered plant species to dust from construction (e.g., ground disturbance and movement of heavy equipment and vehicles) and O&M activities (e.g., maintenance of access roads via grading and reconstruction) could potentially decrease the ability of plants to photosynthesize. Construction equipment, vehicles, or imported materials used during vegetation management, road and pipeline construction and maintenance, and new basin construction could introduce and spread nonnative invasive plant species via mud and other debris tracked in from other sites that may contain nonnative invasive plants and/or seeds. Nonnative invasive plant species could out-compete covered plant species for resources such as water and space, which could either reduce their reproductive productivity (i.e., reduce the number of flowers and/or seeds produced) or displace them from the area. Activities within waterways (e.g., stormflow diversion) that could reduce flow volumes and sediment loads would result in a reduction in the frequency of scouring and depositional events in the floodplain and allow alluvial scrub communities on the Santa Ana River to achieve late succession, reducing seedling establishment of floodplain associated plant species. These indirect impacts could alter plant community structures, and suitable habitat could become monotypic, thereby reducing the quality and diversity of native vegetation communities within the Permit Area. Sites that are degraded due to exposure to indirect stressors may no longer provide the habitat features required by special-status plant species, preventing or reducing colonization of the area by these species.

Negative physiological stressors resulting from construction-related injury, reduced photosynthesis, or competition with nonnative invasive plant species could lead to energetic losses and increased stressors for special-status plants, potentially resulting in lowered reproductive performance, increased susceptibility to diseases, and death. Loss of individual covered plant species, either from project-related mortality or not successfully reestablishing temporarily disturbed areas, could cause a decline in population numbers in the region.

The goals, objectives, actions, and conservation measures provided by the Proposed Project addressing terrestrial and aquatic communities and covered plant species would have a substantial beneficial effect on all plant species and on a landscape scale. Under the Proposed Project, wherever possible, construction would avoid individual Covered Species of plants to the maximum extent. Where impacts are proposed and where feasible, seeds and/or topsoils would be harvested in the vicinity of covered plant species and stored for future restoration and rehabilitation projects. Sites where temporary impacts occur would be restored and replanted with the previously collected seeds over consecutive years following the ground disturbance. The protection and management of mitigation sites as a part of the Upper SAR HCP would provide suitable habitat to covered plant species, ensuring that they are maintained in perpetuity. Areas to be conserved would include both occupied habitat as well as suitable habitat adjacent to occupied habitat to preserve ecological processes and reduce edge effects. Conservation areas would be managed to maintain the quality of habitat and expand current distributions of covered plant species, including the control of nonnative annual grasses and other invasive plants. Actions taken to conserve covered plant species would also benefit other non-covered special-status plant species by protecting, maintaining, and enhancing suitable habitat. See Chapter 5, *Conservation Strategy*, of the Upper SAR HCP for details.

Implementing the Conservation Strategy would offset direct and indirect impacts on special-status species (including Covered Species) from permanent removal of up to 706.3 acres of shrubland plant communities (of which 237.1 acres occur within existing basins), the permanent removal of 465.3 acres of alluvial fan sage scrub (of which 196.2 acres occur within existing basins), and the permanent removal of 82.3 acres of grassland habitat (of which 38.9 acres occur in existing basins). These vegetation communities may be occupied by Group 1 Covered Plant Species (refer to Table 4-13, *Proposed Impacts of Ground-Disturbing Covered Activities on Natural Vegetation Communities and Land Cover Types*, in Chapter 4 of the Upper SAR HCP). The HCP Preserve System would conserve and restore environmental values to over 875.1 acres of shrubland habitats, of which 509.4 acres would be alluvial fan sage scrub, and 152.5 acres of grassland habitat. Extant occurrences within the HCP Preserve System of slender-horned spineflower and Santa Ana River woolly-star will be restored or rehabilitated, expanded, and protected in perpetuity. See Chapter 5 of the Upper SAR HCP for details regarding the Proposed Project's Conservation Strategy.

Habitat improvement activities are anticipated to occur in Alluvial Fan Preserve Unit A and Unit B. Restoration and rehabilitation could result in temporary and permanent impacts on covered special-status plants species if they occupy the Conservation Areas or if plants or seed banks are dug up or buried during recontouring, revegetation, fencing, or other restoration activities. Indirect effects include increased sedimentation during and following restoration activities.

### **Covered Special-Status Wildlife Species**

Covered Activities could affect Group 1 Covered Wildlife Species that occupy shrubland and grassland habitats, including SBKR, Los Angeles pocket mouse, burrowing owl, coastal cactus wren, coastal California gnatcatcher, glossy snake, and western spadefoot. Implementing the Proposed Project would offset direct and indirect impacts on these covered wildlife species from construction and maintenance activities.

Covered Activities may temporarily or permanently remove shrubland suitable habitat for covered wildlife species. These direct impacts would result from construction of new water facilities and infrastructure, new access roads and other impervious surfaces, and routine O&M activities, as well as habitat rehabilitation and restoration activities. Loss of suitable and occupied habitat could result

in less available foraging, nesting, roosting, and breeding habitat for covered wildlife species in the region. If areas that are temporarily disturbed are not successfully restored and suitable habitat does not re-establish, individuals and populations of special-status wildlife species may not occur in areas that they had previously occupied.

Implementation of the Conservation Strategy (e.g., restoration/rehabilitation activities, nonnative invasive species removal, surveys) in shrubland and grassland plant communities could result in direct mortality, injury, or harassment of individual covered wildlife species. Injury to and/or mortality of wildlife that are Covered Species under the Upper SAR HCP (i.e., western spadefoot, California glossy snake, burrowing owl, coastal cactus wren, coastal California gnatcatcher, SBKR, and Los Angeles pocket mouse) could result in the loss of individuals that would cause a decline in population numbers in the region.

The use of construction equipment, machinery, and vehicles within areas occupied by covered wildlife could result in individuals being struck during construction and O&M activities, leading to injury or mortality. Ground disturbance could crush or entomb individuals in their burrows (e.g., amphibians, reptiles, burrowing owl, small and medium-sized mammals). Should any covered wildlife become trapped in unburied pipes or conduits or uncovered holes or trenches, they could be injured or killed. Capturing, handling, and relocating special-status wildlife that occur within construction areas could cause injury or death if proper handling and relocation techniques are not used. Capture and translocation could also cause strain and stress on, and displacement of, individuals. Exposure to toxic contaminants and pollutants, such as inadvertent spills of gasoline, oil, or lubricants when fueling or storing construction equipment, could result in illness or mortality if an animal comes into contact with the contaminant.

The use of heavy equipment, machinery, and pile driving operations associated with construction and O&M activities (e.g., repair and/or reconstruction of water infrastructure and access roads), could produce loud noises and ground vibrations that stress and strain individuals. Masking (i.e., the inability to hear environmental cues and animal signals) could limit an individual's ability to communicate and receive important cues from the environment and other wildlife, which could negatively impact their ability to procreate and respond to a threat, as well as increase the risk of predation. However, depending on the noise levels and duration, animals may also adjust behavior to acclimate to the disturbance, such as adjusting calling height and location, turning their heads, increasing their call volume, and timing calls during periods of low noise. Depending on the time of year when construction is occurring, all life stages of special-status wildlife associated with the breeding season could be exposed to noise and vibration stressors.

If nighttime construction occurs, then activities (e.g., foraging) of nocturnal species could be altered and resting diurnal species in the area (e.g., nesting birds) could be disturbed. In addition, artificial lighting at night may increase predation risk of special-status wildlife by allowing predators, such as owls, to hunt more efficiently.

Construction activities may expose covered wildlife species to indirect stressors as well. The presence of construction personnel could disturb individuals occupying the area. Increased human activity could produce trash and construction-related debris piles, which could draw opportunistic predators that are attracted to litter to the area, such as coyote, raccoon, common raven, American crow, and feral cats. Increased predation risks could result in mortality of both adults and young wildlife. Project personnel could collect individuals or bring pets on site, which could harass or kill special-status wildlife.



The direct and indirect effects from exposure to stressors such as increased noise levels, ground vibrations, night lighting, and increased risk of predation and harassment could lead to behavioral modifications and negative physiological stressors. Behavioral modifications, including habitat avoidance and nest/burrow/roost abandonment, could result in decreased reproductive success. Habitat avoidance could reduce the availability of suitable breeding and foraging habitat for covered wildlife, making successful reproduction more challenging. Nest/burrow/roost abandonment could result in the death of young. Physiological stressors could lead to energetic losses and increased stressors to the body, potentially resulting in lowered reproductive performance, increased susceptibility to diseases and predation, inability to successfully forage and feed young, and death of both adults and young. Depending on whether individuals are foraging or breeding in the area, all life stages of special-status wildlife associated with the breeding season could be exposed to these stressors.

Additional indirect stressors on suitable and occupied habitat for covered wildlife species could also occur. Potential indirect impacts may include edge effects and degradation of native vegetation communities and water quality associated with litter, fire, introduction of invasive plant species, erosion, sedimentation, chemical spills during construction, and dust and pollutants associated with vehicles and machinery. Construction and mechanical soil disturbance may alter the drainage patterns of waterways. Indirect effects on suitable habitat could cause special-status species to cease using the area within and adjacent to construction footprints if habitat restoration has limited success and/or habitat degradation was severe enough to diminish resources needed for foraging and nest/burrow/roost placement and construction. Edge effects and degraded native habitat could create hospitable habitats for predators of native wildlife species (e.g., western spadefoot, south coast garter snake), such as Argentine ants (*Linepithema humile*), African clawed frogs (*Xenopus laevis*), and bullfrogs. Fires within suitable habitat could result in loss of suitable foraging and breeding habitat, and, if during the breeding season, death of young.

Other potential impacts on suitable habitat include the compaction of soil due to construction vehicles, which may decrease the availability of friable soils for burrow creation. Soil that is not decompacted following construction so that it is friable enough for digging burrows could prevent burrowing animals from moving back into the area.

The goals, objectives, actions, and conservation measures that would be implemented as part of the Proposed Project would address impacts on terrestrial communities, and covered wildlife species would have a beneficial effect on both covered and noncovered special-status wildlife species. Habitat improvement activities include: conserving and managing terrestrial habitats (e.g., cismontane, cactus patches, alluvial fan sage scrub); rehabilitating and restoring habitats (e.g., soil addition, extraction, or decompaction); removing and controlling nonnative plant species (e.g., Spanish broom [*Spartium junceum*], annual grasses, castor bean); adjusting and maintaining stream flows and hydrological connectivity to benefit floodplain species; fuels reduction; implementing noise reduction measures; avoiding or minimizing the use of pesticides or rodenticides; and reducing human disturbances (e.g., recreational activities). These activities would benefit covered wildlife species' foraging and breeding habitat, provide wildlife movement, and protect watershed health, contributing to higher survival of these species in the Project Area. See Chapter 5, *Conservation Strategy*, of the Upper SAR HCP for details.

Covered Activities could result in the permanent removal of up to 706.3 acres of shrubland plant communities (of which 237.1 acres occur within existing basins), the permanent removal of 465.3 acres of alluvial fan sage scrub (of which 196.2 acres occur within existing basins), and the

permanent removal of 82.3 acres of grassland habitat (of which 38.9 acres occur in existing basins). These vegetation communities may be occupied by Group 1 Covered Wildlife Species. In the absence of other conservation actions, this would constitute a significant impact through habitat modification and potential direct mortality of covered wildlife species. However, implementation of the Conservation Strategy would offset direct and indirect impacts and would protect, enhance, and increase special-status wildlife habitat. Implementation of relevant avoidance and minimization measures (AMMs) would protect against direct and indirect mortality to special-status plant and wildlife species (see below). A small proportion of overall habitat would be affected by construction and maintenance activities, but protection, rehabilitation, and restoration activities are expected to result in an overall gain in wildlife habitat. The HCP Preserve System would conserve and improve environmental values to over a minimum of 875.1 acres of shrubland habitats, of which 509.4 acres would be alluvial fan sage scrub, and 152.5 acres of grassland habitat in the Alluvial Fan Preserve Unit A and Alluvial Fan Preserve Unit B. Land management and prioritization of land acquisition would be given to areas that function to preserve, enhance, or reestablish connectivity for terrestrial species over the landscape. HCP Preserve System lands will include shrubland and grasslands that would provide suitable habitat to support covered wildlife species potentially occurring within the Project Area.

The HCP identifies multiple Conservation Areas that will restore alluvial fan scrub habitats. Restoration and rehabilitation of these lands could result in temporary and permanent impacts on covered special-status wildlife species if they occupy the Conservation Areas. Indirect effects include those identified for Covered Activities.

### **Conclusion**

The net effect of the Proposed Project (issuance of ITPs and implementation of the HCP conservation measures) would be an overall beneficial effect on Group 1 covered plant and wildlife species during the Permit Term because the Proposed Project would require the establishment of the HCP Preserve System, which would conserve and restore habitat for covered plant and wildlife species. The Proposed Project would require the establishment and long-term management and monitoring of the HCP Preserve System.

Ground disturbing activities associated with alluvial fan scrub restoration could result in death and removal of Group 1 covered special-status plant species. This would be a significant impact. Implementation of applicable Conservation Strategy AMMs for slender-horned spineflower and Santa Ana River woolly-star (AMM-1, AMM-4, AMM-5, SHSF AMM-1 through SHSF AMM-4, SARW AMM-1 through SARW AMM-6) would reduce such impacts to less-than-significant levels.

Ground-disturbing activities associated with alluvial fan scrub restoration could result in the injury or death of Group 1 covered special-status wildlife species. Implementation of applicable Conservation Strategy AMMs for SBKR and Los Angeles pocket mouse (AMM-1, AMM-4, AMM-5, SBKR AMM-1 through SBKR AMM-7) during restoration activities would reduce the impacts on these species to less-than-significant levels. Implementation of applicable Conservation Strategy AMMs for nesting birds, burrowing owl, coastal cactus wren, and coastal California gnatcatcher (AMM-1, AMM-4, AMM-5, AMM-14, AMM-21, AMM-38, AMM-39, BUOW AMM-1, and CAGN AMM-1) would reduce the impacts on these species to a less-than-significant level. Implementation of Conservation Strategy AMM-1, AMM-4, and AMM-5, and CGSN AMM-1 through CGSN AMM-5 would reduce impacts on California glossy snake to less-than-significant. Implementation of Conservation

Strategy AMMs for western spadefoot (AMM-1, AMM-4, AMM-5, WESP AMM-1 and WESP AMM-2) would reduce the impacts on western spadefoot to a less-than-significant level.

Impacts on Group 1 Covered Species from implementation of Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) would be **beneficial**. No additional mitigation measures are required.

Impacts on Group 1 Covered Species from implementation of Restoration Activities would be reduced to **less-than-significant** levels with implementation of Conservation Strategy AMMs. No additional mitigation measures are required.

### **Mitigation Measures**

No additional mitigation measures are required.

### ***Impact BIO-2: 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: Impacts on Group 2 HCP Covered Species and Habitat due to Implementation of HCP***

Implementing the Proposed Project would allow direct and indirect impacts on riparian and wetland habitats used by Group 2 Covered Species from construction of water reuse, groundwater recharge wells, and water conveyance infrastructure, as well as routine O&M and habitat improvement, management, and monitoring (Covered Activities) that would occur in the Permitting Area. Riparian habitat losses or disturbance that could occur during the Permit Term from Covered Activities is estimated to be approximately 87.4 acres; wetland loss and disturbance is estimated to be approximately 21 acres (refer to Table 3.4-6). The Covered Activities effects include temporary and permanent loss of riparian and wetland habitats available to Group 2 Covered Species and potential for reduced riparian and wetland habitat quality associated with a reduction in the extinction depth. Detailed analyses of impacts on riparian and wetland plant communities and Covered Species from Covered Activities are also provided in the Upper SAR HCP in Chapter 4, *Take Assessment and Impact Analysis*.

### **Covered Special-Status Wildlife Species**

Covered Activities could affect Group 2 covered wildlife species that occupy riparian and wetland habitats, including mountain yellow-legged frog, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, western yellow-billed cuckoo, tricolored blackbird, south coast garter snake, and southwestern pond turtle. Implementing the Proposed Project would offset direct and indirect impacts on these covered wildlife species from construction and maintenance activities.

Covered Activities may temporarily or permanently remove riparian and wetland habitats for covered wildlife species. These direct impacts would result from construction of new water facilities and infrastructure, new access roads and other impervious surfaces, and routine O&M activities, as well as habitat rehabilitation and restoration activities. Loss of suitable and occupied habitat could result in less available foraging, nesting, roosting, and breeding habitat for covered wildlife species in the region. If areas that are temporarily disturbed are not successfully restored and suitable habitat does not re-establish, individuals and populations of Group 2 covered special-status wildlife species may not occur in areas that they had previously occupied.

Implementation of the Conservation Strategy (e.g., restoration/rehabilitation activities, nonnative invasive species removal, surveys) in riparian and wetland plant communities could result in direct mortality, injury, or harassment of individual Group 2 covered wildlife species. Injury to and/or mortality of Group 2 covered wildlife could result in the incidental taking of these species, which could lead to a decline in population numbers in the region. Impacts on riparian and other sensitive natural communities adjacent to the project limits of disturbance may be caused by construction activities (e.g., soil compaction, introduction of nonnative invasive species, dust, increased fire risk, chemical spills, sedimentation), which could lead to the degradation of native habitats and floodplains.

The movement of heavy equipment and supplies during construction and O&M activities could compact the soil, affecting vegetation germination and growth. Soil compaction occurs when soil particles are pressed together, reducing pore space between them. Heavily compacted soils contain few large pores, which are the most effective in moving water through the soil when it is saturated, and thus have a reduced rate of both water infiltration and drainage from the compacted layer. In addition, the exchange of gases slows down in compacted soils, causing an increase in the likelihood of root aeration problems. Also, compacted soil means that roots must exert greater force to penetrate the compacted layer. Soil compaction would inhibit seed germination and root penetration in the soil surface and could result in bare soil or sparsely vegetated areas. Vegetation removal and soil compaction would expose soil to the erosive forces of rain and overland stormwater runoff, causing sediment to smother vegetation within and beyond project footprints, especially in areas with steep terrain.

During construction and O&M activities, the operation of heavy equipment could generate fugitive dust from loose soil. Any accumulation of fugitive dust on vegetation could affect plant growth by inhibiting photosynthesis and reducing vegetation density and plant diversity. More tolerant native plant species could benefit from decreased competition. However, invasive plants could colonize and disrupt the overall plant ecosystem. The magnitude and duration of dust exposure, tolerance of native vegetation, and aggressiveness of invasive plants would determine vegetation response and the intensity of impacts.

Accidental release of contaminants during construction (short term) and O&M activities (long term), such as an inadvertent spill of gasoline, oil, or lubricants when fueling or storing construction equipment, could affect plant growth. Accidental releases of hazardous materials could affect plant communities in the vicinity of the spill. The magnitude of impacts would depend on the type and volume of material spilled, the location, and habitat affected. However, an uncontained spill of hazardous materials would likely be relatively small and affect a limited area because the volume of these materials that may be present at a construction location would be relatively small, and there would be no long-term storage of hazardous materials at construction locations.

These activities may temporarily and or permanently remove suitable habitat for Group 2 covered special-status species, including riparian, wetlands, open waters, and woodlands vegetation communities (Table 3.4-6). These direct impacts would result from water reuse or habitat rehabilitation and restoration activities. Loss of suitable and occupied habitat could result in less available foraging, nesting, roosting, and breeding habitat for Group 2 covered special-status wildlife species in the region. If areas that are temporarily disturbed are not successfully restored and suitable habitat does not re-establish, individuals and populations of Group 2 covered special-status wildlife species may not occur in areas that they had previously occupied.

Construction and O&M activities in riparian plant communities could result in direct mortality, injury, or harassment of individual special-status wildlife. Injury to and/or mortality of Group 2 covered wildlife species could result in the incidental taking of these species. Loss of individual Group 2 covered wildlife will cause a decline in population numbers in the region until restoration of temporary disturbance areas is successful.

The goals, objectives, actions, and conservation measures that would be implemented as part of the Proposed Project to address impacts on riparian and wetland habitats and covered wildlife species would have a beneficial effect on both covered and non-covered special-status wildlife species. Habitat improvement activities include the following.

- Conserving and managing riparian and wetland habitats
- Removing and controlling nonnative plant species
- Adjusting and maintaining stream flows and hydrological connectivity to benefit floodplain species; fuels reduction; implementing noise reduction measures
- Avoiding or minimizing the use of pesticides or rodenticides
- Reducing human disturbances (e.g., recreational activities)

These activities would benefit covered wildlife species foraging and breeding habitat, provide wildlife movement, and protect watershed health, contributing to higher survival of these species in the Project Area. See *Chapter 5, Conservation Strategy*, of the Upper SAR HCP for details.

Covered Activities could result in the permanent removal of up to 51.1 acres of riparian vegetation communities (of which 3.6 acres occur within existing water recharge/flood control basins) and 81.6 acres of wetland vegetation communities (of which 71.7 acres occur within existing water recharge/flood control basins) that may be occupied by Group 2 Covered Wildlife Species. In the absence of other conservation actions, this would constitute a significant impact through habitat modification and potential direct mortality of covered wildlife species. However, implementation the HCP Conservation Strategy would offset direct and indirect impacts and would protect, restore/rehabilitate, and increase special-status wildlife habitat. Implementation of relevant AMMs would protect against direct and indirect mortality to special-status plant and wildlife species (see below). A small proportion of overall habitat would be affected by construction and maintenance activities, but protection, rehabilitation, and restoration activities are expected to result in an overall gain in wildlife habitat. The HCP Preserve System would conserve and improve environmental values to over 208 acres of riparian habitats and 39 acres of wetland habitat in the Santa Ana River Preserve Unit. Land management and prioritization of land acquisition would be given to areas that function to preserve, improve, or re-establish connectivity for terrestrial and aquatic species over the landscape. HCP Preserve System lands will include riparian woodland and wetlands that would provide suitable habitat to support covered wildlife species potentially occurring within the Project Area.

Habitat improvement activities are anticipated to occur in Hidden Valley Creek, Hidden Valley Pond, Lower Hole Creek, and Sunnyslope Creek. Restoration and rehabilitation could result in temporary and permanent impacts on covered special-status wildlife species if they occupy the habitat improvement sites.

## Conclusion

The net effect of the Proposed Project (issuance of ITPs and implementation of the HCP conservation measures) would be an overall beneficial effect on Group 2 covered wildlife species during the Permit Term because the Proposed Project would require the establishment of the HCP Preserve System, which would conserve and rehabilitate/restore habitat for covered wildlife species. The Proposed Project would require the establishment and long-term management and monitoring of the HCP Preserve System.

Ground-disturbing activities associated with riparian and wetland restoration could result in the injury or death of Group 2 covered special-status wildlife species. This would be a significant impact. Implementation of applicable Conservation Strategy AMMs for least Bell's vireo, southwestern willow flycatcher, tricolored blackbird, yellow-breasted chat, and western yellow-billed cuckoo (AMM-1, AMM-4, AMM-5, AMM-21, AMM-38, AMM-39, LBVI AMM-1, SWFL AMM-1, TRBL AMM-1, YBCH AMM-1, and WYBC AMM-1) would reduce the impacts on these species to a less-than-significant level. Implementation of Conservation Strategy AMM-1, AMM-4, and AMM-5, SCGS AMM-1 through SCGS AMM-6, and SWPT AMM-1 through SWPT AMM-4 would reduce impacts on south coast garter snake and southwestern pond turtle to less-than-significant. Implementation of Conservation Strategy AMM-1, AMM-4, AMM-5, and MYFL AMM-1 through MYLF AMM-3 would reduce impacts on mountain yellow-legged frog to **less-than-significant** levels.

Impacts on Group 2 Covered Species from implementation of Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) would be **beneficial**. No additional mitigation measures are required.

Impacts on Group 2 Covered Species from implementation of Restoration Activities would be reduced to **less-than-significant** levels with implementation of Conservation Strategy AMMs. No additional mitigation measures are required.

## Mitigation Measures

No additional mitigation measures are required.

***Impact BIO-3: 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: Impacts on Group 3 HCP Covered Species and Habitat due to Implementation of HCP***

Implementation of the Proposed Project and Covered Activities would result in direct and indirect impacts on aquatic habitat in the Santa Ana River from construction and operation of water reuse and stormflow capture projects, and habitat improvement, management, and monitoring that would occur in the Permit Area. Aquatic habitat modification and loss in river flow and commensurate flow velocities in the upper Santa Ana River and some tributaries could result in the following.

- Loss of deep scour pool habitat and general increase in shallow water conditions
- Reducing river flow velocities and stream depths due to a reduction in baseflow discharge
- Potential for improved habitat suitability for nonnative warm water aquatic predators (e.g., bullfrog, sunfish, bass, and catfish)
- Loss of Santa Ana sucker and arroyo chub occupied habitat

- Reduced gravel/cobble substrate availability
- Reduction in gravel/cobble substrate availability due to lower velocity flows and reduced sand transport
- Reduced amount of wetted habitat (acreage) available for each life stage (reduced wastewater discharge and temporary direct effects)
- Reduced habitat suitability: warmer water, reduced depth and high velocity areas leading to overall reduced viability for Covered Species (reduced wastewater discharge)
- Reduced recruitment resulting from degraded conditions and/or increased competition for suitable habitat and resources (reduced wastewater discharge)

Refer to Table 3.4-8, which summarizes the potential impacts on aquatic habitat, for the Conservation Strategy and outcomes compared to existing conditions. Detailed analyses of impacts on aquatic habitat in the Santa Ana River from Covered Activities is also provided in the Upper SAR HCP in Chapter 4, *Effects Analysis*.

Stream channel dewatering or diversion associated with Covered Activity groundwater recharge projects could result in desiccation, suffocation, and/or predation of special-status fish due to stranding in isolated or dewatered aquatic habitats (e.g., Santa Ana speckled dace). Fish could also be harmed during dewatering or diversion activities if entrained in pumping equipment or impinged at intakes if pumping methods are used in the diversions.

Construction of water reuse infrastructure would have direct effects on suitable and occupied habitat for special-status aquatic species and would include vegetation removal, excavation and filling, and grading in existing stream channels and riparian areas. These activities could cause a permanent change in substrate composition and channel morphology in aquatic habitat; change patterns of erosion and sedimentation; create a permanent loss of shallow-water habitat, riparian vegetation, and instream woody material; change water temperatures; and change instream hydrological flows and volumes if water is diverted from streams and if woody material is removed from waterways that could benefit habitat for aquatic species. Over time, these effects could alter aquatic habitat structure, hydrology, and function from existing conditions and could adversely affect special-status species.

Construction work in open water habitat, including instream habitat restoration or rehabilitation activities, may require temporarily dewatering of stream channel segments, which could result in the temporary relocation or displacement of special-status native aquatic species and impede the use of nursery sites. Temporary dewatering activities may also limit the ability of sensitive semi-aquatic species to pass between aquatic habitats.

Permanent direct effects from aquatic habitat rehabilitation and restoration activities include removal of in-channel debris to improve fish passage, placement of rock (gravel, cobble, boulders) and large woody debris in and along restored channels to improve spawning and foraging habitat for Santa Ana sucker, minimizing pool (deep and slow velocity flow) formation, and using rock structures like gabions to create and sustain pool habitat by scouring. Placement of spawning habitat in stream channels may temporarily remove riparian vegetation from channel banks (e.g., vegetation removed for equipment access) and may alter the existing in-channel habitat structure and function for special-status aquatic species.

Construction and operation of Covered Activities in and near the Santa Ana River and its tributaries, including Mill Creek, City Creek, Plunge Creek, Warm Creek, Cajon Wash, and Lytle Creek, could affect fish movement within the Planning Area. Projects could include construction of wells and water infrastructure, treatment facilities, diversions, recharge basins, general property and facility maintenance and water reuse projects, groundwater recharge, wells and water conveyance infrastructure, routine O&M, and habitat improvement, management and monitoring. These Covered Activities may result in the construction of new infrastructure (e.g., berms, basins, drains, outlets) within potential movement corridors, but are not expected to create impassible barriers within the corridors or eliminate corridors. All of the corridors would still be functional once construction is completed; therefore, no permanent impacts are anticipated.

Substances toxic to special-status aquatic species, such as petroleum products, transmission fluid, hydraulic fluid, coolant, and degreaser, may enter habitats via leaks or spills from construction equipment within limits of disturbance. Pollution of aquatic habitats by toxic substances is of particular concern because the toxins could be quickly transported downstream or concentrate in ponded areas. Exposure to toxic substances could result in lethal or non-lethal direct effects on fish, such as physiological impairment that prevents or interferes with migration, feeding, and reproduction. Exposure to toxin concentrations for a sufficient duration could cause mortality.

Temporary direct effects could also result from operation of heavy equipment and pile driving. Noise, visual disturbances, and ground vibrations associated with these activities could result in temporary abandonment, reduction in use of habitat areas, or physiological stressors to any special-status aquatic species that are present within the Permit Area.

Construction also has the potential for temporary direct effects on special-status aquatic species and their suitable habitat from a possible decrease in water quality due to erosion and road runoff, turbidity, or sedimentation. Sediment disturbed during excavation and enhancement activities in or adjacent to aquatic habitats could cause increased suspended sediment concentrations and turbidity at both the construction site and downstream. Sediment could also be delivered to stream habitats during dewatering and diversion activities, particularly at the point of re-entry of diverted water, and can be transported downstream changing bathymetric and hydrological conditions. Erosion of soils may also occur at construction sites following precipitation events prior to vegetation replanting or establishment or in the event that erosion control BMPs fail or are ineffective. High concentrations of suspended sediment can cause direct damage to gill filaments of fish, which in some cases can lead to mortality, and could also reduce foraging abilities. High levels of turbidity and reduced dissolved oxygen could trigger avoidance and alarm behavior leading to physical displacement from preferred habitat, which in turn could lead to physiological stress and reduced feeding. This could adversely affect all life stages of special-status aquatic and semi-aquatic species and could also reduce foraging abilities of these species. Such increases in turbidity could temporarily impair feeding by native fishes or disrupt other behaviors; however, Santa Ana sucker, arroyo chub, and Santa Ana speckled dace are adapted to turbid environments and can likely tolerate short-term, minor increases in suspended sediment and turbidity that would occur during construction. As a result, physiological impairment or mortality of special-status species as a result of increased sedimentation and/or turbidity is expected to be minimal.

Recurring O&M activities within the Permit Area, such as water reuse facility and infrastructure maintenance, wells and water conveyance infrastructure maintenance, and vegetation management, may have temporary direct effects on special-status aquatic or semi-aquatic species and their suitable habitat through the release of sediment and contaminants and the removal of in-channel



vegetative and woody material. An increase in the input of contaminants (e.g., petroleum-based chemicals, pesticides, heavy metals) to waterways could result from the presence of new impervious surfaces associated with new infrastructure, facilities, and access roads if runoff enters waterways.

The goals, objectives, actions, and conservation measures under the Upper SAR HCP addressing aquatic communities and Covered Species are anticipated to have a beneficial effect on both covered and non-covered special-status species. Aquatic habitat improvement activities include floodplain improvement/hydrological connectivity projects in the Santa Ana River watershed; increased surface water flows at tributary restoration sites; low-flow channel improvements; fish passage enhancements; and placement and enhancement of spawning habitat. These activities would benefit special-status fish species spawning and rearing habitat, provide fish movement, and protect watershed health, contributing to higher survival of these species in the Permit Area. The restoration of riparian natural communities adjacent to waterways would further benefit covered special-status fish and other covered aquatic species by providing cover and shade for thermoregulation and by providing vegetation that is a source of macroinvertebrates upon which special-status fish species feed. See Chapter 5, *Biological Objectives*, of the Upper SAR HCP for details regarding the Proposed Project's Conservation Strategy.

Taking into consideration the construction and operational impacts on aquatic resources and Group 3 Covered Species from Covered Activities and the habitat and species improvements that would be implemented under the Proposed Project, it is expected that the following conditions will occur under the Proposed Project during the Permit Term.

- Offsetting direct and indirect impacts on special-status species from the removal and/or disturbance of aquatic habitat, native resident fish and wildlife species, wildlife movement corridors, and/or nursery areas that could cause direct mortality
- Offsetting permanent and temporary removal of aquatic habitats during construction activities resulting in the loss of essential foraging, sheltering, and reproduction areas for these species
- Offsetting potential injury to or mortality of special status or Covered Species from temporary construction activities
- Partially offsetting loss of Group 3 Covered Species habitat in the Upper Santa River from reductions in surface water flow and velocities

Implementing the HCP would minimize impacts caused by water reuse activities by providing replacement water at various mainstem tributary streams and various habitat improvement opportunities in mainstem tributary streams and along the mainstem Santa Ana River. The HCP will ensure that the reduction in river flow caused by water reuse activities would be offset through conservation measures to establish a minimum flow requirement in the mainstem river and would implement measures to ensure that habitat management would be achieved in perpetuity for the benefit of the Santa Ana sucker and other aquatic resources in the Santa Ana River. Implementing the HCP would also benefit sensitive species and their habitats by improving the connectivity, quantity, and/or quality of aquatic, riparian, floodplain, and upland habitats. Many native wildlife species would benefit from the HCP objectives and goals, including goals to increase gene flow between core populations by creating movement corridors connecting core populations; to maintain, increase, and restore habitat and hydrological connectivity; to establish dispersal pathways by removing barriers to movement (where appropriate) and/or restoring and enhancing fragmented habitat.

## Conclusion

The net effect of the issuance of the ITPs and implementation of the HCP conservation measures is anticipated to have an overall beneficial effect for the majority of Group 3 covered wildlife species, specifically arroyo chub, speckled dace, mountain yellow-legged frog, south coast garter snake, and southwestern pond turtle, during the Permit Term because implementing the HCP would require the establishment of the HCP Preserve System, which would conserve and restore habitat for these covered wildlife species. Furthermore, the Proposed Project would require the establishment and long-term management and monitoring of the HCP Preserve System, which would afford further benefits.

Although implementation of the HCP's conservation measures is anticipated to fully offset most impacts associated with implementation of Covered Activities, suitable aquatic habitat for the Group 3 Covered Species, including Santa Ana sucker, would be affected by the reduction in surface water flows proposed in the Planning Area. Santa Ana suckers have more narrow aquatic habitat requirements than other Group 3 Covered Species and the amount of suitable habitat within the Planning Area is more limited. Consequently, although it is anticipated that the HCP's Conservation Strategy will expand the range of the Santa Ana sucker, via the creation of new habitat in Santa Ana River tributary streams and through translocation to mainstem Santa Ana River mountain streams, and will also reduce direct impacts on the species with implementation of AMMS, because of the reductions of surface waters that occur in affected reaches as a result of the Covered Activities, to be conservative, this EIR identifies a **significant and unavoidable impact** on the Santa Ana sucker. The other Group 3 Covered Species—south coast garter snake, southwestern pond turtle, mountain yellow-legged frog, Santa Ana speckled dace, and arroyo chub—have broader habitat requirements and are thus less likely to be affected by stream flow reductions; therefore, impacts on these species from reduced water flows is considered **less than significant**.

Restoration activities associated with the Conservation Strategy would enhance habitat for Group 3 Covered Species, and implementation of Conservation Strategy AMM-1, AMM-4, and AMM-5, SCGS AMM-1 through SCGS AMM-6, and SWPT AMM-1 through SWPT AMM-4 would reduce impacts on south coast garter snake and southwestern pond turtle to **less-than-significant** levels. Implementation of Conservation Strategy AMM-1, AMM-4, AMM-5, and MYFL AMM-1 through MYLF AMM-3 would reduce impacts on mountain yellow-legged frog to **less-than-significant** levels. Implementation of Conservation Strategy AMM-29 to AMM-31, SAS AMM-1, SAS AMM-2, SAS AMM-3, SASD AMM-1, and SASD AMM-2 would reduce impacts on arroyo chub and Santa Ana speckled dace to **less-than-significant** levels.

As noted above, restoration activities associated with the Conservation Strategy are anticipated to benefit aquatic habitat for Santa Ana sucker through quality enhancements compared with existing conditions. Furthermore, AMMs for Santa Ana sucker will be implemented, and the HCP's Up-Front and Stay-Ahead Provisions will require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. However, given the threatened status of the species and consideration of the species current limited distribution within the Santa Ana River, for the purposes of this CEQA analysis, the potential impact on Santa Ana sucker is conservatively found to be **significant and unavoidable**. The EIR reaches this conclusion because, although the Conservation Strategy is designed and expected to result in a net beneficial effect on Santa Ana Sucker, it cannot be concluded with complete confidence that all of the proposed conservation measures (e.g., translocation) will necessarily achieve their intended result.

## Mitigation Measures

No additional mitigation measures are required.

### ***Impact BIO-4: 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: Impacts on Non-HCP Covered Species and Habitat***

There are numerous special-status plant and wildlife species that have the potential to occur within the Project Area. Special-status plants and wildlife species that have potential to occur are identified in Tables 3.4-2 and 3.4-3, respectively. Most of these special-status plants and wildlife are species that are not proposed for coverage under the HCP. Additionally, migratory birds and raptors and their nests protected under the Migratory Bird Treaty Act and California Fish and Game Code are known or have the potential to occur within the Project Area. These non-Covered Species may be affected by Covered Activities and implementation of the Conservation Strategy under the HCP. This EIR quantitatively analyzes the Project's potential impacts on non-covered special-status plant and wildlife species.

Both direct and indirect impacts associated with Covered Activities are likely to affect non-covered plant and wildlife species. The Conservation Strategy and AMMs have been developed to avoid and minimize impacts on HCP Covered Species and natural vegetation communities. Projects and activities that would be implemented under the HCP, including activities associated with the Conservation Strategy, would be required to implement the AMMs. Though these AMMs were identified specifically to reduce adverse effects on covered special-status species, they would also reduce any adverse effects on non-Covered Species.

The Conservation Strategy under the HCP does not include goals and objectives for non-covered special-status species. However, goals and objectives specific to vegetation communities that provide suitable habitat for non-covered special-status species are included. Implementation of the HCP would result in the conservation and restoration/rehabilitation of a minimum of approximately 1,349 acres of natural vegetation communities in the HCP Preserve System for the benefit of Covered Species. Non-Covered Species would also benefit from the conservation, restoration and/or rehabilitation, and adaptive management and monitoring of these Preserve System lands.

Although the implementation of the Conservation Strategy (i.e., habitat improvement activities, nonnative plant management, nonnative invasive species control, erosion control, and monitoring activities) may result in temporary impacts on non-covered special-status species, these actions are expected to have a net benefit for HCP Covered Species and their habitats. These actions are expected to similarly benefit non-covered special-status plant and wildlife species and their habitats.

The environmental impact on non-covered special-status plants and wildlife species and their habitat resulting from construction and operation of Covered Activities under the HCP will be evaluated on a project-by-project basis pursuant to CEQA, and potentially significant impacts would be identified and mitigated pursuant to the requirements of applicable laws and regulations (refer to Section 3.4.2, *Regulatory Framework*).

## Non-Covered Special-Status Plants

Implementation of the Conservation Strategy would have overall benefits for non-covered special-status plant species through land preservation and habitat rehabilitation and restoration. Many of

the 206 non-covered special-status plant species that were determined to have a potential to occur within the Planning Area (Table 3.4-2) are montane forest and/or woodland species. Though the Planning Area for the Upper SAR HCP covers the majority of the Upper SAR watershed, which extends to the higher elevations of the San Gabriel and San Bernardino Mountains, the majority of the potential Conservation Areas in the watershed are located within the valley, with only a few occurring in the foothills and none within montane areas. As such, the majority of the non-covered special-status plant species would not likely be affected by implementation of Covered Activities and the Conservation Strategy. However, implementation of the Conservation Strategy may result in direct and indirect impacts similar to impacts on covered special-status plant species that occur within areas where conservation and habitat improvement activities would occur. This impact would be significant but would be reduced to **less-than-significant** levels through implementation of the relevant HCP AMMs for Covered Species of plants including slender-horned spinyflower and Santa Ana River woolly-star (AMM-1, AMM-4, AMM-5, SHSF AMM-1 through SHSF AMM-4, and SARW AMM-1 through SARW AMM-6) and Mitigation Measure BIO-1.

### **Non-Covered Special-Status Wildlife Species**

Implementation of the Conservation Strategy would have overall benefits for non-covered special-status wildlife species through land preservation and habitat restoration and rehabilitation. However, implementation of the Conservation Strategy may result in direct and indirect impacts on non-covered special-status wildlife species. Other O&M activities associated with the implementation of the Conservation Strategy (i.e., habitat restoration/rehabilitation activities, nonnative invasive species removal, surveys) require activities that may result in direct and indirect adverse impacts on non-covered special-status wildlife species.

Habitat improvement activities that would require the removal or trimming of vegetation, especially mature trees and trees containing snags, crevices, or peeling bark could directly harm nesting birds and roosting or hibernating bats if they were to occur during the nesting season or bat maternity season (typically April–August in Southern California). Bird eggs and young birds in the nest and young, flightless bats could be particularly susceptible to harm.

Ground-disturbing activities associated with riparian buffer floodplain creation, native riparian buffer vegetation restoration, and alluvial fan scrub restoration may result in potentially significant impacts on the following non-covered special-status wildlife species: coast range newt, Southern California legless lizard, coastal whiptail, red-diamond rattlesnake, coast horned lizard, coast patch-nosed snake, two-striped garter snake, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern grasshopper mouse, Dulzura pocket mouse, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, and American badger.

### **Conclusion**

The net effect of the issuance of the ITPs and implementation of the HCP conservation measures would be an overall **beneficial effect** on non-covered special-status plant and wildlife species during the Permit Term because the Proposed Project would require the establishment of the HCP Preserve System, which will conserve and restore/rehabilitate habitat for covered special-status species that would also benefit non-covered special-status plant and wildlife species. The Proposed Project would require the establishment and long-term management and monitoring of the HCP Preserve System.

Ground-disturbing activities associated with habitat improvement activities within the Preserve System could result in the injury or death of non-covered special-status wildlife species. This would be a significant effect. Implementation of applicable Conservation Strategy AMMs for western spadefoot (WESP AMM-1 and WESP AMM-2) as well as Mitigation Measure BIO-2 would reduce impacts on non-covered special-status amphibian species to **less-than-significant levels with mitigation**; implementation of Mitigation Measure BIO-2 would reduce impacts on non-covered reptile species to **less-than-significant levels with mitigation**. Implementation of the Conservation Strategy AMM-32 and AMM-33 would reduce impacts on non-covered special-status bird species to a **less-than-significant** level. Implementation of applicable Conservation Strategy AMMs for SBKR and Los Angeles pocket mouse (SBKR AMM-1 through SBKR AMM-7) would reduce the impacts on Dulzura pocket mouse, northwestern San Diego pocket mouse, pallid San Diego pocket mouse, and southern grasshopper mouse to **less-than-significant** levels. Implementation of Mitigation Measures BIO-3 through BIO-5 would reduce impacts on special-status bats, San Diego desert woodrat, and American badger, respectively, to **less-than-significant levels with mitigation**.

### **Mitigation Measures**

#### **BIO-1: Conduct Pre-activity Surveys to Document the Presence of Non-Covered Special-Status Plant Populations**

The Alliance shall retain a qualified botanist to document the presence or absence of non-covered special-status plant species within the Preserves. Surveys for non-covered special-status plant would be conducted prior to the commencement of restoration activities to determine the presence, location, and extent of any populations of non-covered special-status plant species. If non-covered special-status plants are found, the population would be incorporated into the project or restoration design to avoid, to the extent feasible, direct or indirect impacts on those species. Special-status plant populations near habitat improvement activities shall be protected by installing environmentally sensitive area fencing around the populations.

#### **BIO-2: Conduct Pre-activity Surveys to Document the Presence of Non-Covered Special-Status Amphibians and Reptiles**

Prior to conducting any ground-disturbing activities associated with the habitat improvement, the Alliance shall conduct pre-activity surveys for special-status amphibian and reptile species. If special-status species are observed within areas that will be disturbed, they will be encouraged to move out of those areas or will be captured and relocated to suitable habitat outside of disturbance areas. A qualified biologist shall be present during ground-disturbing activities to ensure that special-status amphibian and reptile species are not adversely affected.

#### **BIO-3. Conduct Pre-activity Surveys to Document the Presence of Bat Maternity and Hibernation Roosts**

Prior to ground-disturbing activities associated with habitat improvement activities (including vegetation removal) within suitable habitat for bat species, the Alliance shall retain a qualified biologist to conduct a bat roost assessment to determine whether bat maternity roosts or hibernation roosts are likely to occur. Any locations identified as suitable bat roosting habitat shall be subject to additional nighttime surveys during the summer months (i.e., June–August) to

determine roosting. Surveys will be conducted using a combination of visual inspection, exit counts, and acoustic surveys. If no maternity or hibernation roosts are detected, no further mitigation is required. If bats are found using vegetation subject to potential impacts, the species of bat(s) and number of bats will be determined.

If impacts on maternity roosts or hibernation roosts are likely, the following mitigation options are available:

- Habitat improvement activities involving vegetation removal shall occur in September through early November, after the breeding season and before the bat hibernation season. Furthermore, trees identified as suitable bat roost sites shall be removed using a two-step process that occurs over a 2-day period. On day one, branches and limbs that do not contain crevices or cavities shall be removed using hand tools or chainsaws. On day two, the remainder of the tree may be removed.
- A qualified biologist shall conduct a survey to determine presence of bats within maternity or hibernation roosts. If no roosting bats are found, no further mitigation is required. If bats are detected, a 50-foot exclusion zone shall be established around the occupied roost until roosting activities have ceased. The identified two-step process will be implemented where trees need to be removed/affected.

#### **BIO-4: Conduct Pre-activity Surveys to Document Presence of San Diego Desert Woodrats**

Within suitable habitat for the San Diego desert woodrat, the Alliance shall retain a qualified biologist to conduct surveys for San Diego desert woodrat not more than 30 days prior to the start of ground-disturbing activities (including vegetation removal). All San Diego desert woodrat nests shall be mapped and flagged for avoidance. Graphics depicting the location of all San Diego desert woodrat nests shall be provided to the Alliance to determine if those nests would be affected by habitat improvement activities. Any San Diego desert woodrat nests that cannot be avoided shall be relocated according to the following procedures.

- Each active nest shall be disturbed by the qualified biologist to the degree that San Diego desert woodrats leave the nest and seek refuge elsewhere. After the nests have been disturbed, the nest sticks shall be removed from the impact areas and placed outside of areas planned for impacts. Nests shall be dismantled during the non-breeding season (between October 1 and December 31), if possible. If a litter of young is found or suspected, nest material shall be replaced and the nest left alone for 2–3 weeks; after this time, the nest will be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling.

#### **BIO-5: Conduct Pre-activity Surveys to Document the Presence of American Badger**

Within suitable habitat for the American badger, the Alliance shall retain a qualified biologist to conduct focused preconstruction surveys for potential American badger dens within areas where ground-disturbing activities will occur no more than 2 weeks prior to the initiation of those ground-disturbing activities (including vegetation removal) associated with habitat improvement activities. If no potential American badger dens are present, no further mitigation is required. If potential dens are within disturbance areas, the following measures shall be required to avoid impacts on American badgers:

- If the biologist determines that potential dens are inactive, the biologist shall excavate the burrow by hand with a shovel to prevent badgers from reusing them during construction.
- If the biologist determines that potential dens may be active, and cubs may be present in the den, no impacts will occur until the cubs are no longer reliant on the den. Following confirmation that either cubs are not present, or are no longer dependent on the den, the entrances of the dens shall be blocked with one-way doors over a 3–5 day period. The one-way doors shall be checked daily to ensure that they are in proper working order and to determine if the burrows are still active. After the biologist determines that badgers have stopped using active dens within the area potentially affected by the activity, the dens shall be hand-excavated with a shovel to prevent re-use during construction.

***Impact BIO-5: 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***

### Direct Impacts

Potential effects on riparian woodlands from Project implementation are based on predictive modeling, and consequently they represent our best estimate of potential effects. Actual effects on riparian woodland habitat would be monitored and adaptively managed to ensure the potential effects estimated in the HCP Effects Analysis are not exceeded. Implementing the HCP would result in the permanent loss of approximately 51.1 acres of riparian woodlands (of which 3.6 acres occur within existing basins) and the temporary impacts on 39.9 acres of riparian woodland (Table 3.4-9). These temporary and permanent impacts would result from the changes in groundwater levels due to Covered Activities in the areas supporting riparian habitats. These assume that once riparian plant species are no longer able to access the groundwater, they will no longer be able to persist. The point at which an increasing depth to groundwater becomes too deep for a groundwater-dependent ecosystem (GDE) to reliably access the groundwater is called the *extinction depth*. More precisely, extinction depth is the elevation relative to the surface where evapotranspiration ceases. For this analysis, extinction depth is used to determine the depth to groundwater threshold where GDEs can no longer persist (i.e., plants no longer transpire). GDEs are defined for the purpose of this assessment as wetland and riparian land covers mapped within the groundwater basin underlying the Santa Ana River.

**Table 3.4-9. Impacts on Riparian Vegetation Communities and Land Cover Types**

Vegetation Community and Land Cover Type	Acres of Impact		
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary	Total
<i>Riparian</i>			
Interior Warm and Cool Desert Riparian Forest	50.1 (3.6)	36.1	86.2
Warm Desert Lowland Freshwater Marsh, Wet Meadow, and Shrubland	1.0	3.8	4.8
<b>TOTAL</b>	<b>51.1 (3.6)</b>	<b>39.9</b>	<b>91.0</b>

<sup>a</sup> Impact acreages in parentheses are on existing water recharge/flood control basins subject to regular O&M activities and are a subset of total acreage. For example, of the 50.1 acres of impacts on Interior Warm and Cool Desert Riparian Forest, 3.6 acres occurs within existing water recharge/flood control basins. Consequently, impacts outside of basins are 50.1 - 3.6 = 46.5 acres.

The goals, objectives, actions, and conservation measures under the Proposed Project addressing riparian communities would have a beneficial effect on riparian habitats by restoring and protecting riparian habitats and improving watershed health. Riparian habitat improvement activities include protecting riparian woodlands within the Preserve system. Creation of riparian floodplains would allow flood water that is currently confined to spill out of the channel, thereby reducing the flow's energy and reducing the potential for future channel incision and bank erosion. Floodplain construction would also create the hydrologic conditions necessary to support certain native riparian species that cannot exist in upland environments. The new floodplain would be constructed by excavating the ground adjacent to the channel to lower the elevation of the top of the channel's bank and increase the frequency with which flood water would be able to spill out of the channel and overbank onto the new floodplain. The riparian buffer would be 100 feet wide (50 feet on each side of stream) on average.

The desired future condition of the tributary stream restoration/rehabilitation projects is to produce riparian areas composed of native vegetation. However, currently some of the nonnative vegetation provides beneficial shade to aquatic life in the creeks and to terrestrial species, and it may be important to preserve some nonnative plants within the riparian buffer area that are identified as important sources of existing shade and roosting habitat or that are providing bank stability until newly planted vegetation becomes established. Future design work will include a detailed tree survey of native and nonnative trees.

The permanent loss of approximately 51.1 acres (of which 3.6 acres occur within existing basins) and temporary disturbance of 39.9 acres of riparian woodland associated with the Proposed Project is considered a significant impact. Implementation of the Proposed Project Conservation Strategy would likely have an overall benefit to riparian woodlands in the Planning Area because the Proposed Project would require the establishment of the HCP Preserve System, which would protect approximately 208.3 acres and restore and rehabilitate 216 acres of riparian woodlands, thereby protecting and improving riparian woodlands in the Planning Area. Therefore, impacts on riparian woodlands would be **less than significant with implementation of the Conservation Strategy**. Because the acreage of riparian woodlands that would be preserved and improved would be greater than the acreage that would be permanently affected, no additional mitigation measures are required. The impact would be **less than significant**.

### **Indirect Impacts**

Permanent ground disturbance adjacent to riparian woodlands could result in alterations in local ground and surface waters and the introductions of pollutants that could adversely affect the functions and values of riparian woodlands.

Temporary construction activities, as well as recurring O&M activities in and adjacent to riparian woodlands, could result in the inadvertent introduction of nonnative plant species, the accidental release of chemical pollutants, and erosion and sedimentation resulting from ground-disturbing activities that could adversely affect the functions and values of riparian woodlands. The cumulative reduction of flow from water reuse activities would result in less surface water flowing in the river and reaching Prado Basin. Although riparian vegetation of the Prado Basin is largely reliant on groundwater, the cumulative reduction in surface water flow could result in a gradual reduction of riparian vegetation in the river corridor. The HCP Conservation Strategy includes measures to track the distribution and condition of riparian vegetation along the river corridor and within Prado Basin. Dedicated, permanent supplemental water is proposed for the tributary restoration sites,



which would provide benefits to adjacent riparian vegetation. Nonnative vegetation management would also occur along the river corridor. The provision of dedicated permanent water supply to the tributary restoration streams, along with a reduction of nonnative plants, would enhance the quality of riparian habitats in the river corridor.

**Conclusion**

Implementation of the Proposed Project would have significant impacts on riparian habitats from the permanent loss of riparian woodlands. However, the net effect of the Proposed Project will be an overall beneficial effect on riparian woodlands because the Proposed Project would require the establishment of the HCP Preserve System, which would conserve 208.3 acres of new riparian woodlands and restore and enhance 216 acres of additional riparian woodlands. Additionally, implementing AMMs in the Conservation Strategy, general BMPs, and an SWPPP and erosion control plan would also reduce direct and indirect effects. Together, the preservation and improvement of riparian woodlands and implementation of Conservation Strategy AMMs would reduce these impacts to **less-than-significant** levels.

**Mitigation Measures**

No additional mitigation measures are required.

***Impact BIO-6: Have a substantial adverse effect on State or Federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means***

**Direct Impacts**

Implementing the HCP would offset direct and indirect impacts on special-status species from the permanent loss of approximately 74 acres of wetlands (of which 71.7 acres occur within existing basins) and 754.7 acres of other waters (of which 668.4 acres occur within existing basins) in the Permit Area as well as temporary impacts of 11.2 acres and 42.5 acres of wetlands and other waters, respectively (Table 3.4-10). These are composed of aquatic habitats (e.g., freshwater marshes, wet meadows, open water) that may be considered State and Federally protected wetlands and waters. Impacts were considered permanent if they result in irreversible effects or removal of resources. Permanent impacts would result primarily from construction activities, including water reuse projects, diversions, recharge basins, solar energy facilities, and wells and water infrastructure, as well as habitat enhancement and management. Temporary impacts are characterized as effects that are reversible and would be associated with vegetation management, and infrastructure and facilities O&M. Effects on wetlands and waters would occur primarily in the valley portion of the Planning Area.

**Table 3.4-10. Impacts on Wetlands and Other Waters**

Vegetation Community and Land Cover Type	Acres of Impact		
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary	Total
<i>Wetlands</i>			
Western North American Freshwater Aquatic Vegetation	6.7 (6.7)	1.9	8.6

<b>Vegetation Community and Land Cover Type</b>	<b>Acres of Impact</b>		
	<b>Permanent (portion within Existing Basins)<sup>a</sup></b>	<b>Temporary</b>	<b>Total</b>
Western North American Montane-Subalpine-Boreal Marsh, Wet Meadow, and Shrubland	0.2	0.1	0.3
Western North American Disturbed Marsh, Wet Meadow, and Shrubland	2.9	0.3	3.2
Western North American Temperate and Boreal Freshwater Marsh, Wet Meadow, and Shrubland	71.8 (65.0)	9.0	80.8
Wetlands Subtotal	81.6 (71.7)	11.2	92.8
<i>Water</i>			
Permanent Water	68.3 (27.2)	7.8	76.1
Water in Existing Basins	618.4 (618.4)	0.3	618.7
Dry Channel/Shrubland	67.9 (22.8)	34.5	102.4
Water Subtotal	754.7 (668.4)	42.5	797.2
<b>TOTAL</b>	<b>836.3 (740.1)</b>	<b>53.7</b>	<b>890.0</b>

<sup>a</sup> Impact acreages in parentheses are on existing water recharge/flood control basins subject to regular O&M activities and are a subset of total acreage. For example, of the 836.3 acres of total permanent impacts, 740.1 acres occurs within existing water recharge/flood control basins. Consequently, impacts outside of basins are 836.3 - 740.1 = 96.2 acres.

Independent jurisdictional delineations will be performed on a project-by-project level basis to determine potential jurisdiction of aquatic wetlands and other waters under USACE, RWQCB, and CDFW purview during the independent environmental review process for each project. More precise acreages of impacts on wetlands and other waters would be determined based on project-level jurisdictional delineations.

The goals, objectives, actions, and conservation measures under the Proposed Project addressing aquatic communities would have a beneficial effect on wetlands and other waters by protecting and increasing aquatic habitats and improving watershed health. Aquatic habitat improvement activities include floodplain restoration/hydrological connectivity projects in the Santa Ana River watershed, increased surface flow at mainstem tributary streams, low-flow channel improvements, creation of new floodplain benches, and creation of new tributary streams. See Table 3.4-8 as well as Chapter 5, *Biological Objectives*, of the Upper SAR HCP for details regarding the Proposed Project's Conservation Strategy.

The permanent loss of approximately 836.3 acres (of which 740.1 acres occur in exiting basins) and temporary disturbance of 53.7 acres of aquatic habitats that could encompass protected wetlands and other waters associated with the Proposed Project and nonfederal Covered Activities would be considered a significant impact absent mitigation. Regulatory permitting requirements for protected wetlands and waters require no net loss of wetland/waters functions and values. The Proposed Project conservation measures would likely benefit wetlands and other Waters of the United States because the Proposed Project would require the establishment of the HCP Preserve System, which would protect, create, restore, and rehabilitate aquatic habitats, thereby improving protected wetlands and other waters in the Planning Area.

### Indirect Impacts

Permanent ground disturbance adjacent to wetlands and other waters could result in alterations in local ground and surface waters and the introductions of pollutants that could adversely affect the functions and values of wetlands and other waters.

Temporary construction activities, as well as recurring O&M activities in wetlands and waters, could result in the inadvertent introduction of nonnative plant species, the accidental release of chemical pollutants into wetlands and waters, and erosion and sedimentation resulting from ground-disturbing activities that could adversely affect the functions and values of wetlands and waters. The cumulative reduction of flow from water reuse activities would result in less surface water flowing in the river and reaching Prado Basin. Although riparian vegetation of the Prado Basin is largely reliant on groundwater, the cumulative reduction in surface water flow could result in a gradual reduction of riparian vegetation in the river corridor. The HCP Conservation Strategy includes measures to track the distribution and condition of riparian vegetation along the Santa Ana River corridor and within Prado Basin. Dedicated permanent supplemental water is proposed for the tributary restoration sites, which would provide benefits to adjacent riparian and wetland habitats. Nonnative vegetation management would also occur along the river corridor. The provision of dedicated permanent water supply to the tributary restoration streams, along with a reduction of nonnative plants, would enhance the quality of riparian and wetland habitats along the river corridor.

### Conclusion

Implementation of the Proposed Project could have significant impacts from the permanent loss of wetlands and other waters. However, the net effect of the Proposed Project will be an overall beneficial effect on wetlands and other waters because the Proposed Project would require the establishment of the HCP Preserve System, which would conserve 39.0 acres of new wetland habitats and 37.8 acres of permanent water and improve 54 acres of additional wetlands. Additionally, implementing AMMs in the Conservation Strategy, general BMPs, and a SWPPP and erosion control plan would also reduce direct and indirect effects. Together, the preservation and restoration of wetlands and implementation of Conservation Strategy AMMS would reduce these impacts to **less-than-significant** levels.

### Mitigation Measures

No additional mitigation measures are required.

***Impact BIO-7: 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***

Impacts on wildlife movement and corridors from implementation of the Proposed Project, including the construction and operation of Covered Activities, would be limited. Implementing the HCP would offset direct and indirect impacts on wildlife movement and corridors through the establishment of the HCP Preserve System, which will conserve and manage, in perpetuity, multiple Conservation Areas composed of natural land cover types that will create, restore and/or rehabilitate, to the greatest extent practicable, migration corridors for Covered Species or other special-status species. A majority of the conserved lands planned for inclusion in the HCP Preserve

System will be contiguous with existing open spaces and other protected areas within the Planning Area, thus enhancing their benefits for wildlife movement.

Covered Activities and the Proposed Project will be designed to minimize impacts on wildlife movement, and projects proposed in more natural areas would be sited and BMPs implemented to provide for safe movement of wildlife species around project sites both during construction and in the long term following project completion. Temporary impact areas would be restored to ensure that natural cover is available to wildlife species following project completion. Permanent impacts that sever or substantially interfere with the movement of wildlife are not anticipated.

Temporary impacts may occur primarily as a result of construction activities, including water reuse projects, diversions, recharge basins, solar energy facilities, and wells and water infrastructure, as well as habitat enhancement and management. These impacts would be short term in nature and may consist of noise, ground vibration, and human presence disturbances resulting from activities such as vegetation management; maintenance and repair of access roads, channels, levees, and banks; and removal of silt, clay, and debris from basins, culverts, and diversion structures. However, because these activities would be temporary or not be located in current migratory corridors, they are not anticipated to interfere substantially with the movement of wildlife species or with wildlife corridors.

### **Conclusion**

The net effect of the Proposed Project would be an overall **beneficial effect** on Covered Species and other special-status species because the Proposed Project would require the establishment of the HCP Preserve System, which would prioritize the conservation and long-term management of a landscape of natural land cover types that will create, restore and/or rehabilitate, to the greatest extent practicable, migration corridors for Covered Species or other special-status species. The conserved lands planned for inclusion in the HCP Preserve System would generally be continuous with existing open spaces and protected areas within the Plan Area, thus enhancing their benefits for wildlife movement.

### **Mitigation Measures**

No additional mitigation measures are required.

### ***Impact BIO-8: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance***

Implementing the Proposed Project would offset direct and indirect impacts on Covered Species from the construction and operation of Covered Activities that could require the removal of trees during vegetation management and grading. O&M activities designed to keep access roads and water facilities and infrastructure clear and accessible would require vegetation management, which could involve both tree trimming and/or tree removal. Implementation of the Proposed Project could conflict with local tree policies and ordinances, including the County of San Bernardino Tree Policy (Chapter 88.01 Plant Protection and Management), County of Riverside Tree Removal Ordinance (Ordinance No. 559), and County of Riverside Oak Tree Management Guidelines, as well as other applicable local tree ordinances under city jurisdictions.

Because specific details are not known at this time for some activities, the locations of and exact number of trees to be affected resulting from construction and O&M activities cannot be predicted.

Quantitative analysis of the number, species, size, and location of trees to be affected will be performed at a project-by-project level basis during the independent environmental review process.

### **Conclusion**

The net effect of the Proposed Project will be an overall **beneficial** effect on Covered Species, other special-status species, and natural vegetation because the Proposed Project would require the establishment of the HCP Preserve System as well as AMMs and compliance with applicable local tree policies and/or ordinances. Therefore, no additional mitigation measures are required.

### **Mitigation Measures**

No mitigation measures are required.

### ***Impact BIO-9: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan***

The Planning Area overlaps with five other HCPs: the Wash Plan HCP, Lake Mathews MSHCP, SKR HCP, WRC MSHCP, and West Valley HCP. Some of the Permit Area overlaps with conservation lands under these other plans. Implementing the Proposed Project would offset direct and indirect impacts on special-status species from activities that may conflict with the provisions outlined in these HCPs, as described below. Impacts on special-status species, natural communities, wetlands and other waters, and wildlife movement corridors that occur in lands located within these other HCPs would be similar to those described in Impact BIO-1 through Impact BIO-8 above.

### **Western Riverside County MSHCP**

The southern portion of the Permit Area occurs within the boundaries of the WRC MSHCP area (Figure 3.4-3). Thirty-three activities facilitated by the implementation of the Proposed Project fall within the WRC MSHCP, including the construction and O&M of groundwater recharge, wells and water conveyance infrastructure, and water reuse projects, as well as habitat improvement, management, and monitoring projects (Figure 3.4-4). Construction and operation of 33 of these projects may affect lands within the WRC MSHCP Planning Area necessary to fulfill the conservation objectives of the overall Reserve Assembly, including habitat management units, area plans and subunits, criteria cells, PQP conserved lands, cores and linkages, and species survey areas. WRC MSHCP area components to be affected and the type of impact that would occur are listed in Table 3.4-11. In addition, impacts may occur within WRC MSHCP-designated riparian/riverine resources, including riparian habitats, open waters, wetlands, and riparian species, as described in Impact BIO-1 through Impact BIO-6, above.

Implementing the Proposed Project would result in direct and indirect impacts on special-status species from the removal of habitat within WRC MSHCP area that may result in a loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in the WRC MSHCP. In contrast, the Proposed Project would be beneficial to WRC MSHCP species and would be consistent with the WRC MSHCP conservation objectives within the Planning Area (e.g., habitat restoration/rehabilitation). As a part of the proposed HCP Preserve System, 301 acres of restoration/rehabilitation of native vegetation communities would occur within the WRC MSHCP area. Habitat improvement activities conducted as part of the Proposed Project would create an ecological and/or hydrological lift that would benefit Covered Species of the WRC MSHCP.

To compensate for any loss of Conservation Areas in the WRC MSHCP, project proponents would need to coordinate with the wildlife agencies and/or the Western Riverside County Regional Conservation Authority (WRCRCA) to develop a mitigation plan that demonstrates biological equivalency to offset any losses and to ensure that the project is as consistent with the WRC MSHCP as possible. Should any impacts within the WRC MSHCP area affect the permittees' obligations and/or implementation of the conservation strategies outlined in the WRC MSHCP, then it is possible that an amendment to the WRC MSHCP and the associated USFWS and CDFW permits and agreements may be required (per WRC MSHCP Section 6.10 [WRCRCA 2003]); however, this will be determined on a project-by-project level basis during the independent environmental review process.

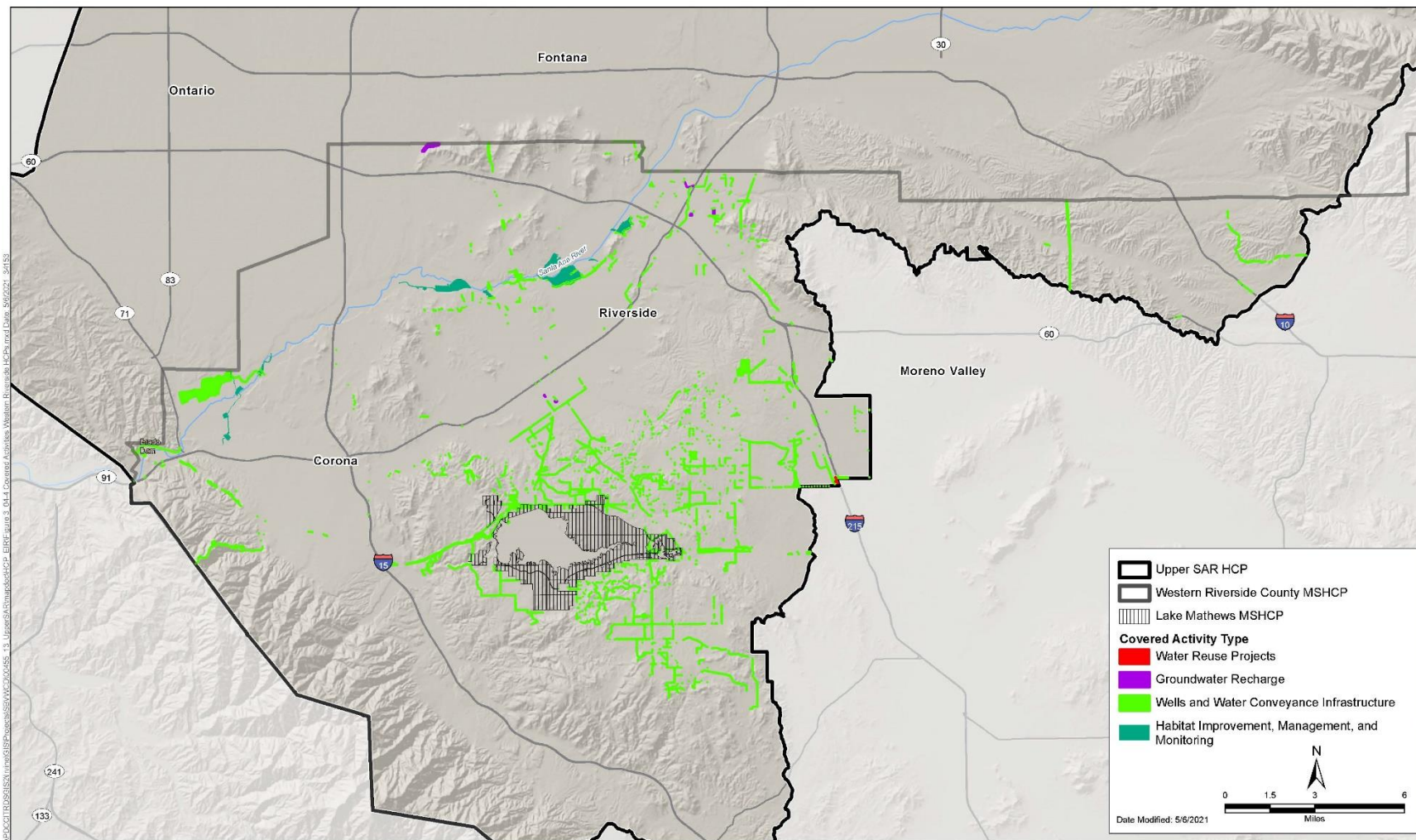


Figure 3.4-4. Potential Upper SAR HCP Covered Activity Conflicts within the Western Riverside County HCPs

**Table 3.4-11. Covered Activities Occurring within WRC MSHCP Conservation Areas**

<b>WRC MSHCP Area Component</b>	<b>WRC MSHCP Area Component to be Affected by the Proposed Project</b>	<b>Type of Activity</b>
Habitat Management Units	River, San Timoteo, Gavilan, San Jacinto, Santa Ana Mountains, Forest Service Trabuco, Badlands	<ul style="list-style-type: none"> <li>• Groundwater recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Water reuse projects</li> <li>• Habitat improvement, management, and monitoring</li> </ul>
Area Plans and Subunits	<p><u>Cities of Riverside and Norco Area Plan:</u> Subunit 1 Santa Ana River South, Subunit 2 Sycamore Canyon/Box Springs West</p> <p><u>Highgrove Area Plan:</u> Subunit 1 Sycamore Canyon/Box Springs Central, Subunit 2 Springbrook Wash North</p> <p><u>Jurupa Area Plan:</u> Subunit 1 Santa Ana River North, Subunit 2 Jurupa Mountains, Subunit 3 Delhi Sands Area</p> <p><u>Lake Mathews/Woodcrest Area Plan:</u> Subunit 1 Lake Mathews East, Subunit 3 Gavilan Hills West, Subunit 4 Good Hope West</p> <p><u>Mead Valley Area Plan:</u> Subunit 2 Gavilan Hills East</p> <p><u>Reche Canyon/Badlands Area Plan:</u> Subunit 3 Badlands North</p> <p><u>Temescal Canyon Area Plan:</u> Subunit 1 Santa Ana River/Santa Ana Mountains, Subunit 2 Prado Basin, Subunit 3 Temescal Wash West, Subunit 4 Sierra Hills/Lake Mathews West</p> <p><u>The Pass Area Plan:</u> Subunit 1 Potrero/Badlands, Subunit 2 Badlands/San Bernardino National Forest, Subunit 3 San Timoteo Creek</p>	<ul style="list-style-type: none"> <li>• Wells and water conveyance infrastructure</li> <li>• Habitat enhancement, management, and monitoring</li> <li>• Wells and water conveyance infrastructure</li> <li>• Groundwater Recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Wells and water conveyance infrastructure</li> <li>• Wells and water conveyance infrastructure</li> <li>• Wells and water conveyance infrastructure</li> <li>• Wells and water conveyance infrastructure</li> <li>• Wells and water conveyance infrastructure</li> </ul>
Criteria Cells	0, 8, 10, 11, 12, 17, 21, 22, 45, 46, 55, 75, 76, 146, 187, 196, 233, 301, 323, 326, 386, 387, 408, 410, 411, 443, 473, 474, 475, 534, 545, 570, 617, 621, 634, 635, 655, 721, 743, 931, 933, 936, 1032, 1612, 1616, 1702, 1704, 1706, 1826, 2026, 2119, 2120, 2121, 2211, 2212, 2213, 2214, 2304, 2306, 2307, 2308, 2309, 2310, 2323, 2324, 2325, 2326, 2400, 2402, 2403, 2404, 2405, 2407, 2408, 2419, 2420, 2421, 2423, 2523, 2524, 2627, 2628, 2631, 2634, 2735, 2736, 2740, 2842, 2843, 2844, 2846, 2848, 2853, 2948, 2949, 2950, 2951, 3052, 3054, 3055, 3056, 3158, 3164, 3263, 3267, 3370	<ul style="list-style-type: none"> <li>• Groundwater recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Habitat improvement, management, and monitoring</li> </ul>



<b>WRC MSHCP Area Component</b>	<b>WRC MSHCP Area Component to be Affected by the Proposed Project</b>	<b>Type of Activity</b>
Public/Quasi-Public (PQP) conserved lands Object IDs	3, 4, 10, 12, 13, 20, 23, 24, 25, 26, 30, 31, 35, 38, 47, 56, 59, 64, 78, 89, 90, 103, 106, 111, 114, 116, 121, 129, 131, 141, 165, 167, 168, 169, 175, 176, 177, 203, 232, 234, 235, 237, 246, 251, 262, 267, 268, 274, 275, 276, 277, 278, 279, 281, 294, 303, 307, 310, 314, 315, 319, 321, 322, 323, 324, 325, 326, 330, 369, 385, 387, 390, 391, 392, 394, 398, 401, 402, 404, 405, 407, 466, 471, 476, 478, 481, 484, 485, 486, 490, 495, 496, 497, 505, 535, 537, 538, 540, 621, 622, 623, 624, 625, 626, 627, 628, 630, 631, 637, 638, 643, 644, 646, 684, 686, 697, 701, 702, 703, 704, 706, 707, 709, 710, 711, 712, 718, 727, 728, 731, 735, 743, 745, 748, 750, 753, 760, 763, 781, 783, 822, 839, 845, 846, 848, 867, 873, 875, 878, 895, 908, 963, 969, 978, 994, 1006, 1039, 1043, 1048, 1049, 1052, 1061, 1062, 1068, 1070, 1071, 1077, 1110, 1111, 1113, 1114, 1115, 1116, 1121, 1126, 1128, 1130, 1137, 1141, 1146, 1160, 1161, 1164, 1172, 1173, 1177, 1178, 1179, 1180, 1184, 1189, 1190, 1191, 1192, 1196, 1197, 1200, 1265, 1269, 1283, 1299, 1327, 1343, 1361, 1382, 1383, 1384, 1406, 1412, 1415, 1437, 1441, 1466, 1499, 1506, 1511, 1515, 1532, 1537, 1555, 1558, 1560, 1582, 1588, 1599, 1651, 1660, 1661, 1668, 1699, 1728, 1790, 1804, 1811, 1822, 1829, 1837, 1855, 1860, 1878, 1879, 2258, 2447, 2568	<ul style="list-style-type: none"> <li>• Groundwater recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Habitat improvement, management, and monitoring</li> </ul>
Cores and Linkages	CL-1, CL-2, CL-7, CL-23, Core-1, Core-3, Core-A, Core-B, Core-C, Core-D, ECE-2, L-3, L-6, L-12, NCH-2, NCH-3, NCH-A	<ul style="list-style-type: none"> <li>• Groundwater Recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Habitat improvement, management, and monitoring</li> </ul>
Survey Areas	Narrow Endemic Plants Survey Areas 1, 7, and 8	<ul style="list-style-type: none"> <li>• Groundwater recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Habitat improvement, management, and monitoring</li> </ul>
	Criteria Area Species Survey Areas 1 and 6	<ul style="list-style-type: none"> <li>• Wells and water conveyance infrastructure</li> </ul>
	Mammals Survey Area 3	<ul style="list-style-type: none"> <li>• Groundwater recharge</li> <li>• Wells and water conveyance infrastructure</li> </ul>

WRC MSHCP Area Component	WRC MSHCP Area Component to be Affected by the Proposed Project	Type of Activity
	Burrowing Owl Survey Area	<ul style="list-style-type: none"> <li>• Groundwater recharge</li> <li>• Wells and water conveyance infrastructure</li> <li>• Water reuse projects</li> <li>• Habitat improvement, management, and monitoring</li> </ul>

### Lake Mathews MSHCP

The entire Lake Mathews MSHCP plan area occurs within the Planning Area of the Proposed Project (Figure 3.4-3). Five activities are proposed within the Lake Mathews MSHCP boundaries and could conflict with the plan's provisions, including the construction of wells and water conveyance infrastructure, and O&M activities. Construction and operation of these projects could potentially affect Lake Mathews MSHCP lands along the west and northern shore of Lake Mathews and in the eastern portion of the Planning Area near the intersection of Cajalco Road and El Sobrante Road (Figure 3.4-4). Lake Mathews MSHCP lands that could potentially be affected include mitigation bank lands and Lake Mathews-Estelle Mountain Reserve lands, which contain suitable and occupied habitat for Covered Species under the Lake Mathews MSHCP.

Should any activity remove habitat within the Lake Mathews MSHCP mitigation bank or reserve lands, then it would result in a loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in the Lake Mathews MSHCP. Because this would not be an allowable use or activity under the Lake Mathews MSHCP, any removal of mitigation bank or reserve lands would be in conflict with the provisions outlined in the plan. To compensate for any loss of mitigation or reserve lands in the Lake Mathews MSHCP, project proponents would need to coordinate with the Lake Mathews Reserve Management Committee and wildlife agencies to develop a mitigation plan that demonstrates biological equivalency to offset the loss and to ensure that the project is as consistent with the Lake Mathews MSHCP as possible. Should any impacts on the Lake Mathews MSHCP mitigation bank and/or reserve lands affect the permittees' obligations and/or implementation of the Conservation Strategy outlined in the Lake Mathews MSHCP, then it is possible that an amendment to the Lake Mathews MSHCP and the associated USFWS and CDFW permits and agreements may be required (per Lake Mathews MSHCP Section 3.G.4 [MWD/RCHCA 1995]); however, this will be determined on a project-by-project level basis during the independent environmental review process.

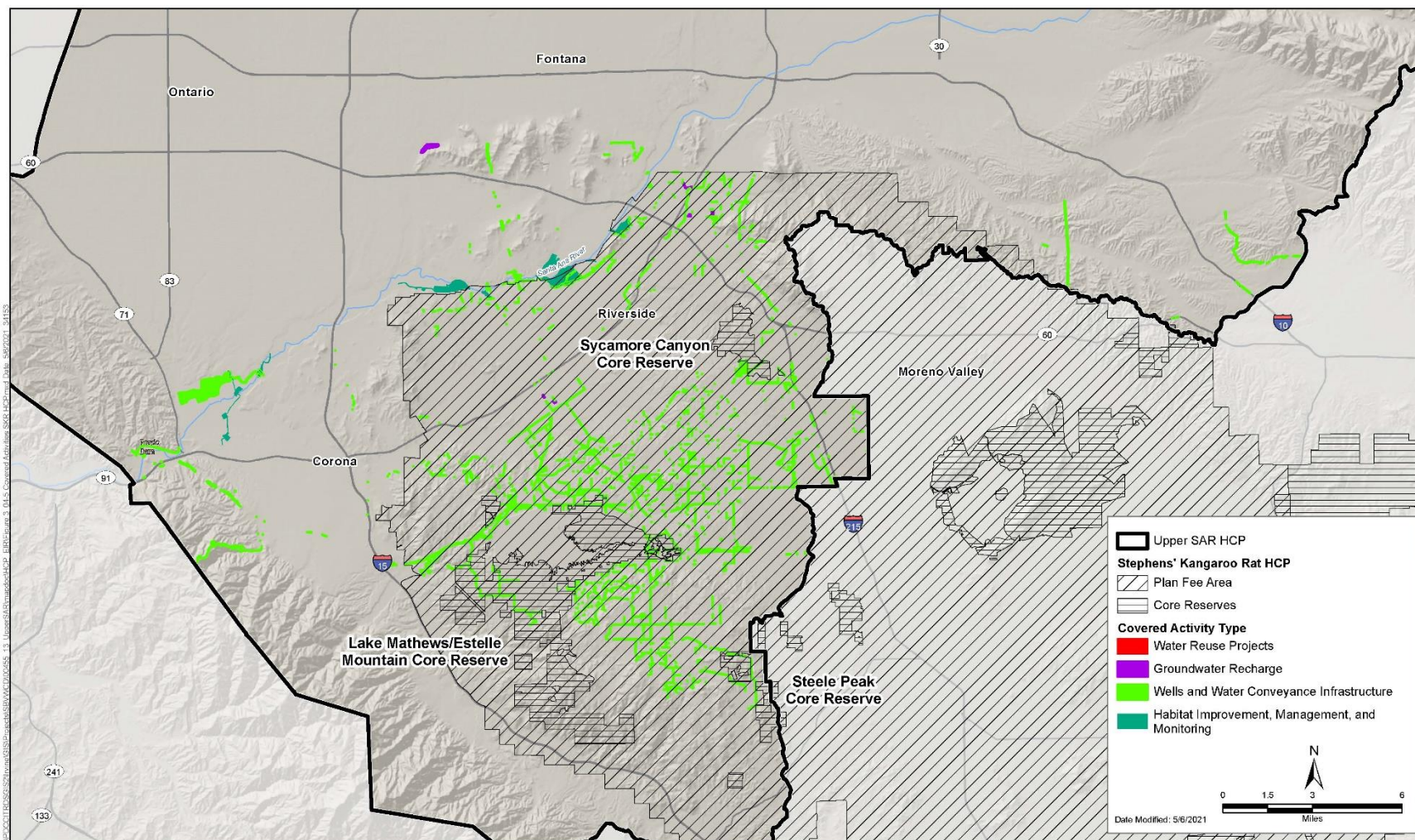
Because the specific details are not known at this time for some activities, the exact impacts on Lake Mathews MSHCP mitigation bank and reserve lands resulting from construction and O&M activities cannot be predicted. Quantitative analysis of the exact areas, acreages, and protected resources under the Lake Mathews MSHCP to be affected by each activity will be performed at a project-by-project level basis during the independent environmental review process. The net effect of the Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) will be an overall beneficial effect on Covered Species and other special-status species and eventual implementation of Covered Activities would result in biological impacts on Covered Species that are less than significant because the Proposed Project would require the establishment of the HCP

Preserve System that will conserve and provide long-term management of lands within the plan area of the Lake Mathews MSHCP.

### **Stephens' Kangaroo Rat HCP**

The southern portion of the Proposed Project occurs within the boundaries of the SKR HCP plan area (Figure 3.4-3). Twenty-one activities are proposed within the SKR HCP boundary and Plan Fee Area and could conflict with the plan's provisions, including the construction of wells and water conveyance infrastructure, water reuse projects, groundwater recharge, and O&M activities, as well as habitat improvement, management, and monitoring (Figure 3.4-5). Five activities would occur within the Lake Mathews/Estelle Mountain Core Reserve (wells and water conveyance infrastructure), two within the Sycamore Canyon Core Reserve (wells and water conveyance infrastructure), and two within the Steele Peak Core Reserve (wells and water conveyance infrastructure). Construction and operation of these projects would potentially affect SKR HCP lands, including designated core reserves, Plan Fee Areas, and suitable and occupied habitat for SKR.

Should any of the activities remove habitat within the SKR HCP Core Reserve lands, then it would result in a loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in the SKR HCP. Because this would not be an allowable use or activity under the SKR HCP, any removal of core reserve lands would be in conflict with the provisions outlined in the plan. To compensate for any loss of core reserve lands in the SKR HCP, project proponents would need to coordinate with the RCHCA and wildlife agencies to develop a mitigation plan that demonstrates biological equivalency to offset the loss and to ensure that the project is as consistent with the SKR HCP as possible. Should any impacts on the SKR HCP Core Reserve lands affect the permittees' obligations and/or implementation of the Conservation Strategy outlined in the SKR HCP, then it is possible that an amendment to the SKR HCP and the associated USFWS and CDFW permits and agreements may be required (per SKR HCP Section 5.F.5 [RCHCA 1996]); however, this will be determined on a project-by-project level basis during the independent environmental review process. Any activity that occurs within the SKR Plan Fee Area (Figure 3.4-5) may also need to pay the required mitigation fee to comply with the SKR HCP and CEQA (per SKR Mitigation Fee Ordinance 663.10). Because the specific details are not known at this time for some activities, the exact impacts on the SKR HCP Core Reserve and Plan Fee Area lands resulting from the implementation of construction and maintenance activities cannot be predicted. Quantitative analysis of the exact areas, acreages, and protected resources under the SKR HCP to be affected by each activity will be performed at a project-by-project level basis during the independent environmental review process. The net effect of the Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) will be an overall beneficial effect on Covered Species and other special-status species and eventual implementation of Covered Activities would result in biological impacts on Covered Species that are less than significant because the Proposed Project would require the establishment of the HCP Preserve System that will conserve and provide long-term management of lands within the plan area of the SKR HCP.



**Figure 3.4-5. Potential Upper SAR HCP Covered Activity Conflicts within the Stephens' Kangaroo Rat HCP**

### **Upper Santa Ana River Wash Habitat Conservation Plan**

The entire Wash Plan HCP plan area occurs within the Planning Area (Figure 3.4-3). Fourteen activities are proposed within the Wash Plan HCP boundaries and could conflict with the plan's provisions, including the construction of wells and water infrastructure, groundwater recharge, water reuse projects, and habitat improvement, management, and monitoring as well as routine O&M (Figure 3.4-6). Construction and operation of these activities could potentially affect Wash Plan HCP preserve lands, including designated management units, mitigation lands, and suitable and occupied habitat for Wash Plan HCP Covered Species.

The Wash Plan HCP covers water infrastructure projects and has several of the same participating water agencies as that of the Upper SAR HCP. However, while some activities occur within the boundaries of both HCPs, the Covered Activities and associated ITP of the Wash Plan HCP are independent of those ITPs anticipated as part of the Proposed Project.

Should removal of habitat occur within the Wash Plan HCP preserve lands, then it would result in a loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in the Wash Plan HCP. Because this would not be an allowable use or activity under the Wash Plan HCP, any removal of preserve lands would be in conflict with the provisions outlined in the plan. To compensate for any loss of preserve lands in the Wash Plan HCP, project proponents would need to coordinate with the Conservation District and wildlife agencies to develop a mitigation plan that demonstrates biological equivalency to offset the loss and to ensure that the project is as consistent with the Wash Plan HCP as possible. Should any impacts on the Wash Plan HCP preserve lands affect the permittees' obligations and/or implementation of the Conservation Strategy outlined in the Wash Plan HCP, then it is possible that an amendment to the Wash Plan HCP and the associated USFWS and CDFW permits and agreements may be required (per Wash Plan HCP Section 6.6 [San Bernardino Valley Water Conservation District 2018]); however, this will be determined on a project-by-project level basis during the independent environmental review process.

Because the specific details are not known at this time for some activities, the exact impacts on Wash Plan HCP preserve lands resulting from construction and O&M activities cannot be predicted. Quantitative analysis of the exact areas, acreages, and protected resources under the Wash Plan HCP to be affected by each project will be performed at a project-by-project level basis during the independent environmental review process.

As a part of the proposed HCP Preserve System, 198 acres of restoration and/or rehabilitation of native vegetation communities would occur within the Wash Plan HCP area. These habitat improvement activities conducted as part of the Proposed Project would create an ecological and/or hydrological lift that would benefit Covered Species of the Wash Plan HCP plan area.

The net effect of the Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) would be an overall beneficial effect on Covered Species and other special-status species and eventual implementation of Covered Activities would result in biological impacts on Covered Species that are less than significant because the Proposed Project would require the establishment of the HCP Preserve System that will conserve and provide long-term management of lands within the plan area of the Wash Plan HCP.



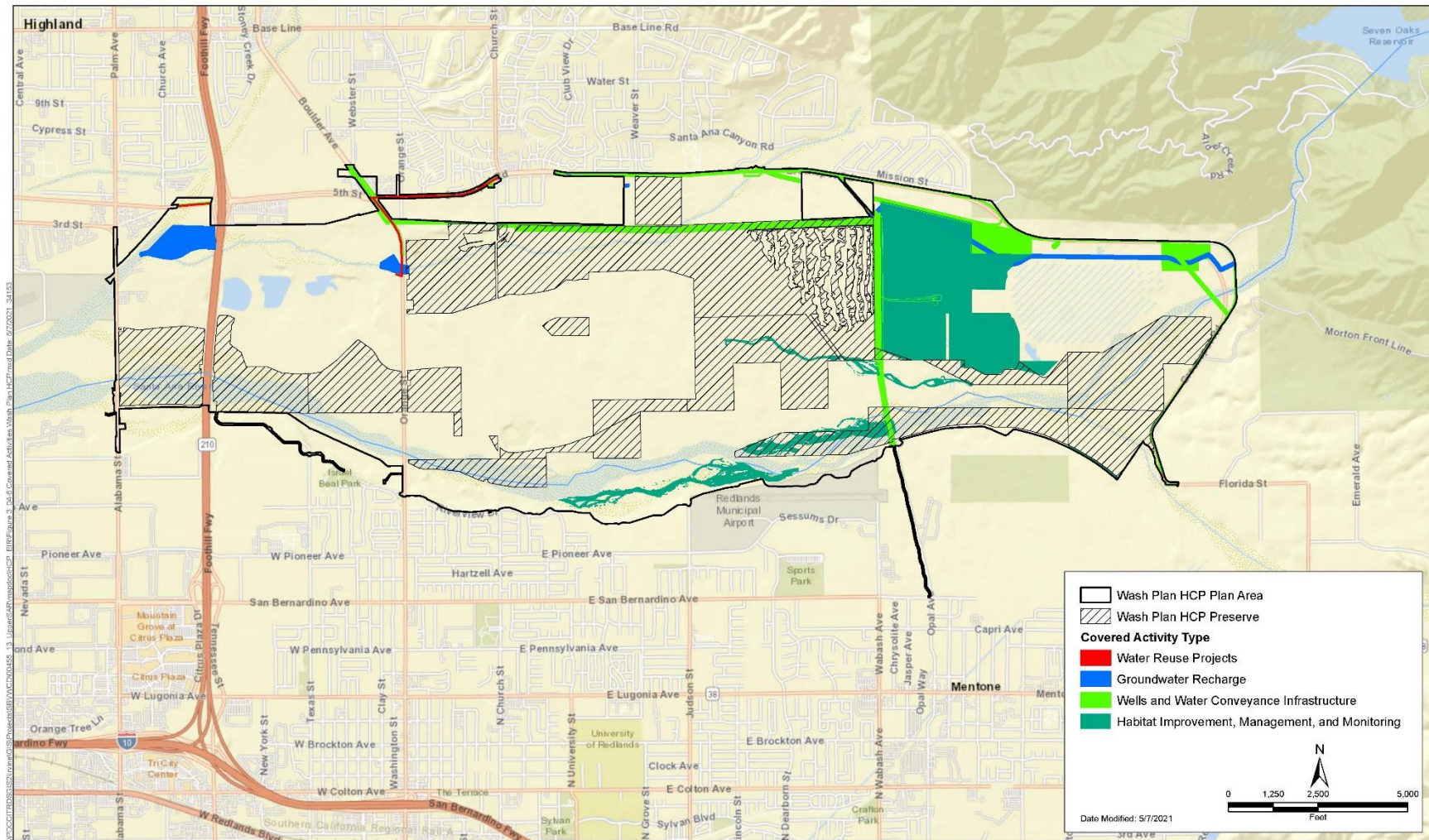


Figure 3.4-6. Potential Upper SAR HCP Covered Activity Conflicts within the Wash Plan HCP

### **West Valley HCP**

The entire West Valley HCP plan area occurs within the Planning Area of the Proposed Project (Figure 3.4-3). Two activities are proposed within the West Valley HCP boundaries and could conflict with the plan's provisions, including the construction of wells and water conveyance infrastructure (Figure 3.4-7). Although construction and operation of these projects would potentially affect West Valley HCP lands, including designated management units and suitable and occupied habitat for Delhi Sands flower-loving fly, the Proposed Project would not be issued incidental take for the fly. Activities are proposed on the borders of the Unit 1 management unit along North Eucalyptus Avenue and North Sycamore Avenue South and within the Unit 4 management unit along Slover Avenue, but they would be required to implement measures to avoid impacts on potentially occupied habitats (see Impact BIO-1 above).

Should habitat be removed within any of the West Valley HCP management units, then it would result in a loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in the West Valley HCP. Because this would not be an allowable use or activity under the West Valley HCP, any removal of management unit lands would be in conflict with the provisions outlined in the plan. To compensate for any loss of management unit lands in the West Valley HCP, coordination would need to occur with the Riverside Land Conservancy and wildlife agencies to develop a mitigation plan that demonstrates biological equivalency to offset the loss and to ensure that the project is as consistent with the West Valley HCP as possible. Should any impacts on the West Valley HCP management units affect the implementation of the conservation strategy outlined in the West Valley HCP, then it is possible that an amendment to the West Valley HCP and the associated USFWS permits and agreements may be required (per West Valley HCP Section 9.0 [RBF 2014]); however, this will be determined on a project-by-project level basis during the independent environmental review process.

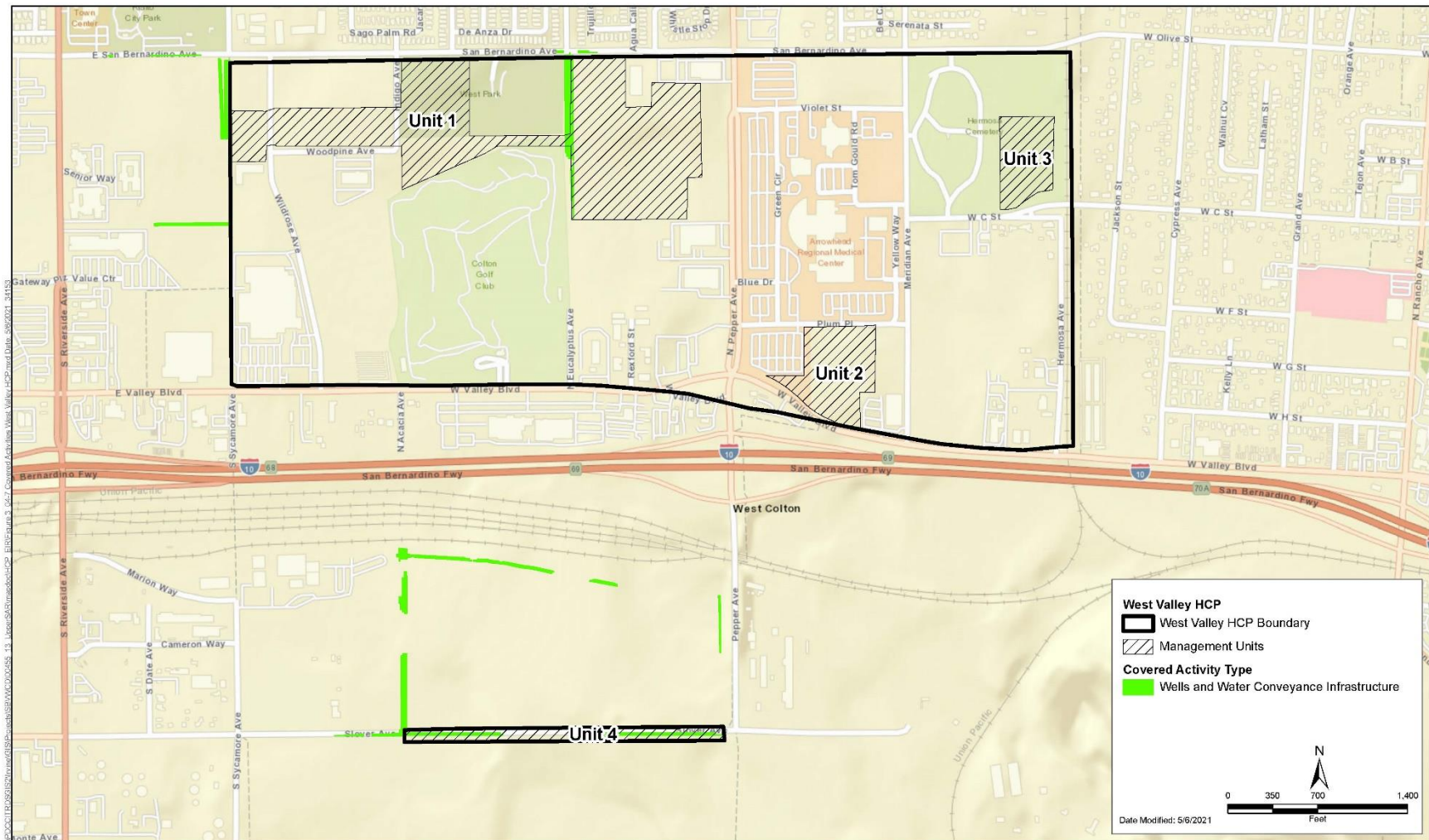


Figure 3.4-7. Potential Upper SAR HCP Covered Activity Conflicts within the West Valley HCP



Because the specific details are not known at this time for some activities, the exact impacts on West Valley HCP management units resulting from construction and O&M activities cannot be predicted. Quantitative analysis of the exact areas and acreages to be affected and whether or not activities would encroach into management units under the West Valley HCP will be determined at a project-by-project level basis during the independent environmental review process. The net effect of the Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) will be an overall beneficial effect on Covered Species and other special-status species, and eventual implementation of Covered Activities would result in biological impacts on Covered Species that are less than significant because the Proposed Project would require the establishment of the HCP Preserve System that will conserve and provide long-term management of lands within the plan area of the West Valley HCP.

### Conclusion

Because the specific details are not known at this time for some activities, the exact impacts on Conservation Areas for the WRC MSHCP/NCCP, Upper Santa Ana River Wash HCP, SKR HCP, Lake Mathews HCP, and West Valley HCP resulting from construction and O&M activities cannot be predicted. Quantitative analysis of the exact areas, acreages, and protected resources under the HCPs that could be affected by each activity will be performed at a project-by-project level basis during the independent environmental review process.

Implementation of the Covered Activities, including the Conservation Strategy, could have significant impacts related to temporary and permanent loss of areas within established HCPs. However, the net effect of the Proposed Project (issuance of the ITPs and implementation of the HCP conservation measures) would be an overall beneficial effect on Covered Species and other special-status species through the establishment of the HCP Preserve System. Additionally, implementation of AMMs under the Conservation Strategy as well as Mitigation Measures BIO-6 and BIO-7 would reduce the impacts to **less-than-significant levels with mitigation**.

### Mitigation Measures

#### **BIO-6: Conduct Impact Analysis to Ensure that Activities Do Not Conflict with the Provisions, Goals, and Objectives of Other HCPs within the Permit Area**

Permittees with Covered Activities proposed in other HCPs within the Permit Area (i.e., Wash Plan HCP, Lake Mathews MSHCP, WRC MSHCP, SKR HCP, West Valley HCP) shall conduct an impact analysis as part of the environmental review process on a project-by-project basis prior to implementation. Should an activity impact any designated conservation lands under one of these HCPs, then a mitigation plan will be developed to ensure no net loss of HCP conservation lands. Compensation for the permanent loss of conservation lands would be accomplished through the acquisition of replacement lands at a minimum 1:1 ratio. These lands will provide equivalent or greater habitat value and be located adjacent to the existing HCP conservation lands. Restoration of temporary impact areas on HCP conservation lands will be accomplished through on-site restoration of those temporarily affected areas, including the development of a Habitat Mitigation and Monitoring Plan. The mitigation plan would be developed in consultation with the applicable HCP reserve managers and policy authorities (i.e., WRCRCA, Lake Mathews Reserve Management Committee, RCHCA, Conservation District, Riverside Land Conservancy), USFWS, and CDFW to ensure that the activity does not conflict with the provisions, goals, and

objectives of the HCP and that the mitigation plan will offset any losses and is biologically equivalent.

#### **BIO-7: Comply with Policies, Goals, Objectives, and Conservation Measures of Other HCPs Located within the Permit Area**

Any activity that occurs within the boundaries of another HCP located within the Permit Area (i.e., Wash Plan HCP, Lake Mathews MSHCP, WRC MSHCP, SKR HCP, West Valley HCP) shall comply and be consistent with the policies, goals, objectives, and conservation measures of that plan to the maximum extent feasible.

### **3.4.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of biological resource effects that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C for a more detailed discussion of Covered Activities that could create biological resources impacts and potential best practices that could be incorporated into future projects to reduce biological resource impacts.

Covered Activities by type and their possible relationship to biological impacts if implemented with permit coverage are shown in Table 3.4-12 and discussed below.

**Table 3.4-12. Construction and Operation of Covered Activities and Their Relevance to Biological Resources**

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and O&M of existing and new water treatment plants and associated facilities	Excavation and grading would remove vegetation cover, potentially affecting biological resources. Siting new facilities, both structures and infrastructure, could adversely affect biological resources. Grading and excavation could adversely affect biological resources.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, O&M of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and O&M of existing and new recharge basins	See Water Reuse Projects.
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the O&M of this infrastructure and associated development	See Water Reuse Projects.
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	See Water Reuse Projects.

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Routine Operations and Maintenance (O&M)	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Ground-disturbing activities are expected to be minimal, associated with weed abatement, access road maintenance, site repairs, trash clean up, etc., and are not expected to unearth or damage biological resources in already affected areas.

Potential biological resource impacts that could result from implementing the types of Covered Activities identified in Table 3.4-12 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.4-12, biological resource impacts associated with constructing, operating, and maintaining these types of Covered Activities include ground disturbance during O&M of new or expanded facilities. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity biological resource impacts and best practices that could be employed to reduce potential impacts.

Recommended best practices to reduce biological resource impacts of future Covered Activities include implementing general and species-specific AMMs identified in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP as well as the establishment of the HCP Preserve System.

## 3.5 Cultural Resources

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *cultural resources* are the tangible remains of past human activity and typically greater than 50 years in age. These could include pre-European contact Native American sites, buildings, structures, rock art, earthworks, landscapes, water conveyance features such as canals or ditches, and precontact or post-contact objects or collections. Cultural resources are a nonrenewable resource that may provide unique information about past cultures, lifeways, and environments.

### 3.5.1 Environmental Setting

#### 3.5.1.1 Regional Setting

##### Cultural Setting

Building on early studies and focusing on data synthesis, Wallace (1955, 1978) developed a prehistoric chronology for the Southern California coastal region that is still widely used today and is applicable to coastal and many inland areas, including southwestern San Bernardino and Riverside Counties. Four periods are presented in Wallace's prehistoric sequence: Early Man, Milling Stone, Intermediate, and Late Prehistoric. In addition to Wallace's classic summary, a regional synthesis developed by Warren (1968) is referred to in the following discussion.

When Wallace defined the Early Man Period in the mid-1950s, there was little evidence of human presence on the Southern California coast prior to 6000 B.C. Archaeological work in the intervening years has identified numerous older sites dating prior to 10,000 years ago, including ones on the coast and Channel Islands (e.g., Erlandson 1991; Rick et al. 2001:609; Johnson et al. 2002; Moratto 1984, 2004). The earliest accepted dates for occupation are from two of the northern Channel Islands off the coast of Santa Barbara. On San Miguel Island, Daisy Cave clearly establishes the presence of people in this area about 10,000 years ago (Erlandson 1991). On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago (Johnson et al. 2002). Recent data from inland as well as coastal sites during this period indicate that the economy was a diverse mixture of hunting and gathering. At near-coastal and inland sites, it appears that an emphasis on hunting may have been greater during the Early Man Period than in later periods; numerous Clovis-like or Folsom-like fluted points have been found in San Bernardino County along shorelines of Pleistocene lakes in the desert portion of the county. Subsistence patterns shifted around 6000 B.C. coincident with the gradual desiccation associated with the onset of the Altithermal, a warm and dry period that lasted for about 3,000 years.

The Milling Stone Period of Wallace (1955, 1978) and Encinitas Tradition of Warren (1968) are characterized by an ecological adaptation to collecting, and by the dominance of small seed grinding. Milling stones, such as metates and slabs, and handstones, such as manos and mullers, occurred in large numbers for the first time, and were even more numerous near the end of this period. As indicated by their toolkits, people during this period practiced a mixed food procurement strategy.

Subsistence patterns varied somewhat as groups became better adapted to their regional or local environments.

Koerper and Drover (1983) suggest that Milling Stone Period sites reflect migratory settlement patterns of hunters and gatherers who used marine resources during the winter and inland resources the remainder of the year. More recent research indicates that residential bases or camps were moved to resources in a seasonal round (de Barros 1996; Mason et al. 1997; Koerper et al. 2002), or that some sites were occupied year-round, with portions of the village population leaving at certain times of the year to exploit seasonally available resources (Cottrell and Del Chario 1981). Regardless of settlement system, it is clear that subsistence strategies during the Milling Stone Period included hunting small and large terrestrial mammals, marine mammals, and birds; collecting shellfish and other shore species; extensive use of seed and plant products; the processing of yucca and agave; and near-shore fishing (Reinman 1964; Kowta 1969).

Wallace's Intermediate Period and Warren's Campbell Tradition date from approximately 3000 B.C. to A.D. 500. This era is characterized by a shift toward a hunting and maritime subsistence strategy along with a wider use of plant foods. During the Intermediate Period, there was a pronounced trend toward greater adaptation to regional or local resources. For example, chipped stone tools suitable for hunting were more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Mortars and pestles, used for processing acorns, became more common during this period, gradually replacing manos and metates as the most abundant milling stone implements. In addition, hopper mortars and stone bowls, including steatite vessels, appear to have entered the toolkit at this time. This shift appears to be a correlate of a diversification in subsistence resources. Many archaeologists believe this change in milling tools signals a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn (e.g., Glassow et al. 1988; True 1993).

Wallace (1955, 1978) places the beginning of the Late Prehistoric Period around A.D. 500. In all chronological schemes for Southern California, the Late Prehistoric Period lasts until European contact occurred in A.D. 1769. During the Late Prehistoric Period, there was an increase in the use of plant food resources and an increase in land and marine mammal hunting. There was a concurrent increase in the diversity and complexity of material culture during this period, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely chipped projectile points, usually stemless with convex or concave bases, indicates an increased use of the bow and arrow—rather than the atlatl and dart—for hunting. Cottonwood series triangular projectile points in particular are diagnostic of this period (Koerper and Drover 1983).

During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages (Wallace 1955:223). Large populations and, in places, high population densities were characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages where people resided year-round. The populations of these villages may have also increased seasonally. In Los Angeles, Orange, western Riverside, and southwestern San Bernardino Counties, similar changes (introduction of cremation, pottery, and small triangular arrow points) are thought to have resulted from Takic migration to the coast from inland desert regions. This Takic or Numic Tradition was formerly referred to as the "Shoshonean wedge" or "Shoshonean intrusion" (Warren 1968).

## Historic Context

Post-contact history for the state of California is generally divided into three specific periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California began in 1769 with the establishment of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marked the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signaled the beginning of the American Period when California became a territory of the United States (Smith et al. 2008).

### Spanish Period (1769–1822)

Sailing expeditions along the coast of Southern California were led by Spanish explorers between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríguez Cabrillo stopped in 1542 at present-day San Diego Bay. With his crew, Cabrillo explored the shorelines of present-day Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half century by Spanish naval officer Sebastian Vizcaino. Vizcaino's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California, based on the surveys conducted by Cabrillo and Vizcaino (Bancroft 1886:96–99; Grumprecht 1999:35).

More than 200 years would pass before Spain would begin colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portola marked the beginning of California's "Historic Period," occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Native Americans from Baja California, and Mexican civilians, Portola established the Presidio of San Diego, a fortified military outpost and the first Spanish settlement in Alta California. In July of 1769, while Portola was exploring Southern California, Franciscan Father Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823 (Smith et al. 2008).

### American Period (1848–Present)

War in 1846 between Mexico and the United States precipitated the Battle of Chino, a clash between resident Californios and Americans in the San Bernardino area. The American forces were led by Benjamin Wilson, and they staged at the Rancho Santa Ana del Chino owned by Isaac Williams, who was married to Maria de Jesus Lugo, daughter of Antonio Maria Lugo, the owner of Rancho San Bernardino (Guinn 1915). The Mexican-American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (including present-day Arizona) as U.S. territories. Horticulture and livestock (primarily cattle, the "currency" and staple of the rancho system) continued to dominate the Southern California economy through the 1850s.

The Gold Rush commenced in 1848. With the influx of people who were seeking gold, cattle were no longer desired mainly for their hides; they were now a source of meat and other goods. During the cattle boom of the 1850s, rancho vaqueros drove large herds from Southern to Northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads, such as the Gila Trail or Southern Overland Trail, then transported by trains where available. The cattle boom ended for Southern California as neighboring states and territories drove herds to Northern California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 1941:102–103).

### 3.5.1.2 Planning Area

#### Ethnography

Ethnographic studies show that portions of the Planning Area were occupied by the Gabrielino/Tongva, Cahuilla, Luiseño, Juaneño/Acjachemen, and the Serrano Native American groups.

#### The Gabrielino/Tongva

Ethnographic studies show that portions of the Planning Area were occupied by the Gabrielino during the sixteenth to nineteenth centuries (McCawley 1996). The term Gabrielino is derived from the association of these peoples with Mission San Gabriel. Today, some of the Gabrielino prefer to call themselves Tongva (McCawley 1996). The Gabrielino practiced a hunter-gatherer lifestyle and lived in communities near the convergence of two or more environmental zones or habitats (Bean and Smith 1978). Important considerations influencing the location of habitation sites included the presence of a stable food supply and some measure of protection from flooding. Gabrielino territory included the watersheds of the Los Angeles, San Gabriel, and Santa Ana Rivers; the watersheds of several smaller intermittent streams in the Santa Monica and Santa Ana Mountains; the coast from Aliso Creek north to a point between Topanga and Malibu Creeks; and the islands of San Clemente, San Nicolas, and Santa Catalina (Bean and Smith 1978:538; McCawley 1996:3).

Community populations generally ranged from 50 to 150 inhabitants, although larger settlements may have existed. Gabrielino communities located in the interior regions maintained permanent geographical territories or use areas that may have averaged 30 square miles. However, it is unclear whether this pattern was similar for coastal settlements, where food resources may have been more plentiful (White 1963:117; Oxendine 1983:44). In addition to these permanent settlements, the Gabrielino occupied temporary campsites that were used on a seasonal basis for hunting, fishing, gathering, and processing of wild plant foods and shellfish (McCawley 1996:25). One or more lineages, each of which was composed of several related nuclear families, lived in a typical Gabrielino community. Each community had a chief, the *tomyaar*, who was the head of the oldest or largest lineage. Some chiefs may have had authority over multiple communities. The chief provided insurance against environmental variability by ensuring that members of the community could obtain access to scarce resources in times of need. For example, the chief controlled ritual exchanges of shell beads; such exchanges maintained relationships with groups in other areas and thus provided access to resources in those areas. The chief also managed surpluses to provide insurance against tough times. In general, status differences among the Gabrielino were ascribed. Wealth was inherited, and Gabrielino society consisted of a number of classes including elites, commoners, and slaves.

Gabrielino culture was characterized by an active and elaborate system of rituals and ceremonies. Rituals included individual rites of passage, village rites, seasonal ceremonies, and participation in the widespread *Chinigchinich* cult, which was observed and recorded by Franciscan Friar Gerónimo Boscana during his residences at Missions San Juan Capistrano and San Luis Rey (Boscana 1933). The Gabrielino had introduced *Chinigchinich*, their pre-Christian creator-god, to other Indian cultures of Southern California, and the worship of this supernatural being remained a prominent religion in the region long after the introduction of Christianity (McCawley 1996).

### **Cahuilla**

Cahuilla territory extended from the San Bernardino Mountains south to Borrego Springs and the Chocolate Mountains, east to the Colorado Desert, and west to the eastern slopes of the Palomar Mountains. Cahuilla villages were permanent and occupied by lineage groups that owned rights to adjacent resources (Bean 1978). Villages were generally constructed in canyons or on alluvial fans near sources of fresh water. Villages at lower elevations were located around mesquite groves at the lower ends of fans, near springs, and/or in areas where the water table was high enough for shallow wells to be dug (Moratto 2004). Deeper wells were dug to reach deeper underground water sources (Bean and Bourgeault 1989).

Dwellings were constructed of fan palm fronds, arrowweed, and other brush material. During the prehistoric period, structures were dome shaped but tended to be rectangular during the historic period. Brush-covered ramadas were constructed near houses and used for domestic chores; additionally, several granaries were built in each village to store food. Earth-covered ceremonial and sweat houses (temescals) were constructed and used to provide sacred space when purification and healing rituals were performed (Bean 1978).

The Cahuilla practiced a lifeway that was based on hunting, collecting, and harvesting. Well-developed exchange systems provided access to a wide array of resources. The Cahuilla ate a varied assortment of fresh meat as well as roots, leaves, seeds, acorns, and fruit from pinyon, mesquite, and other sources. Mule deer, mountain sheep, and antelope were considered the most valuable because they tasted good and provided a large quantity of meat. Cahuilla men generally used bows and arrows to shoot animals. They made their arrow shafts from the stems and branches of cane, sagebrush, and arrowweed; then fastened stone or wooden points to the tips of the shafts. Three feathers were attached with animal sinew to the other end of the shaft for stability in flight. Hunters also used clubs, traps, and nets to catch small game (Bean 1972).

Acorns were an important dietary staple. Acorns were harvested from October to November, just before the start of winter rains (Bean 1972). During the harvest, as many as half of the men, women, and children moved to the oak groves and camped there for several weeks (Bean 1972). The acorns were husked and dried, ground, and leached. Individual oak trees could produce one hundred to several hundred pounds of food per year, depending on the species. Black oak, coast live oak, and canyon live oak were the most productive. This supplied an annual food source that required an intensive harvesting each fall (Bean et al. 1995).

To start fires, Cahuilla used a fire drill. Each drill consisted of a stick that was held vertically and twirled fast on top of a small flat piece of wood, which acted as a hearth. The rapid drilling produced friction and heat, which ignited the tiny sticks that were placed under the drill to act as tinder. Once the tinder caught fire, it could be used to start a larger fire (Bean and Bourgeault 1989).



Tools found in archaeological contexts provide important information about Cahuilla subsistence. Results of extensive ethnographic and archaeological research reveal that the Cahuilla used an assortment of tools (Bean et al. 1995). Bows, arrows, traps, nets, disguises, blinds, throwing sticks, knives, and slings were used for hunting. The Cahuilla caught fish with the aid of nets, traps, spears, hooks, lines, and fish poisons. Gathering required poles for shaking down pine cones and acorns, cactus pickers, chia hooks, seed beaters, digging sticks, and pry bars. Burden baskets, carrying nets, and bags were used to transport food. Baskets treated with asphaltum and ceramic ollas were used to transport and store water. The Cahuilla used hammers, anvils, mortars, pestles, manos, metates, winnowing shells, and strainers to process plant material. Wood racks were used to dry fish, and prepared food was served in dishes made of wood and/or gourd or in basket bowls (Bean and Bourgeault 1989).

Men made heavy openwork baskets that were used for gathering plant foods and large baskets for storing food. Women made fine coiled baskets for ceremonies and gifts as well as for cooking, storing, and serving foods. The foundation for coiled baskets was usually a bundle of deer grass, around which juncus or sumac stems were wrapped. Women often wove designs of rattlesnakes, eagles, stars, and other sacred symbols into their baskets. They used plant materials of different colors, which they either found naturally or dyed with natural dyes (Bean and Bourgeault 1989).

About 1,000 years ago, the Cahuilla began making designs on rocks for ritual uses or marking boundaries. Pictographs were located in sheltered areas where the colors would not be damaged by the weather (Bean and Bourgeault 1989). Petroglyphs were created by pecking or carving the rocks with a sharp stone. These petroglyphs were often used to mark a clan's territory (Bean and Bourgeault 1989).

The first recorded Cahuilla contact with European culture was in 1776 when Juan Bautista de Anza passed through Los Coyotes Canyon (Bean 1972). There is little evidence of contact after that time until, in 1809, baptisms of Cahuillas began to be recorded at San Gabriel Mission. Around 1819, several Asistencias were established near Cahuilla territory (i.e., San Bernardino, Pala, Santa Ysabel) (Bean 1972:17). The most significant event in recent Cahuilla territory was the smallpox epidemic of 1863, which killed a large portion of the population (Bean 1972).

### **Luiseño**

Luiseño territory extended from the coast inland approximately 30 miles through the Temecula Valley. The term Luiseño refers to Mission San Luis Rey and has been used in Southern California to refer to those Takic-speaking people who were associated with this mission (Bean and Shipek 1978:550).

Luiseño clans were apt to own land in valley, foothill, and mountain areas, providing them with the resources of many different ecological niches. Individual lineages or families owned specific resource areas within the clan territory. Most inland clans also owned sites on the coast, also part of Luiseño territory, to allow for fishing and shellfish collecting (Bean and Shipek 1978:551). However, most Luiseño foods were available in locations that were within a day's travel of the village (Bean and Shipek 1978:551).

Houses were conical, semi-subterranean thatched structures that were made of reeds, brush, or bark, whichever was available locally. Domestic chores were carried out in the shade of brush-covered rectangular structures (ramadas). Earth-covered sweathouses were important for purification and curing rituals. A ceremonial structure, the *wamkis*, had a central location in the

village and was enclosed by a circular fence. Ceremonies were held in the *wamkis*, and paintings were made in front of it (Bean and Shipek 1978:553).

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice and ground squirrels, antelope, valley and mountain quail, doves, ducks, and other birds. Most predators were avoided, as were tree squirrels and most reptiles. Coastal marine foods included sea mammals, fish, crustaceans, and mollusks (especially abalone). Trout and other fish were caught in mountain streams (Bean and Shipek 1978:552).

Acorns were the most important single food resource; six species were used (Bean and Shipek 1978:552). As with the Cahuilla, acorns were harvested just before the start of winter rains (Bean and Saubel 1972:121–131). During the harvest, most of the men, women, and children (about one-half to two-thirds of a village) moved to the oak groves and camped there from 3 to 4 weeks. The men climbed the oaks and knocked down acorns, which the women and children gathered. The acorns were husked and dried, then ground. Next, the acorn meal was leached. While the acorn harvest was occurring, men would hunt deer and small game from the vicinity (Bean et al. 1995:V.I.25). The Luiseño would return from the groves early only if it rained during the harvest. In that case, the acorns would be brought back in the husk for processing in the home village.

Villages were located near water sources, which were necessary for leaching the acorns. Grass seeds were the next most abundant plant food. Other important seeds were manzanita, sunflower, sage, cha, lemonadeberry, wild rose, holly-leaf cherry, prickly pear, lamb's-quarters, and pine nuts (Bean and Shipek 1978:552). Greens, including thistle, miner's lettuce, white sage, and tree clover, were also eaten. In addition, cactus pads and fruits were used, and thimbleberries, elderberries, wild grapes, and wild strawberries were gathered. Cooked yucca buds, blossoms, and pods were other important food resources. Mushrooms and tree fungi provided a significant food supplement (Bean and Shipek 1978:552).

Seeds were ground with handstones on shallow, unshaped basin metates of fine-grained granite. Granite was also shaped into bowl mortars or pestles for pounding acorns and small game. Bedrock mortars and metates were generally located near village sites, especially the inland areas. A basket hopper was attached to new or shallow mortars (Bean and Shipek 1978:552).

### **Juaneño/Acjachemen**

The Juaneño and Luiseño languages are dialects of one another. Along with the Gabrielino they are part of the Uto-Aztecan linguistic stock derived from the Takic language family (Mithun 2004). The Takic language is originally from the Great Basin area. The timing, extent, and impact on the local societies of the first Takic immigrants is not well understood at this time.

The Juaneño lived in permanent villages and associated seasonal camps, in what is now Orange and Los Angeles Counties. The population was centered primarily along San Juan Creek near modern day San Juan Capistrano. The population of each village ranged from 35 to 300 people. The inhabitants of smaller villages generally were of a single family line while those in larger centers were centered around the dominant clan. As Boscana said of the Acjachemen. "all the rancherias were composed of a single relationship" (Harrington 1934:32). Each village had its own resource territory and was independent, although maintained connection with other groups throughout the area.

Plant resources formed the bulk of the diet. The following description is from the summary by Bean and Shipek (1978:552). Acorns were the most important single food source, and two species were used locally. Villages were situated near reliable sources of abundant water, as was necessary in part

for the daily leaching of milled acorn products. As a dietary staple, acorn mush (*weewish*) was prepared in various ways and served as gruel, cakes, or fried; it might be sweetened with honey or sugar laden berries; and it could be made into a stew with added greens and meat. Grass seeds were the next most abundant food used, and other plant foods included manzanita, sunflower, sage, chia, lemonade berry, wild rose, holly-leaf cherry, prickly pear, lamb's-quarter, and pine nuts. Seeds were parched, ground, and cooked as mush in various combinations. Such greens as thistle, lambs' quarters, miner's lettuce, white sage, and clover were eaten raw or cooked, and sometimes dried for storage. Cactus pods and fruits were also used. Thimbleberries, elderberries, and wild grapes were eaten raw or dried for later cooking. Cooked yucca buds, blossoms, and pods provided a sizable addition to the community's food resources. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus provided significant food supplements and were prized as delicacies. Various teas were made from flowers, fruits, stems, and roots for medicinal cures and beverages.

Principal game animals included deer, rabbit, jackrabbit, wood rat, mice, ground squirrel, antelope, quail, dove, duck, and other birds. Most predators were avoided as food, as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, and salmon was harvested when they migrated along the coast. The Juaneño were a coastal people for the most part, and as such marine food made up a large part of their diet. Sea mammals, fish, and crustaceans were harvested from the shore and open sea in reed and dugout canoes. Shellfish were the predominate resource, including abalone, turban, mussel, clams, scallops, Chione, and bubble shells.

### **Serrano**

According to Altschul et al. (1984:54), the Serrano-speaking groups in the San Bernardino Valley were more closely allied with the Gabrielino than the Vanyume, a Serrano-speaking group of the Mojave Desert. The term *Serrano* comes from the Spanish, who applied the name to indigenous groups who lived in and around the San Bernardino and San Gabriel Mountains and inland desert areas. The Serrano were speakers of a language that is in the Takic sub-family (Kroeber 1925).

The Serrano were hunter-gatherers who utilized both large and small game, as well as numerous plant resources, for food. Large game, such as deer and mountain sheep, were hunted with bows and arrows, while smaller animals, including rabbits and rodents, were taken with throwing sticks, nets, and snares. Pinyon nuts and acorns from several species of oak formed the dietary staples, supplemented by seeds, such as chia, roots, tubers, and greens (Bean and Smith 1978).

Clothing was made of netted fabrics, bark cloth, woven rabbit skins, or buckskin (Benedict 1924). Bows and arrows were about 3 feet long. The bows were made from scrub oak. Arrows were either sharpened wood or cane with stone arrowheads that were attached with fiber (Benedict 1924).

The settlement pattern of the Serrano consisted of permanent villages in proximity to reliable sources of water and a range of floral and faunal food resources, which were exploited from temporary camp locations that surrounded the main village (Bean and Smith 1978).

The houses of the Serrano were rectangular, non-communal structures that were constructed of tule (Benedict 1924). Ceremonial houses were constructed in the same way but were larger, up to 40 feet long and 15 feet wide (Benedict 1924). Semi-subterranean sweathouses were also constructed (Benedict 1924). History records the Spaniard Pedro Fages as the first non-indigenous person to pass through the San Bernardino Valley in 1772. Four years later, Father Francisco Hermenegildo Garces, "the famous and revered Franciscan missionary-explorer-martyr," entered the valley,

seeking to plot a road that would connect Monterey with Sonora (Beattie and Beattie 1939:3). It would be another 30 years before the Spanish returned to the region (Smith et al. 2008).

In 1779, Garces arrived in the Yuma area where he established Mission La Purisma Concepcion de la Virgen Santisma on the north bank (California side) of the Colorado River (Mission La Purisima Concepcion, near Santa Barbara, was later founded in 1787). The settlement included soldiers, settlers, and missionaries but lasted only 6 months. To retaliate for the loss of their land and crops, the local Native American population, the Quechan (formerly known as the Yuma), attacked and destroyed the settlement in 1781, killing missionaries, including Father Garces, and nearly a hundred others. With the Spanish expelled, this land route between northern Mexico and California settlements remained closed for decades (Smith et al. 2008).

The string of 21 California missions paralleled the coastline between San Diego and Sonoma. Near-coastal locations were preferred by the Spaniards for colonization because they were easier to defend and supply from ships; they were also bordered by populous Native American villages with potential converts. Approximately 30 miles, or a day's ride by horseback, typically separated the missions. The connecting roadway became known as "El Camino Real." Today's Interstate 5, between San Diego and Los Angeles, and U.S. 101, between Los Angeles and Petaluma, generally follow "The King's Highway" (Smith et al. 2008).

Only four fortified outposts were established by the Spanish government in Alta California. El Presidio Real de San Diego was the southern-most and the first; established in 1769. The northernmost (Real de San Francisco) was founded near Mission San Francisco de Asis in 1776. The other two presidios (Real de Monterey and Real de Santa Barbara) were spaced in between the northern and southern arms of the mission system. The Presidio of Monterey and accompanying mission (San Carlos de Monterey) were established in 1770; in 1782, Spain built its last presidio in Alta California at Santa Barbara (Smith et al. 2008).

All of the missions contained churches, workshops, storehouses, barracks for soldiers, and quarters for Native American neophytes. These new converts were used as labor, establishing and nurturing the mission orchards, gardens, vineyards, and pastures. In San Diego, for example, 1,400 Native Americans were associated with the mission by 1797. Initially, cattle and horses were raised on the pastures adjacent to that first mission. Sheep, goats, and pigs were later added to the list of animals raised on mission lands. These animals ultimately provided meat, wool, tallow for candles and soap, and leather for clothing, among other uses. Ranching eventually expanded to other areas and missions within San Diego County and beyond (Smith et al. 2008).

### **Mexican Period (1822–1848)**

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, and only two were successful and remained as California cities (San Jose and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies that were designed to protect the Spanish monopoly on trade and decreed California ports open to foreign merchants (Dallas 1955:14).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population and entice inland migration from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. At the same time, the influence of the California missions waned from the late 1820s through the early 1830s. This decline resulted from a combination of outside events and pressures, including increasing hostility between missionaries and local civilians who demanded mission lands, decimation of the Native American population by introduced diseases, and the influence of private traders in the hide and tallow industry. Letters and documents indicate that the San Bernardino *estancia* became an *asistencia*. Although San Bernardino never had a resident priest, it did expand, and several adobe buildings were constructed by the Franciscans between 1830 and 1834 (Smith et al. 1969:23). The site is now listed as California Historical Landmark No. 42. By 1834, however, violence had escalated, and the missionaries found themselves on the defensive. A letter from Father Duran dating from 1837 notes that the *asistencia* in San Bernardino would very likely have progressed to become one of “a chain of missions in the very heart of paganism” had other circumstances not intervened (quoted in Beattie and Beattie 1939:32). Chief among these circumstances was the adoption of the Secularization Act of 1833, by which the Mexican government privatized most of the Franciscans’ landholdings, including their California missions. By 1836, this sweeping process effectively reduced the California missions to parish churches and released their vast properties. Although earlier secularization schemes had called for redistribution of lands to Native American neophytes, who were responsible for construction of the mission empire, the mission lands and livestock holdings were instead redistributed by the Mexican government through several hundred land grants to non-Native American ranchers (Langum 1987:15–18). The Mexican citizens who received the ranchos released their neophyte “workers” to fend for themselves. Subsequent to the abandonment of San Bernardino by the Franciscans, three brothers, Jose del Carmen, Jose Maria, and Vicente Lugo, settled the former mission lands with the intention of starting a colony. Slover Mountain, also known as El Cerrito Solo, was the natural landmark used for establishing the boundaries of the Lugos’ land grant in the San Bernardino Valley (State of California Resources Agency 1973). The colony was not a success, but with some effort, they were able to retain the land, which, by the early 1840s, they held in common with Diego Sepulveda. Sepulveda’s adobe at Yucaipa remains the oldest home in San Bernardino County and is listed as California Historical Landmark No. 528 (Smith et al. 1969:37).

In 1842, a small band of New Mexicans settled nearby Politana. Their presence was intended to help forestall attacks by Native Americans. Members of the group eventually established La Placita and Agua Mansa along the Santa Ana River. Their cemetery at Agua Mansa remains the oldest cemetery in the county and is listed as California State Historical Landmark No. 121.

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary Southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The growing California population unfortunately contributed to the introduction of diseases that were foreign to the Native American population, who had no associated immunities. Large numbers of native peoples in the Central Valley, for example, died from disease between 1830 and 1833; disease also exterminated whole tribes along the American, Merced, Tuolumne, and Yuba Rivers. The Central Valley was hit by a second epidemic in 1837, which further decimated indigenous Californians (Cook 1955; Smith et al. 2008).

## San Bernardino County

As the chain of Spanish missions prospered, their livestock holdings increased and became vulnerable to thieves. The Spaniards responded by planning inland missions that could provide additional security and establishing a presence beyond the coast. By 1806, a formal expedition was mounted to find potential locations in the San Bernardino Valley. On May 10, 1810, Father Francisco Dumetz established a religious site, or *capilla*, at a Cahuilla *rancheria* called Guachama (Beattie and Beattie 1939). The valley received its name from this site, which Father Dumetz dedicated to San Bernardino de Siena in honor of the saint's feast day, traditionally celebrated on May 10.

Spanish missionaries settled the San Bernardino Valley in the early nineteenth century and colonized local native populations. Father Francisco Dumetz of Mission San Gabriel Arcángel arrived in 1810 and named the area after the Italian San Bernardino of Siena (City of San Bernardino 2010). By 1821, mail was being carried between Sonora and California on the Cocomaricopa Trail, which passed through the San Bernardino Valley (Smith et al. 2008). Although San Bernardino never had a resident priest, it did expand, and several adobe buildings were constructed by the Franciscans between 1830 and 1834. The missionaries ran Rancho San Bernardino, which functioned as a cattle ranch and adjunct to Mission San Gabriel Arcángel until 1834, when the missions were closed by order of the Mexican governor of California.

In 1841, following secularization of the missions, Antonio María Lugo was granted a portion of the former Mission San Gabriel Arcángel lands, named Rancho Santa Ana del Chino. The land encompassed the modern cities of Chino and Chino Hills. Two years later, Lugo's son-in-law, American-born (and naturalized Mexican citizen) Colonel Isaac Williams, purchased the land. Williams' home was the site of a short siege and skirmish in 1846, during the Mexican-American War. The incident occurred as a result of Williams hosting a small group of United States soldiers who were attempting to evade Mexican troops. One Mexican soldier died during the skirmish, and Williams and the troops eventually surrendered to the Mexicans, who were commanded by Cervol Varela, Diego Sepulveda, Ramon Carillo, and Williams' brother-in-law, José del Carmen Lugo (Caballeria 1902; Brown and Boyd 1922; Ingersoll 1904).

In addition to Rancho Santa Ana del Chino, in 1842, Antonio María Lugo was granted the lands of Rancho San Bernardino, along with three of his sons, José del Carmen Lugo, José Maria Lugo, and Vicente Lugo, and his friend Diego Sepulveda. Slover Mountain, also known as El Cerrito Solo, was a natural landmark and used for establishing the boundaries of the land grant in the San Bernardino Valley (Ingersoll 1904). Sepulveda's adobe at Yucaipa remains the oldest home in San Bernardino County (California Historical Landmark #528).

In the 1850s, Mormon pioneers, under the aegis of Brigham Young, arrived in the San Bernardino Valley and purchased 35,000 acres of Rancho San Bernardino. However, the missionaries were recalled to Salt Lake City by Brigham Young in 1857, leaving behind schools, roads, and a local government. After the departure of the Mormon missionaries, Dr. Benjamin Barton bought Rancho San Bernardino, which became the property of San Bernardino County in 1925.

San Bernardino County was established in 1953. Although the southwestern part of the county remained primarily an agricultural and logging area throughout the nineteenth century, some commercial interest was sparked by the Holcomb Valley Gold Rush between 1861 and 1862.

Citrus trees were introduced to San Bernardino County in 1857 by Anson Van Leuven, who purchased several orange trees from Mission San Gabriel Arcángel and planted them near the

*asistencia*. The citrus industry grew dramatically within the next century and became San Bernardino County's most important industry. Commercial interests were served by the Southern Pacific Railroad, which arrived in Colton in 1875, and the California Southern Railroad, which arrived in San Bernardino in 1883 (Ingersoll 1904; Brown and Boyd 1922; Anonymous 1994).

By 1910, the citrus and railroad industries dominated the local economy by growing, packing, and shipping local fruit. Other industries in the San Bernardino area included cattle ranching, sugar beet cultivation, and viticulture and enology. Residential and commercial development in the county mirrored post-World War I residential and industrial activity in Southern California during the boom years of the 1920s. The county gained a large military presence during World War II with the establishment of San Bernardino Air Material Command, later renamed Norton Air Force Base, on the outskirts of San Bernardino (Smith et al. 2008). Since World War II, industrial, commercial, and residential investment and development have markedly increased in the region. Improved transportation networks have helped the county and its residents increasingly tie themselves to the economies of the Los Angeles Basin and Southern California as a whole.

### **Riverside County**

In 1859, the first U.S. Post Office in what would become Riverside County was established at John Magee's store on Temecula Rancho (Gunther 1984:526). The first major population boom in Southern California followed completion of the Southern Pacific Railroad connection from Sacramento and the transcontinental Central Pacific Railroad route south to Los Angeles in 1874 (Lech 2012). The railroad brought land speculators, developers, and agriculturalists into the region, including Riverside and surrounding areas that seemed most fit for agricultural development.

In 1870, Judge John Wesley North and a group of associates founded the city of Riverside on part of Rancho Jurupa. Orange trees were first planted in Riverside County in 1871, but the citrus industry began 2 years later when Eliza Tibbets received two Brazilian navel orange trees from a friend at the Department of Agriculture in Washington. The trees thrived in the Southern California climate, and the navel orange industry grew rapidly, supported by extensive irrigation projects. By 1882, there were more than half a million citrus trees in California, almost half of which were in Riverside County. With the agricultural boom that the navel orange provided, the city of Riverside grew rapidly during the 1880s. On May 9, 1893, Riverside County was officially formed from portions of San Bernardino County and San Diego County (Patterson 1971). The citrus boom created a number of fortunes in Riverside, and, according to the Bradstreet Index, in 1895 the city became the wealthiest jurisdiction per capita in the United States (Patterson 1971).

During World War I, the Federal government established a military presence in Riverside County. The U.S. Army constructed March Field, now March Air Reserve Base, to train aviators. The base increased in size during World War II, adding Camp Haan and a third facility, Camp Anza, now occupied by the National Veteran's Cemetery. Over the decades, new residents populated new towns such as Murrieta, Wildomar, and Lake Elsinore. Eastvale, Norco, and unincorporated areas within the county south of Corona zoned lots with enough acreage for "ranchettes" and permitted horse keeping. Civic activities with equestrian themes became a feature of towns and neighborhoods within the county area and towns south of the City of Riverside (County of Riverside 2010; March Air Reserve Base n.d.). The bulk of the county remained agricultural into the 1960s and 1970s, when real estate development activity began to occur (ICF 2012).

## **Water History**

Early European colonists irrigated their crops by diverting water from the Santa Ana River and its tributaries. The valley's earliest human-made irrigation ditch, the Mill Creek Zanja (California Historical Landmark #43), was built in 1820 under direction of the Mission San Gabriel using Serrano labor. It stretched approximately 12 miles from Mentone to Loma Linda. These colonists also took advantage of natural springs and groundwater. In 1851 a group of Mormon colonists built a fort that eventually became San Bernardino and further developed the water resources in the area. However, as the population of the area increased more demand was placed on the natural water sources and disputes began to arise. This led to some of the first water infrastructure such as dams to capture excess winter runoff.

Water supply management in the Planning Area goes back to the 1800s when agricultural development within the Santa Ana River watershed began and from its inception of use has seen an almost continual increase in demand. There are dozens of local agencies that utilize the watershed, the earliest being the Bear Valley Mutual Water Company, which was formed in 1903 to establish a reliable supply of water to citrus growers in the Redlands/Highland area. It is still in operation today.

Wide support for development of artificial recharge dates back to 1907. Orange, Riverside, and San Bernardino Counties agreed to petition the Federal government and request almost 1,000 acres be set aside near the headwater of the Santa Ana River to construct a diversion dam and ditch to the acquired recharge area.

Water rights lawsuits and judgements go back as far as 1861 and continue today often for similar reasons—developers building homes and more and more people coming to Southern California to enjoy the mild climate and opportunity that is available in Southern California. Past disputes erupted due to the conflicting concerns of agricultural enterprises in the San Bernardino Valley and residential populations in the growing cities. As the cities expanded, city residents and businesses became concerned with the availability of local groundwater and whether imported water was going to be required to supplement the area.

## **Cultural Resources Types and Sensitivity**

### **Archaeological Resources**

Archaeological resources are the physical remains of past human activity. They include prehistoric and historic archaeological sites; and extant buildings, structures, and objects that are listed in or eligible for listing in national, State, and/or local registers. Archaeological evidence shows that Southern California has been occupied by humans for thousands of years; Riverside and San Bernardino Counties are rich in archaeological resources that date from early prehistoric times to the historic period. Information on previously recorded cultural resources and studies for San Bernardino County is held at the South Central Coastal Information Center located at California State University, Fullerton. The same data for Riverside County is held at the Eastern Information Center at University of California, Riverside. Both counties are home to thousands of unique cultural resources and this number is constantly growing as more are discovered due to land development and other factors. Table 3.5-1 includes cultural resources listed on the National Register of Historic Places (NRHP).



**Table 3.5-1. Cultural Resources Listed on the National Register of Historic Places by County**

<b>Name on the NRHP</b>	<b>Date Listed</b>	<b>Location</b>	<b>City</b>
<b>San Bernardino County</b>			
A.K. Smiley Public Library	December 12, 1976 (#76000513)	125 W. Vine St.	Redlands
Atchison, Topeka and Santa Fe Railway Passenger and Freight Depot	February 2, 2001 (#01000025)	1170 W. 3 <sup>rd</sup> St.	San Bernardino
Auerbacher Home	August 1, 2012 (#12000442)	121 Sierra Vista Dr.	Redlands
Barton Villa	October 24, 1996 (#96001176)	11245 Nevada St.	Redlands
Beverly Ranch	February 11, 2004 (#04000018)	923 W. Fern Ave.	Redlands
Bono's Restaurant and Deli	January 10, 2008 (#07001353)	15395 Foothill Blvd.	Fontana
The California Theater	December 22, 2009 (#09001116)	562 W. 4 <sup>th</sup> St.	San Bernardino
Carnegie Public Library Building	June 23, 1988 (#88000894)	380 N. La Cadena Dr.	Colton
Crowder Canyon Archaeological District	June 16, 1976 (#76000415)	Confidential	San Bernardino
Cucamonga Service Station	July 23, 2018 (#100002675)	9670 Foothill Blvd.	Ranch Cucamonga
Robert J. Dunn House	July 24, 2017 (#100001336)	1621 Garden St.	Redlands
Dr. Orville S. Ensign House	March 20, 2012 (#12000126)	304 S. Laurel Ave.	Ontario
Euclid Avenue	August 10, 2005 (#05000843)	From 24 <sup>th</sup> St. in Upland to Philadelphia St. in Ontario	Upland and Ontario
First Christian Church of Rialto	February 20, 2003 (#03000037)	201 N. Riverside Ave.	Rialto
Fontana Farms Company Ranch House, Camp No. 1	November 1, 1982 (#82000982)	8863 Pepper St.	Fontana
Fontana Pit and Groove Petroglyph Site	April 17, 1980 (#80000838)	Confidential	Fontana
Frankish Building	August 11, 1980 (#80000839)	200 S. Euclid Ave.	Ontario
Highland Historic District	April 5, 2001 (#01000333)	Roughly bounded by Col and Nona Ave., Pacific and Church St.	Highland
Hofer Ranch	July 8, 1993 (#93000596)	11248 S. Turner Ave.	Ontario
Judson and Brown Ditch	September 29, 2015 (#15000646)	Crosses San Bernardino FCD Rd.	Redlands
Kimberly Crest	March 28, 1996 (#96000328)	1325 Prospect Dr.	Redlands
Sam and Alfreda Maloof Compound	November 9, 2010 (#03000471)	5131 Carnelian St.	Alta Loma
Mill Creek Zanja	May 12, 1977 (#77000329)	Sylvan Blvd. E to Mill Creek Rd.	Redlands

<b>Name on the NRHP</b>	<b>Date Listed</b>	<b>Location</b>	<b>City</b>
Moyse Building	February 28, 1979 (#79000522)	13150 7 <sup>th</sup> St.	Chino
Old San Antonio Hospital	January 2, 1980 (#80000840)	792 W. Arrow Hwy.	Upland
Ontario and San Antonio Heights Waiting Stations	September 25, 2012 (#12000813)	1251 W. 24 <sup>th</sup> St.	Upland
Ontario State Bank Block	January 8, 1982 (#82002242)	300 S. Euclid Ave.	Ontario
Pacific Electric Etiwanda Depot	March 21, 2011 (#11000119)	7092 Etiwanda Ave.	Rancho Cucamonga
John Rains House	April 24, 1973 (#73000428)	7869 Vineyard Ave.	Rancho Cucamonga
Redlands Central Railway Company Car Barn	January 3, 1991 (#90002119)	746 E. Citrus Ave.	Redlands
Redlands Santa Fe Depot District	October 29, 1991 (#91001535)	Roughly bounded by Stuart Ave., N. 5 <sup>th</sup> St., Redlands Blvd., Eureka St. and the Santa Fe Railroad tracks	Redlands
Russian Village District	December 28, 1978 (#78000680)	290-370 S. Mills Ave. and 480 Cucamonga Ave	Montclair
San Bernardino County Court House	January 12, 1998 (#97001632)	351 N. Arrowhead Ave.	San Bernardino
Smiley Park Historic District	December 29, 1994 (#94001487)	Roughly bounded by Brookside Ave., Cajon St., Cypress Ave., and Buena Vista St.	Redlands
Upland Public Library	December 10, 1990 (#90001817)	123 E. D St.	Upland
US Post Office-Downtown Station	January 11, 1985 (#85000136)	390 W. 5 <sup>th</sup> St.	San Bernardino
US Post Office-Redlands Main	January 11, 1985 (#85000135)	201 Brookside Ave	Redlands
Wigwam Village No t	January 3, 2012 (#11000057)	2728 Foothill Rd.	San Bernardino
Yorba-Slaughter Adobe	July 7, 1975 (#75000460)	5.5 miles south of Chino at 17127 Pomona Rincon Rd.	Chino
<b>Riverside County</b>			
Administration Building, Sherman Institute	January 9, 1990 (#80000831)	9010 Magnolia Ave.	Riverside
All Souls Universalist Church	September 18, 1978 (#78000736)	3657 Lemon St.	Riverside
Andrew Carnegie Library (demolished in 1978)	June 29, 1977 (#77000324)	8 <sup>th</sup> and Main Sts.	Corona
Arlington Branch Library and Fire Hall	July 22, 1993 (#93000668)	9556 Magnolia Ave.	Riverside
Armory Hall	January 29, 19992 (#91002032)	252 N. Main St.	Lake Elsinore
Chinatown	March 1, 1990 (#90000151)	Brockton and Tequesquite Aves.	Riverside

<b>Name on the NRHP</b>	<b>Date Listed</b>	<b>Location</b>	<b>City</b>
Community Settlement House	December 21, 2017 (#100001906)	4366 Bermuda Ave.	Riverside
Cornelius Jensen Ranch	September 6, 1979 (#79000519)	4350 Riverview Dr.	Rubidoux
Corona High School	August 3, 2005 (#05000772)	815 W. 6 <sup>th</sup> St.	Corona
Crescent Bathhouse	July 30, 1975 (#75000453)	201 W. Graham Ave.	Lake Elsinore
Federal Post Office	November 20, 1978 (#78000737)	3720 Orange St.	Riverside
First Church of Christ, Scientist	September 22, 1992 (#92001250)	3606 Lemon St.	Riverside
First Congregational Church of Riverside	April 3, 1997 (#97000297)	3504 Mission Inn Ave.	Riverside
Galleano Winery	June 22, 2003 (#03000533)	4231 Wineville Rd.	Mira Loma
Grand Boulevard Historic District	July 14, 2011 (#11000432)	Grand Blvd.	Corona
Harada House	September 15, 1977 (#77000325)	3356 Lemon St.	Riverside
Heritage House	February 28, 1973 (#73000423)	8193 Magnolia Ave.	Riverside
Lake Norconian Club	February 4, 2000 (#00000033)	Junction of Fifth and Western Ave.	Norco
M. H. Simon's Undertaking Chapel	June 9, 1980 (#80000834)	3610 11 <sup>th</sup> St.	Riverside
March Field Historic District	December 6, 1994 (#94001420)	Eschscholtzia Ave., March Air Force Base	Riverside
Masonic Temple	June 6, 1980 (#80000832)	3650 11 <sup>th</sup> St.	Riverside
Mission Court Bungalows	July 8, 1993 (#93000549)	3355–3373 Second St. and 3354–3362 First St.	Riverside
Mission Inn	May 14, 1971 (#71000173)	3649 7 <sup>th</sup> St.	Riverside
Old YWCA Building	January 28, 1982 (#82002227)	3425 Mission Inn Avenue	Riverside
Riverside Municipal Auditorium and Soldiers' Memorial Building	March 31, 1978 (#78000738)	3485 7 <sup>th</sup> St.	Riverside
Riverside-Arlington Heights Fruit Exchange	June 9, 1980 (#80000833)	3391 7 <sup>th</sup> St.	Riverside
San Pedro, Los Angeles, & Salt Lake RR Depot	April 18, 1977 (#77000326)	3751 Vine St.	Riverside
San Timoteo Canyon Schoolhouse	January 19, 2001 (#00001646)	31985 San Timoteo Canyon Rd.	Redlands
Steel Development House Number 2	March 20, 2012 (#12000125)	3125 N. Sunny View Dr.	Riverside
Sutherland Fruit Company	April 11, 1986 (#86000732)	3191 Seventh St.	Riverside
Thomas Jefferson Elementary School	September 28, 2017 (#100001663)	1040 S. Vicentia Ave.	Corona

---

<b>Name on the NRHP</b>	<b>Date Listed</b>	<b>Location</b>	<b>City</b>
University Heights Junior High School	June 24, 1993 (#93000547)	2060 University Ave.	Riverside
Victoria Avenue	October 26, 2000 (#00001267)	Victoria Ave., from Arlington Ave. to Boundary Ln.	Riverside
William Childs House	July 28, 1999 (#99000895)	1151 Monte Vista Dr.	Riverside
Woman's Improvement Club Clubhouse	November 3, 1988 (#88002014)	1101 S. Main St.	Corona

---

Archaeological sites generally fall into four temporal categories: *prehistoric*, *protohistoric*, *historical period*, and *multi-component*. Prehistoric sites in North America are considered to be the remains of human activity prior to contact with Europeans. Protohistoric sites bear evidence, either ethnographic or physical, of post-European contact with indigenous groups. Historical period sites contain the remains of human activities from peoples not indigenous to North America. Multi-component sites have archaeological materials dating to both the prehistoric and historical periods. Prehistoric sites date to the earliest appearance of Native Americans on the North American landmass, some 10,000–13,000 years before the present, up to the arrival of the Spanish in California in the late 1700s. Protohistoric sites are those localities of primarily Native American habitation, but where artifacts of Euro American origin appear, generally as a result of trade and interaction between non-Native and Native American groups. Historical period sites were inhabited primarily by the succeeding waves of immigrants who moved into and ultimately took control of Southern California, beginning with people from Spain, Russia, then Mexico, and lastly other parts of America. Historical period archaeological sites can also be representative of any culture group that is nonnative to North America.

### **Historic Resources**

Historic resources are buildings, structures, infrastructure and objects associated with the themes represented by the historic events summarized above (mining, water resources, agriculture, municipalities). Concentrations of historic resources are expected to be found adjacent to transportation corridors (historic highways, railroads, navigable waterways); on rural ranch lands (irrigation features such as ditches and canals); in areas of natural resources extraction (rock, soil, mineral, and timber); and within areas developed over 50 years ago. A sample of known historic resources in both Riverside and San Bernardino Counties is provided below, based on a review of the California Historic Resources Inventory and listings of California State Historical Landmarks and California Points of Historical Interest. Table 3.5-2 includes cultural resources listed as a California Historical Landmark.

**Table 3.5-2. Cultural Resources Listed as a California Historical Landmark by County**

<b>California Historical Landmark</b>	<b>Location</b>	<b>Site Description</b>
<b>San Bernardino County</b>		
No. 42 San Bernardino Asistencia	26930 Barton Rd, Redlands, CA	Constructed in 1830 on San Bernardino Rancho. It was a branch of the San Gabriel Mission.
No. 43 The Zanja	Sylvan Park, University St, Redlands, CA	Spanish missionaries engineered the “first ditch” in 1819–1820 with Native American labor. It supported agriculture in the area.
No. 44 Site of Mormon Stockade	San Bernardino County Courthouse, San Bernardino, CA	First house in San Bernardino was built in 1839; the home of Jose del Lugo, one of the grantees of the San Bernardino Rancho.
No. 95 Guachama Rancheria	25894 Mission Rd, Redlands, CA	Became the San Bernardino Rancho of the Mission San Gabriel in 1819.
No. 121 Agua Mansa	Agua Mansa Cemetery, 270 E. Agua Mansa, Rd, Colton, CA	The community was prosperous from 1845–1862 when a flood destroyed the town. It was rebuilt on higher ground but never regained its prosperity.
No. 191 Yorba-Slaughter Adobe	17127 Pomona-Rincon Rd, Chino, CA	Built in 1850–1853 by Raimundo Yorba.
No. 360 Tapia Adobe	8916 Foothill Blvd, Cucamonga, CA	In 1839 Governor Juan Alvarado granted the 13,000-acre tract called Cucamonga to Tiburico Tapia who built the large adobe on it.
No. 490 Cucamonga Rancho Winery	8916 Foothill Blvd, Cucamonga, CA	Established by Tiburico Tapia.
No. 617 Fort Benson	10600 Hunts Lane, Colton CA	This is the site of an adobe fortification built about 1856–1857 and was maintained for about a year.
No. 942 Site of the Rancho Chino Adobe of Isaac Williams	Chino Fire Station No. 2, 4440 Eucalyptus Ave, Chino, CA	Isaac Williams in 1841 built a large adobe home here. The Battle of Chino occurred here on September 26–27, 1846.
No. 950 United States Rabbit Experimental Station	8384 Cypress Ave, Fontana, CA	In March 1928, the Federal Government established the first and only experimental station in the United States devoted to research on breeding and raising rabbits.
No. 994 A.K Smiley Public Library	125 West Vine Street, Redlands, CA	The library was built and donated to the citizens of Redlands in 1898 by Albert K. Smiley.
No. 1019	1325 Prospect Dr, Redlands, CA	Constructed in 1897, is an excellent example of Chateausque architecture.
No. 1028 Madonna of the Trail	1100 Block of North Euclid Avenue, Upland, CA	Dedicated in 1929, the Madonna of the Trail is one of 12 identical statues placed in 12 states by the National Society of the Daughters of the American Revolution.

## California Historic Resources Inventory

The Historic Property Data File Historic Resources Inventory, which is maintained by the State Office of Historic Preservation, identifies properties that have been surveyed, as well as properties that appear eligible for listing, have been determined eligible for listing, or are listed in the NRHP or California Register of Historical Resources (CRHR). In general, listing a property in the NRHP involves submission of a formal nomination form that requires concurrence from the State Historic Preservation Officer (SHPO), the State Historical Resources Commission, and the Keeper of the NRHP. Properties that are evaluated and found, with SHPO concurrence, to be eligible for listing under one or more of the NRHP criteria but are never nominated, are afforded the same protections for Federally funded projects as listed properties. Properties listed or found eligible for listing in the NRHP are also automatically eligible for the CRHR. The Historic Resources Inventory also includes buildings that have been identified as historically significant by local government agencies. The property types listed in the Historic Resources Inventory are typically non-archaeological in nature (for confidentiality reasons) and encompass numerous architectural and engineering features.

## Regulatory Framework

### 3.5.2.1 Federal Regulations

#### Federal Agencies and Regulations

##### National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires that Federal agencies assess whether Federal actions would result in significant effects on the human environment. The Council on Environmental Quality NEPA regulations further stipulate that identification of significant effects should incorporate “the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources” (40 Code of Federal Regulations [CFR] 1508.27(b)(8)). Note that the NEPA analysis for the Upper SAR HCP will be provided in a separate NEPA document, to be prepared independent of this EIR. The definition of “effects” in the NEPA regulations includes adverse and beneficial effects on historic and cultural resources (40 CFR 1508.8). Therefore, the “Environmental Consequences” section of an environmental impact statement (see 40 CFR 1502.16(f)) must analyze potential effects on historic or cultural resources that could result from the proposed action and each alternative. In considering whether an alternative may “significantly affect the quality of the human environment,” a Federal agency must consider, among other things: (1) unique characteristics of the geographic area such as proximity to historic or cultural resources (40 CFR 1508.27(b)(3)), and (2) the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the NRHP (40 CFR 1508.27(b)(8)).

Therefore, because historic properties are a subset of cultural resources, they are one aspect of the human environment defined by NEPA regulations. The NEPA regulations also require that, to the “fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the National Historic Preservation Act” (40 CFR 1502.25(a)).

The Federal government has a unique relationship with Indian tribes derived from the Constitution of the United States, treaties, Supreme Court decisions, and Federal statutes. Consultation with an Indian tribe must recognize the government-to-government relationship between the Federal government and Indian tribes, and should be conducted in a sensitive manner respectful of tribal sovereignty (36 CFR 800.2(c)(2)(ii)(B) and (C)). Under NEPA, Federal agencies are encouraged to consult with Indian tribes early in the NEPA planning process, and to invite Indian tribes to be cooperating agencies in preparation of an environmental impact statement when potential effects are on a reservation or affect tribal interests. Tribal consultations under NEPA can include effects on treaty, trust, and other natural resource issues, as well as on cultural resources in general, whether or not they meet the specific definition of historic property under the National Historic Preservation Act (NHPA). The NEPA review of an action may also include the Federal government's responsibilities under Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations; Executive Order 13175, Consultation and Coordination with Indian Tribal Governments; the American Indian Religious Freedom Act; and related statutes and policies that have a consultation component.

### **Section 106 of the National Historic Preservation Act**

Section 106 of the NHPA requires Federal agencies, or those they fund or permit, to consider the effects of their actions on cultural resources that may be eligible for listing or that are listed in the NRHP. Such resources are referred to as *historic properties*.

To determine whether an undertaking could affect historic properties, cultural resources (i.e., archaeological, historical, and architectural properties) must be identified and evaluated to determine if they are eligible for listing in the NRHP. The NRHP eligibility criteria are presented in the next section. Although compliance with Section 106 is the responsibility of the lead Federal agency, the work necessary to comply may be undertaken by others.

The Section 106 process entails six basic steps, listed below.

- Initiate consultation and public involvement.
- Identify and evaluate historic properties.
- Assess effects of the project on historic properties.
- Consult with the SHPO regarding adverse effects on historic properties, resulting in a memorandum of agreement (MOA).
- Submit the MOA to the Advisory Council on Historic Preservation.
- Proceed in accordance with the MOA.

A Programmatic Agreement may be negotiated when effects on historic properties cannot be fully determined prior to approval of the undertaking and when effects on historic properties are similar and repetitive or regional in scope (36 CFR 800.4(b)(2)).

### **National Historic Preservation Act Eligibility Criteria**

Eligibility criteria for listing in the NRHP are defined as the quality of significance in American history, architecture, archaeology, and culture present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:



- A. Are associated with events that have made a contribution to the broad pattern of our history;
- B. Are associated with the lives of people significant in our past;
- C. Embody the distinct characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. have yielded, or are likely to yield, information important in prehistory or history (36 CFR 60.4).

As mentioned above, eligibility for listing in the NRHP also requires that a resource not only meet one of the four significance criteria, but also that it possesses integrity. *Integrity* is the ability of a property to convey its significance. The evaluation of a resource's integrity must be grounded in an understanding of that resource's physical characteristics and how those characteristics relate to its significance.

### **Native American Graves Protection and Repatriation Act of 1990**

The Native American Graves Protection and Repatriation Act (NAGPRA) provides a process for Federal agencies to determine custody of Native American cultural items to lineal descendants and culturally affiliated Indian tribes. NAGPRA defines the ownership of Native American human remains and funerary materials excavated on lands owned or controlled by the Federal government. NAGPRA establishes a hierarchy of ownership rights for Native American remains identified on these lands (25 U.S. Code [USC] 3002(a)):

- Where the lineal descendants can be found, the lineal descendants own the remains.
- Where the lineal descendants cannot be found, the remains belong to the Indian tribe or Native Hawaiian organization on whose land the remains were found.
- If the remains are discovered on other lands owned or controlled by the Federal government and the lineal descendants cannot be determined, the remains belong to the Indian tribe or Native Hawaiian organization that is culturally affiliated with the remains, or the tribe that aboriginally occupied the land where the remains were discovered.

Under NAGPRA, intentional excavation of Native American human remains on lands owned or controlled by the Federal government may occur (25 USC 3002(c)) only under the following circumstances.

- With a permit issued under the Archaeological Resources Protection Act (16 USC 470cc); and
- After documented consultation with the relevant tribal or Native American groups.

Ownership and disposition follow NAGPRA for all human remains and associated artifacts (25 1 USC 3001 and 43 CFR 10.6).

NAGPRA also provides guidance on inadvertent discoveries of Native American or Hawaiian human remains on lands owned or controlled by the Federal government. When an inadvertent discovery on these lands occurs in association with construction, construction must cease. The party that discovers the remains must notify the relevant Federal agency, and the remains must be transferred according to the ownership provisions above (25 USC 3002(d)).

### **Archaeological and Historic Preservation Act (54 United States Code Sections 312501 to 312508)**

This act provides for preserving significant historic or archaeological data that may otherwise be irreparably lost or destroyed by construction of a project by a Federal agency or under a Federally licensed activity or program. This includes relics and specimens.

### **American Antiquities Act (54 United States Code Sections 320301 to 320303)**

The American Antiquities Act prohibits appropriation, excavation, injury, or destruction of “any historic or prehistoric ruin or monument, or any object of antiquity” located on lands owned or controlled by the Federal government. The act also establishes penalties for such actions and sets forth a permit requirement for collection of antiquities on Federally owned lands.

### **American Indian Religious Freedom Act (42 United States Code Section 1996)**

The American Indian Religious Freedom Act protects and preserves the traditional religious rights and cultural practices of American Indians, Eskimos, Aleuts, and Native Hawaiians. The act requires policies of all governmental agencies to respect the free exercise of native religion and to accommodate access to and use of religious sites to the extent that the use is practicable and is not inconsistent with an agency’s essential functions. If a place of religious importance to American Indians may be affected by a project, the American Indian Religious Freedom Act promotes consultation with Indian religious practitioners, which may be coordinated with Section 106 consultation.

## **3.5.2.2 State Regulations**

### **California Environmental Quality Act**

Actions that require funding, approval, or permits from a State agency, such as the action alternatives, are subject to the California Environmental Quality Act (CEQA). The CEQA statutes and State CEQA Guidelines require that agencies responsible for funding, permitting, or approving projects assess the potential impacts of the project on the environment, including historical resources. Under CEQA, a *historical resource* is defined as a resource listed in, or determined eligible for listing in, the CRHR or in a local register or survey pursuant to Sections 5020.1(k) and 5024.1(g) of the Public Resources Code (PRC).

Under the State CEQA Guidelines, an impact on a cultural resource is considered significant if a project would result in an effect that may change the significance of the resource (PRC Section 21084.1). Demolition, replacement, substantial alteration, and relocation of historic properties are actions that would change the significance of a historic resource (14 California Code of Regulations [CCR] 15064.5). The following steps are normally taken in a cultural resources investigation to comply with CEQA.

1. Identify cultural resources.
2. Evaluate the significance of the cultural resources to determine if they meet the CEQA definition of a historical resource.
3. Evaluate the effects of a project on all historical resources.
4. Develop and implement measures to mitigate the effects of the project on historical resources.

## Historical Resources

The State CEQA Guidelines define three ways that a cultural resource may qualify as a historical resource (i.e., significant cultural resource) for the purposes of CEQA review.

1. The resource is listed in or determined eligible for listing in the CRHR.
2. The resource is included in a local register of historical resources, as defined in PRC Section 5020.1(k), or is identified as significant in a historical resource survey meeting the requirements of Public PRC Section 5024.1(g) unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (14 CCR 15064.5(a)).

## California Register of Historical Resources

A cultural resource may be eligible for inclusion in the CRHR if any of the following apply.

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important in prehistory or history.

To be considered a *historical resource* for the purpose of CEQA, the resource must also have *integrity*, which is the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance (14 CCR 4852(b)). Integrity is generally evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR.

## Section 21083.2 of the Public Resources Code

A *unique archaeological resource* is defined in PRC Section 21083.2 as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.

- It is associated with an event or person of recognized significance in California or American history or of recognized scientific importance in prehistory.
- It can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions.
- It has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind (PRC Section 21083.2).

## Section 7050.5 of the California Health and Human Safety Code

With respect to the potential discovery of human remains, Section 7050.5 of the California Health and Human Safety Code states the following:

(a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of Section 5097.94 of the Public Resources Code or to any person authorized to implement Section 5097.98 of the Public Resources Code.

(b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

(c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Of particular note to historical resources is subsection (c), requiring the coroner to contact the Native American Heritage Commission (NAHC) within 24 hours if discovered human remains are thought potentially to be of Native American origin. After notification, NAHC will follow the procedures outlined in PRC Section 5097.98, which include notification of most likely descendants, if possible, and recommendations for treatment of the remains. Also, knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under California law (PRC Section 5097.99).

Archaeological human remains are also protected under CEQA and California Health and Safety Code Section 7050.5, which states that no further disturbance can occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98.

### Public Resources Code Section 5097

PRC Section 5097 addresses archaeological, paleontological, and historic sites on State land as well as the cooperative efforts with NAHC that are to be undertaken as part of a project being evaluated under CEQA. PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal public lands. PRC Section 5097.5 considers it a misdemeanor to knowingly and willfully excavate upon or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site,

including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands. The disposition of Native American burials falls within the jurisdiction of NAHC, which prohibits willfully damaging any historic, archaeological, or vertebrate paleontological site or feature on public lands (PRC Section 5097.9). PRC Section 5097.98 stipulates that whenever NAHC receives notification of a discovery of Native American human remains from the county corner, it shall immediately notify those people it believes to be the most likely descendants of the deceased Native American. The descendants may inspect the site of discovery and make recommendations on the removal or reburial of the remains.

### **California Government Code Section 6254(r) and 6254.10**

California Government Code Section 6254(r) and Section 6254.10 of the California Public Records Act 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 relating 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 Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency.”

### **California Native American Graves Protection and Repatriation Act of 2001**

The California Native American Graves Protection and Repatriation Act conveys to American Indians, of demonstrated lineal descentance, human remains and funerary items that are held by State agencies and museums. Human remains require special handling and must be treated with dignity. Procedures for the handling of human remains are pursuant to Section 15064.5(e) of the State CEQA Guidelines and Section 5097.98 of the PRC. In the event of the discovery of human remains and/or funerary items, the following procedures, as outlined by NAHC, must be followed (14 CCR 15000 et seq.).

There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner is contacted to determine that no investigation of the cause of death is required, and
- If the coroner determines that the remains are Native American:
  - 1) The coroner shall contact NAHC within 24 hours.
  - 2) NAHC shall identify the person or persons it believes to be the most likely descendant of the deceased Native American.
  - 3) The most likely descendant may make the recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance:

- NAHC is unable to identify a most likely descendant or the most likely descendant failed to make a recommendation within 24 hours after being notified by NAHC;
- The descendant identified fails to make a recommendation; or
- The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by NAHC fails to provide measures acceptable to the landowner.

### 3.5.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to cultural resources. Most (65%) of the Planning Area is within San Bernardino County, with the majority of the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to aesthetics in full.

#### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) expresses the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The relevant goals and policies presented in the Conservation Element include preservation and promotion of its historic and prehistoric cultural heritage.

Programs require a cultural resources field survey and evaluation prepared by a qualified professional for projects within the mapped Cultural Resource Overlay area, and mitigation of impacts to follow the standards established in Appendix K of the State CEQA Guidelines, as amended to date. They also require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands outside of planning regions, and a professional field survey and evaluation if the preliminary review indicates the presence of known cultural resources.

Programs require site record forms and reports of surveys, test excavations, and data recovery programs to be filed, reviewed, and approved in consultation with the Archaeological Information Center at the San Bernardino County Museum; preliminary reports verifying all necessary fieldwork has been completed prior to project grading and/or building permits; final approved reports prior to project occupancy permits; any recovered artifacts be catalogued per County Museum guidelines; and return of certain tribal artifacts and any required mitigation approved prior to conditional approval.

Programs also have specific guidelines regarding artifacts to be consistent with Senate Bill 18 to consult with local tribes to identify, protect, and preserve "traditional cultural properties." The County is to protect confidential information concerning Native American cultural resources per

Senate Bill 922 and to work with the local tribes, developers/applicants, and other parties for protection and management of artifacts of ceremonial or spiritual significance and rock art.

## **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The relevant goals, policies, and programs are presented in the Natural Resources and Cultural Resources Elements, as summarized below.

### **Natural Resources Element**

Goals and policies include preservation of scenic resources in coordination with adjacent Federal, State, local, and tribal agencies.

### **Cultural Resources Element**

Goals and policies include preservation of historic resources (buildings, structures, or archaeological resources), paleontological resources, and tribal cultural resources through tribal notification, coordination, and planning; mitigation and avoidance; and resource monitoring.

## **County of San Bernardino Code of Ordinances**

### **Chapter 82.12. Cultural Resources Preservation (CP) Overlay**

#### ***§ 82.12.010. Purpose***

The Cultural Resources Preservation (CP) Overlay established by §§ 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is intended to provide for the identification and preservation of important archaeological and historical resources.

#### ***§ 82.12.020. Location Requirements***

The CP Overlay may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present.

#### ***§ 82.12.030. Application Requirements***

The application for a project proposed within the CP Overlay shall include a report prepared by a qualified professional that determines through appropriate investigation the presence or absence of archaeological and/or historical resources on the project site and within the project area, and recommends appropriate data recovery or protection measures.

**§ 82.12.040. Development Standards**

- (a) The proposed project shall incorporate all measures recommended in the report required by § 82.12.030 (Application Requirements).
- (b) Archaeological and historical resources determined by qualified professionals to be extremely important should be preserved as open space or dedicated to a public institution when possible.

**§ 82.12.050. Native American Monitor**

If Native American cultural resources are discovered within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified and if requested by the tribe, a Native American Monitor shall be required during grading and excavation.

**County of Riverside General Plan**

The General Plan for the County of Riverside follows both Federal and State laws and guidelines for the definition of significance and sensitivity of cultural resources. The Multipurpose Open Space Element (2015) seeks to ensure cultural resources are protected in compliance with the cultural resources program, designation of open spaces, respect for human remains from both prehistoric and historic time periods, and compliance with all applicable laws concerning such remains.

**County of Riverside Code of Ordinances*****Title 2, Chapter 2.100 – Emergency Management Organization***

**2.100.020** – The purpose is to provide for the coordination of disaster mitigation, preparation, response and recovery activities for the protection of persons and property within the County of Riverside in the event of an emergency or disaster.

**2.100.050** – The Emergency Management Organization consists of all officers and employees of the County of Riverside, its agencies, cities, tribal governments and special districts of Riverside County, volunteers and all groups, organizations and persons commandeered under the provisions of the act and this chapter, for the support of the aforementioned personnel in the conduct of emergency operations.

**2.100.060** The Disaster Council includes the director of emergency services from each tribe within Riverside County as appointed by the tribal council.

***Title 15, Chapter 15.72 Historic Preservation Districts***

**§ 15.72.020. Purpose** – to set forth uniform procedures for historic preservation districts; to safeguard the county's historic heritage; to stabilize and improve property values and enhance the county's attractiveness to residents, tourists and visitors, and serve as a support and stimulus to business and industry for the betterment of the County's economy.

**Certified Local Governments**

A Certified Local Government is a local government whose historic preservation program and/or ordinance has been certified pursuant to Section 101(c) of the NHPA. Certified Local Governments must be included in the process of nominating properties within their jurisdictions to the NRHP.



Of the cities within the Planning Area, Colton, Highland, Ontario, Pomona, Norco, Redlands, and Riverside are participating Certified Local Government members, and are subject to its historic preservation plan.

### 3.5.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate cultural resource impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on cultural resource. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix B, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.5.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5? (Impact CUL-1)
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? (Impact CUL-2)
- Disturb any human remains, including those interred outside of formal cemeteries? (Impact CUL-3)

#### 3.5.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Proposed Project's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impacts of the Proposed Project:

- Conduct a Sacred Land File search by the NAHC.
- Conduct tribal consultation to gather input from local tribal groups concerning cultural resources that may not be recorded.
- Review and document publicly available data listing NRHP and CRHR sites within the Planning Area.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.

*Direct impacts* are those effects that occur at the same time and place as project implementation such as destruction or removal of cultural resources. *Indirect impacts* are those effects that occur either later in time or a distance from project activities, but are reasonably foreseeable, such as destruction or removal of cultural resources. Direct and indirect impacts can be permanent or temporary.

Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the

Proposed Project would result in significant impacts on cultural resources. Impacts on cultural resources were assessed on the basis of the Planning Area's resources, and review of applicable local government authorities, including the San Bernardino County General Plan, Riverside County General Plan, and applicable ordinances. Impacts related to construction and operational impacts on cultural resources were assessed based on generally accepted analysis techniques that estimate the cultural resource impacts in areas where physical land disturbance is needed to implement the Proposed Project. Because only general locations and durations of habitat restoration and other conservation actions are currently known, a qualitative approach to cultural resource impact analysis is provided that relies on typical construction methods and assumptions about the types of activities that would occur to implement, maintain, and manage the Proposed Project. The analysis is based on judgment of the types of archaeological and historic property impacts that could result from implementing the Proposed Project considering the types of cultural resources recorded to date within the Planning Area.

The Planning Area is rich in its variety and extent of cultural resources, as it contains more than 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, as well as many resources that have been recorded but not evaluated for listing as a California Historical Landmark, or in the NRHP or CRHR. Therefore, any excavation in previously undisturbed soil has the potential to result in impacts on cultural resources. Additionally, because there are already thousands of resource locations identified in the Planning Area, it is reasonable to assume that the implementation of restoration and conservation activities included in the Proposed Project may affect known as well as currently unidentified archaeological sites.

Impacts on cultural resources can be direct or indirect and generally occur in three categories: (1) direct disturbance to archaeological resources; (2) direct disturbance to above-ground built resources; and (3) indirect impacts on resources from adjacent or nearby activities, such as providing access to archaeological sites not previously accessible, through ground vibration and corrosive air contaminants, or by the introduction of elements that detract from the historic integrity of the surroundings. For example, historic architectural resources can suffer indirect effects by the development of new transportation facilities if those facilities change the surroundings to such a degree that the environmental setting is no longer compatible or such that the activity's intrusive effects cause the resource to no longer be enjoyed for its original intended purpose (e.g., tourism).

It is important to note that most of the Planning Area has not been inventoried for cultural resources. Prior to the implementation of CEQA, archaeologists throughout most of the twentieth century concentrated on those sites having the greatest depth, artifact recovery potential, and most renown. Many of these sites were confined to the coastal plains and embayment areas. Interior regions went mostly unsurveyed until compliance archaeology became a necessity with project environmental approvals. In the last 40 years, more acreage has been inventoried than all pre-1970s surveys combined because the land was tied to ministerial decisions of the land managing agencies. As a result, archaeologists have learned vastly more about the natural and cultural history of the Planning Area in recent years.

### 3.5.3.3 Impacts Analysis and Mitigation

#### *Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?*

The Planning Area contains more than 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, as well as many resources that have been recorded but not evaluated for listing as a California Historical Landmark, or in the NRHP or CRHR.

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Conservation activities include habitat improvement, management, and monitoring activities within dedicated Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may be conducted related to hydrologic manipulation and substrate management. Many of these activities could involve the use of construction equipment. For example, restoration projects such as enhancing existing stream channels or recreating the channels and constructing wood and rock structures within stream channels (along with other activities not listed here) could involve soil disturbance with loaders or excavators that affect historic resources.

In addition, hydrologic manipulation and substrate management activities could require the use of construction equipment. Actions to improve stream habitat could include creating microhabitat with natural instream structures, managing and enhancing river gravel and cobble, manipulating river flow and path, and pumping groundwater from wells into rivers to improve water flow and temperatures. For example, the HCP proposes to install a series of structures within the stream flow of the Santa Ana River to manipulate water movement and create suitable microhabitat areas. These activities could involve the use of loaders or excavators to move material and build structures, and pumps to pump water. Flow enhancement could also involve the use of construction equipment to move materials.

Because the Proposed Project conservation and restoration activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment to affect historical resources is relatively low.

Management, monitoring, and maintenance activities under the Proposed Project that could potentially introduce new impacts on historic built resources include installation and maintenance of access control features, and vegetation management using sheep grazing, manual labor, or prescribed burning. Other activities, such as control of nonnative invasive species/vegetation through mowing and hand clearing, herbicide application, species surveys and research, seed collection, and preserve patrols, would generate only low levels of ground disturbance. Construction equipment, potentially including backhoes, applicators and compressors, mowers and tractors, and maintenance vehicle use are anticipated. Some of this equipment would involve ground-disturbing activities. Because the Proposed Project monitoring, management, and maintenance activities would not involve maintenance of built environments, the effect on built environment historical resources would be relatively low. Thus, the potential for construction and management and maintenance activities to affect a historic structure in the Permit Area is low. Therefore, impacts on historical resources would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

#### ***Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?***

Efforts to identify cultural resources included a Sacred Lands File search with NAHC and consultation with Native American tribes through Assembly Bill 52. The Sacred Lands File search request to NAHC revealed that there are sacred lands within the Planning Area.

The Planning Area contains over 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks. There are also many resources that have been recorded but not formally evaluated, and many archaeological resources are known by tribal groups throughout the Planning Area that are not housed in either the Sacred Lands File administered by NAHC or submitted to the California Historic Resource Information Center. They are known to the tribes and would only be learned about through consultation. (See Section 3.17, *Tribal Cultural Resources*.)

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Many of these activities could involve the use of construction equipment that will involve ground disturbance. Because the Proposed Project conservation and restoration activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment to affect archaeological resources is relatively high.

Proposed Project impacts in the Permit Area could potentially be significant because ground-disturbing construction activities could demolish or damage unknown or unrecorded archaeological resources resulting in a substantial adverse change to their significance. Such demolition, damage, or relocation could result in an adverse change to their significance, which would be a significant impact. CEQA therefore requires mitigation. Implementation of Mitigation Measures CR-1, CR-2, CR-3, CR-4, and CR-5 would require that the agency that undertakes the project retain a qualified archaeologist to implement all mitigation; define environmentally sensitive areas; conduct an archaeological assessment; and provide Native American and Archaeological monitoring where appropriate in the Preserve Area. These mitigation measures would reduce impacts through data recovery or preservation in place, as appropriate, and are generally accepted measures to address impacts on archaeological resources.

Monitoring, management, and maintenance activities under the Proposed Project that could affect cultural resources include installation and maintenance access control features (e.g., gates, barriers, and fences), and vegetation management using sheep grazing, manual labor, or prescribed burning. Other activities, such as control of invasive species/vegetation through mowing and hand clearing, herbicide application, species surveys and research, seed collection, and preserve patrols, would generate only low levels of ground disturbance.

Construction equipment, potentially including backhoes, applicators and compressors, mowers and tractors, and maintenance vehicle use are anticipated. Some of this equipment would involve ground-disturbing activities, and it is likely that many of these activities could occur in more natural areas that are in relatively undeveloped areas near perennial water sources. As such, the potential for ground-disturbing activities from construction equipment to affect archaeological resources is relatively high.

There is a strong likelihood that additional unrecorded NRHP- or CRHR-eligible archaeological resources exist within the Permit Area. Until the lands have been completely inventoried and the resources located and evaluated for their potential NRHP and CRHR eligibility, it must be assumed that archaeological resources may be present and that they may be eligible for inclusion in the NRHP and CRHR.

Impacts on archaeological resources would be **less than significant with mitigation**.

### **Mitigation Measures**

#### **CR-1: Establish Environmentally Sensitive Areas**

Avoidance is the preferred method of treatment for archaeological sites. Preservation in place of archaeological materials maintains the critical relationship between artifacts and their archaeological context. Additionally, should sacred objects or objects of religious importance to Native American groups be identified, preservation in place avoids conflicts with traditional values of groups who ascribe meaning to these resources. Impacts on unevaluated and/or eligible cultural resources that could be affected in the Permit Area by conservation and restoration activities, and HCP Preserve System management and monitoring activities can be avoided through establishing fencing around cultural resources with a buffer and delineating these locations as Environmentally Sensitive Areas (ESAs). Worker training should include language to the effect that ESAs must be avoided and cannot be entered on foot or with heavy equipment. Signage indicating the fenced area is an ESA is recommended.

#### **CR-2: Retain a Qualified Archaeologist**

All conservation and restoration and any HCP Preserve System management and monitoring activity that involves ground disturbance in the Permit Area shall require that a qualified archaeologist, defined as a person who meets the Secretary of the Interior's Professional Qualifications Standards for an archaeologist, carry out all mitigation measures related to archaeological resources to determine project-specific archaeological resources impacts. The qualified person shall work under the direction of a qualified Principal Investigator.

#### **CR-3: Conduct Archaeological Assessment**

An archaeological assessment shall be prepared for all ground-disturbing activities related to conservation and restoration and HCP Preserve System management and monitoring activities in the Permit Area to ensure that construction would not result in significant impacts on archaeological resources. This assessment will outline the following.

- Environmental and cultural background for the Permit Area
- Previously identified archaeological resources and studies within the construction area
- Archaeological sensitivity for buried archaeological sites
- Determination of whether further work is necessary (i.e., treatment plan or archaeological monitoring)
- Unanticipated Discovery protocol

**CR-4: Provide Archaeological and Native American Monitoring**

As a standard measure for construction of any project activity in the Permit Area, if avoidance is not feasible for any impact involving project activities, and project-related ground disturbance is anticipated to occur at archaeological sites identified above, an archaeologist shall be present to monitor the activity. If ground-disturbing activities are to proceed at prehistoric archaeological sites, a Native American monitor shall be retained in addition to an archaeological monitor. Prior to the commencement of fieldwork, an Archaeological Monitoring Plan (AMP) shall be developed to guide archaeological monitoring work during ground-disturbing activities. The AMP shall detail and emphasize training for construction workers and qualifications necessary for archaeological monitors. The AMP shall also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP shall include roles and responsibilities for cultural resources staff and contact information for the Archaeological Principal Investigator, archaeological and Native American monitors, and appropriate management staff.

The AMP shall detail monitoring procedures, discovery protocols, general procedures for documenting and recovering archaeological materials, artifact identification, repository institution identification, associated repository fees, guidelines for preparing the archaeological monitoring, and mitigation final report. The AMP shall also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present. The AMP shall require attendance at a preconstruction meeting led by a Qualified Principal Investigator/Project Archaeologist. The Qualified Principal Investigator/Project Archaeologist will explain the likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (who to call, construction diversion away from the find, etc.). The AMP shall include an example proposed letter regarding donating salvaged materials to an appropriate museum curation facility, an example daily monitoring report form, and all other pertinent archaeological resources recordation and analysis forms.

The Native American monitor should be affiliated with a local Native American tribe. If project-related ground-disturbing activities in archaeologically sensitive areas are performed simultaneously in more than one location, and these activities are performed at a distance greater than 300 feet apart, an archaeological monitor shall be present at each location. At a minimum, the archaeological monitor will meet the Society for California Archaeology professional qualification standards for an archaeological crew leader, and will work under the direction of an individual that meets the Secretary of the Interior's Standards and Guidelines for Archaeology and the Society for California professional qualification standards for a Principal Investigator.

The archaeological monitor will have the authority to temporarily pause excavations, as needed, to examine potential archaeological discoveries, and to discuss these discoveries and mitigation measures with the Principal Investigator. In the event of an unanticipated discovery of archaeological resources or human remains, the archaeological monitor will follow the unanticipated discovery protocols described below.

**CR-5: Temporarily Halt Construction Activities for any Unanticipated Discoveries**

As a standard measure for construction of any project activities, if an isolated artifact or archaeological deposit is discovered during construction that requires salvaging, the qualified

archaeologist shall have the authority to temporarily halt construction activities within 50 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system device. If the find is prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest and concern regarding the project shall be undertaken.

If the discovery is determined to be not eligible for inclusion in the NRHP or CRHR in consultation with the lead agency, work will be permitted to continue in the area. If, in consultation with the lead agency, a discovery is determined to be significant, a mitigation plan shall be prepared and carried out in accordance with State and Federal guidelines. If the resource cannot be avoided, a data recovery plan shall be developed to ensure collection of sufficient information to address archaeological and historical research questions, with results presented in a technical report describing field methods, materials collected, and conclusions. The qualified archaeologist shall treat recovered items in accordance with current professional standards by properly proveniencing, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards as promulgated in 36 CFR 79.

To reduce potential impacts on archaeological resources, all proposed grading and excavating for the Proposed Project in the area of potential archaeological sensitivity shall be monitored by a qualified archaeologist(s), who meets the Secretary of the Interior's Professional Qualifications Standards as promulgated in 36 CFR 61, and a Native American cultural monitor (for prehistoric sites or sites of Native American origin). The following conditions shall apply to excavation work at archaeological sites identified.

1. The Qualified Archaeologist shall participate in a preconstruction meeting to inform all personnel of the potential for historical archaeological materials to be encountered during ground-disturbing activities.
2. If an isolated artifact or historic period deposit is discovered that requires salvaging, the qualified archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find and shall be given sufficient time to recover the item(s) and map its location with a global positioning system device, and until a Qualified Archaeologist Principal Investigator makes a determination regarding the significance of the resource.
3. If a potentially eligible Native American archaeological resource is discovered, the qualified archaeologist shall have the authority to temporarily halt construction activities within 100 feet of the find until a Qualified Archaeologist Principal Investigator makes a determination regarding the significance of the resource.
4. The Principal Investigator will notify the lead agency to discuss the significance determination and shall also submit a letter indicating whether additional mitigation is required. If the resource is determined to be not significant, the Principal Investigator shall submit a letter to the lead agency indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
5. If the resource is determined to be significant, the Principal Investigator shall submit an Archaeological Data Recovery Plan that has been reviewed by the Native American consultant/monitor, and obtain written approval from the lead agency to complete data

recovery. Impacts on significant resources must be mitigated before ground-disturbing activities in the area of discovery will be allowed to resume.

6. The qualified archaeologist shall treat recovered items in accordance with current professional standards by properly determining provenance, cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards, as promulgated in 36 CFR 79.
7. Within 60 days after completion of the ground-disturbing activity, the qualified archaeologist shall prepare and submit a final report to the lead agency for review and approval, which shall discuss the monitoring program and its results, and provide interpretations about the recovered materials, noting to the extent feasible each item's class, material, function, and origin.

***Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries?***

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Many of these activities could involve the use of construction equipment that would involve ground disturbance. Because the Proposed Project conservation and restoration activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, there is a potential for ground-disturbing activities from construction equipment to affect human remains.

Proposed Project impacts in the Permit Area could potentially be significant because ground-disturbing construction activities could unearth, expose, or disturb unknown or unrecorded human remains. Monitoring, management, and maintenance activities under the Proposed Project that could affect unanticipated human remains include installation and maintenance access control features (e.g., gates, barriers, and fences), and vegetation management using sheep grazing, manual labor, or prescribed burning. Other activities, such as control of nonnative invasive species/vegetation through mowing and hand clearing, herbicide application, species surveys and research, seed collection, and preserve patrols, would generate only low levels of ground disturbance.

Construction equipment, potentially including backhoes, applicators and compressors, mowers and tractors, and maintenance vehicle use are anticipated. Use of this equipment would result in ground disturbance, and it is likely that their use could occur in more natural areas that are in relatively undeveloped areas near perennial water sources. As such, there is a potential for ground disturbance from construction equipment use to affect human remains.

Mitigation Measure CR-6 establishes the procedures required to address discovery of unanticipated human remains during Proposed Project activities. This mitigation measure would address impacts on discoveries of unanticipated human remains in a generally accepted manner and reduce impacts to **less-than-significant levels with mitigation**.

### **Mitigation Measures**

#### **CR-6: Treat Human Remains and Associated or Unassociated Funerary Objects**

As a standard measure for construction of any restoration project in the Permit Area, if human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:



1. The county coroner (for either Riverside or San Bernardino County) has been informed and has determined that investigation of the cause of death is required; and
2. If the remains are of Native American origin:
  - a. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98; or
  - b. The NAHC was unable to identify a descendent or the descendent failed to make a recommendation within 24 hours after being notified by the commission.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that excavation be stopped in the vicinity of the discovered human remains until the coroner can determine whether the remains are those of a Native American.

### 3.5.4 Summary of Potential Types of Impacts of Covered Activities

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of cultural resources effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of other Covered Activities that could create cultural resource impacts and potential best practices that could be incorporated into future projects to reduce cultural resource impacts.

Covered Activities by type and their possible relationship to impacts on cultural resources if implemented with permit coverage are shown in Table 3.5-3.

**Table 3.5-3. Construction and Operation of Covered Activities Relevant to Cultural Resources**

Covered Activity	Activities	Relevance
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Ground-disturbing activities associated with building new facilities, structures, or infrastructure have the potential to affect cultural resources.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development.	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar projects.	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Ground-disturbing activities occurring from routine operations and maintenance duties have the potential to affect cultural resources.

Potential cultural resource impacts that could result from implementing the types of Covered Activities identified in Table 3.5-3 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.5-3, cultural resource impacts associated with constructing, operating, and maintaining these types of Covered Activities include ground disturbance during operation and maintenance (O&M) of new or expanded facilities.

As described in Table 3.5-3, a number of Covered Activities, depending on where activities are sited and the extent of ground-disturbing activities, could uncover or affect cultural resources. These activities include the development of water reuse projects, groundwater recharge, wells and water conveyance infrastructure, and solar energy development, as well as general property and facility maintenance. In addition, Covered Activities include a variety of activities related to implementation of the Conservation Strategy, such as habitat improvement, management, and monitoring, and routine O&M in the Permit Area. O&M Covered Activities with the potential to affect cultural resources include routine O&M that may require ground disturbance such as bank stabilization. Excavation and grading would remove cover and potentially expose cultural resources to erosive forces. General property and facilities maintenance, in particular the maintenance of access roads, could limit the availability of and access to recovery sites. These activities could result in impacts on cultural resources.

Recommended best practices to reduce cultural resources impacts of future Covered Activities include conducting project-specific cultural resources analysis and incorporating cultural resource measures in construction plans. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity cultural resource impacts and best practices that could be employed to reduce potential impacts.

## 3.6 Geology, Soils, and Paleontological Resources

Geology and soils have an important influence on the distribution of landforms and soil types, which in turn influence vegetation and plant species distribution and abundance; in some cases, geology and soils also greatly influence wildlife species distribution. On a regional scale, geologic activity has also greatly influenced the pattern of stream formation and the structure and function of local watersheds. Soils affect the kind and amount of vegetation that is available to wildlife as food and cover.

*Seismicity* is the occurrence or frequency of earthquakes in a region. *Soil* is the unconsolidated mineral or organic material on the immediate surface of the Earth that serves as a natural medium for the growth of land plants. For purposes of this analysis, an *earthquake* is the sudden and violent shaking of the ground, sometimes causing great destruction, as a result of movements within the earth's crust or volcanic action. The surface where they slip is called the *fault* or *fault plane*. The location below the Earth's surface where the earthquake starts is called the *hypocenter*, and the location directly above it on the surface of the Earth is called the *epicenter*.

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *paleontological resources* are fossilized remains of non-human organisms that lived in the geologic past. Paleontological sites and fossils are non-renewable resources that are important in our understanding of the prehistory and the geologic development of Southern California. Many paleontological sites include remains of species that are now extinct and are known to contain bird, mammal, reptile, or bony fish fossils.

### 3.6.1 Environmental Setting

#### 3.6.1.1 Regional Setting

The Project Area is in the Transverse Ranges Geomorphic Province. The Transverse Ranges are an east/west-trending series of steep mountain ranges and valleys in coastal Southern California (California Geological Survey 2002).

The east/west structure of the Transverse Ranges differs from the normal northwest trend of coastal California, hence the name "Transverse." The easternmost part of the province, the San Bernardino Mountains, has been displaced to the south along the San Andreas fault. Intense north-south compression is squeezing the Transverse Ranges. As a result, this is one of the most rapidly rising regions on Earth. Great thicknesses of Cenozoic petroleum-rich sedimentary rocks have been folded and faulted, making this one of the important oil-producing areas in the United States (California Geological Survey 2002).

California includes a diverse assortment of fossils and fossil-bearing formations, representing tens of millions of years of Earth's history. In the South Coast Range, moreno shale derived from fine-grained sediments deposited 65 million years ago in a warm, shallow marine environment contains the highest diversity of organisms from the late Cretaceous period in the western United States.

### 3.6.1.2 Planning Area

#### Geology

Geologic units in the Planning Area span from Pre-Cambrian time to the Holocene (Bortugno and Spittler 1986; Rogers 1965). Because of faulting in the area, many geologic units in the mountainous region are exposed at ground surface. The valleys in the Planning Area are predominantly composed of various types of Holocene sedimentary deposits. Table 3.6-1 shows geologic units present in the Planning Area.

**Table 3.6-1. Geologic Units Present in the Planning Area**

Map Symbol	Age	Geologic Unit
<b>San Bernardino County</b>		
Q	Holocene	Alluvium (undifferentiated)
Qw	Holocene	Wash deposits (alluvial deposits of modern washes)
Qow	Holocene	Older wash deposits (alluvial deposits of abandoned washes)
Qls	Holocene	Landslide deposits
Qyf	Holocene	Younger fan deposits
Qof	Holocene/Pleistocene	Older fan deposits
Qo	Holocene/Pleistocene	Older alluvium (undifferentiated)
Qod	Pleistocene	Well dissected alluvial fans
Pc	Pliocene	Crowder Formation
Mp	Pliocene/Miocene	Potato Sandstone
Msa	Miocene	Santa Ana Sandstone (nonmarine)
Mpe	Miocene	Puente Formation
Mpv	Miocene	Miocene-Pliocene volcanic rocks
Mb	Miocene	Barstow Formation
Mgv	Miocene	Glendora Volcanics
Mc	Miocene	Unnamed Miocene continental deposits (Poorly sorted sandstone and conglomerate)
m	Oligocene	Mountain Meadows Biotite, Dacite Porphyry
Tsf	Paleocene	San Francisquito Formation
Kgr	Mesozoic	Cretaceous granitic rocks
KJqm	Mesozoic	Cretaceous or Jurassic quartz monzonite
JKgd	Mesozoic	Jurassic or Cretaceous granodiorite
Jqd	Mesozoic	Jurassic quartz diorite
J?mz	Mesozoic	Jurassic? monzonite
Kqd	Mesozoic	Cretaceous quartz diorite
Jhd	Mesozoic	Jurassic hornblende diorite and minor gabbro
TRmz	Mesozoic	Triassic monzonite
m <sub>1</sub> , m <sub>3</sub>	Mesozoic/Paleozoic	Sheared and deformed metamorphic rocks (age uncertain)
Pzls	Paleozoic	Upper Paleozoic limestone and marble
ClS	Precambrian	Cambrian and uppermost Precambrian metasedimentary rocks

Map Symbol	Age	Geologic Unit
Cq	Paleozoic	Quartzite
pCq	Precambrian	Late Precambrian metasedimentary rocks—quartz
pCb	Precambrian	Baldwin Gneiss
<b>Riverside County</b>		
Qal	Holocene	Alluvium
Qt	Pleistocene	Quaternary nonmarine terrace deposits
Qc	Pleistocene	Pleistocene nonmarine
PC	Pliocene	Undivided Pliocene nonmarine
gr	Cretaceous	Meozoic granitic rocks
Ju	Jurassic	Upper Jurassic marine
bi	Jurassic	Mesozoic basic intrusive rocks
JRv	Triassic	Jura-Trias metavolcanic rocks
gr-m	Permian	Pre-Cretaceous metavolcanic rocks
ms	Permian	Pre-Cretaceous metasedimentary rocks
pCc	Precambrian	Precambrian igneous and metamorphic rock complex

Sources: Bortugno and Spittler 1986; Rogers 1965

## Seismicity

The Planning Area is in one of the most seismically active areas of the United States. Faults in or near the Planning Area are shown in Table 3.6-2 (see Figure 3.6-1).

**Table 3.6-2. Primary Faults within 25 Miles of the Planning Area**

Fault	Location and Direction from Planning Area	Alquist-Priolo Fault Zoning for Faults in the Planning Area
<b>Historic</b>		
San Andreas fault	within	Zoned
Faults in W. Coyote Hills	10 miles west	No information
South Branch San Andreas fault (Banning strand)	15 miles east	No information
Casa Loma fault	9 miles southeast	No information
<b>Holocene</b>		
Banning fault	3 miles east	Zoned
Chicken Hill fault	within	Zoned
Chino fault	within	Not zoned
Claremont fault	within	Zoned
Cucamonga fault	within	Zoned
Eagle fault	within	Zoned
Etiwanda Avenue fault	within	Not zoned
Glen Helen fault	within	Zoned
Glen Ivy North fault	within	Zoned
Glen Ivy South fault	within	Zoned
Loma Linda fault	within	Zoned

<b>Fault</b>	<b>Location and Direction from Planning Area</b>	<b>Alquist-Priolo Fault Zoning for Faults in the Planning Area</b>
Lytle Creek fault	within	Zoned
Main Street fault	within	Zoned
Peter's fault	within	Zoned
San Andreas fault (South Branch)	within	Zoned
San Gorgonio Pass fault	within	Zoned
San Jacinto fault	within	Zoned
Sharp (1972) San Jacinto fault	within	Zoned
Tin Mine fault	within	Not zoned
Tokay Hill fault	within	Zoned
Unnamed	within	Zoned
Western Heights fault	within	Zoned
South Branch San Andreas fault (Banning strand)	12 miles east	No information
Casa Loma fault	4 miles southeast	No information
Garnet Hill fault	13 miles east	No information
Helendale fault	10 miles northeast	No information
Morongo Valley fault	14 miles east	No information
Pinto Mountain fault	7 miles east	No information
Banning fault (Strand B)	7 miles east	No information
Banning fault (Strand A)	9 miles east	No information
Gandy Ranch fault	5 miles east	No information
Little Rock fault	16 miles northwest	No information
Hidden Springs fault	15 miles northwest	No information
North Branch fault	22 miles southwest	No information
Whittier fault	1 mile west	No information
Wildomar fault	2 miles south	No information
Hot Springs fault	11 miles southeast	No information
Clark fault	17 miles southeast	No information
Sky High Ranch fault	8 miles north	No information
White Mountains Thrust	8 miles north	No information
Silver Reef fault	11 miles northeast	No information
Old Woman Springs fault	14 miles northeast	No information
West Johnson Valley fault	18 miles northeast	No information
Lenwood fault	14 miles northeast	No information
Johnson Valley fault	20 miles northeast	No information
Thomas Mountain fault	26 miles southeast	No information
South Fork fault	25 miles southeast	No information
Raymond fault	16 miles west	No information
Ord Mountains fault zone	10 miles north	No information
<b>Late Quaternary</b>		
Central Avenue fault	within	Not zoned
Hot Springs fault	9 miles southeast	No information

<b>Fault</b>	<b>Location and Direction from Planning Area</b>	<b>Alquist-Priolo Fault Zoning for Faults in the Planning Area</b>
Sky High Ranch fault	11 miles north	No information
Silver Reef fault	13 miles northeast	No information
Ord Mountains fault zone	7 miles north	No information
Indianapolis fault	21 miles southwest	No information
Sierra Madre fault	3 miles west	No information
Clamshell Canyon fault	16 miles west	No information
Sawpit Canyon fault	15 miles west	No information
San Dimas Canyon fault	5 miles west	No information
Clamshell-Sawpit Canyon fault	12 miles west	No information
Bolsa-Fairview fault	20 miles southwest	No information
Adams Avenue fault	21 miles southwest	No information
Olive Avenue fault	23 miles southwest	No information
South Branch fault	23 miles southwest	No information
THUMS-Huntington Beach	24 miles southwest	No information
Peralta Hills fault	5 miles west	No information
Ocotillo Ridge fold	13 miles north	No information
Arrastre Canyon Narrows fault	8 miles north	No information
Bowen Ranch fault	8 miles north	No information
Tunnel Ridge fault	3 miles north	No information
Cleghorn fault	within	Not zoned
San Antonio fault	within	Not zoned
Waterman Canyon fault	within	Not zoned
San Gorgonio Mountain fault	within	Not zoned
Red Hill-Etiwanda Avenue fault	within	Not zoned
Indian Hill fault	1 mile west	No information
San Jose fault	1 mile west	No information
Redlands fault	within	Not zoned
East Silverwood Lake fault	2 miles north	No information
Grass Valley fault	3 miles north	No information
Mission Creek fault	within	Zoned
Mill Creek fault (North Branch San Andreas)	within	Zoned
Live Oak Canyon fault	within	Not zoned
Reservoir Canyon fault	within	Not zoned
Yucaipa Graben Complex	within	Not zoned
Mill Creek fault (North Branch San Andreas)	within	Zoned
Cherry Valley fault	within	Not zoned
West Silverwood Lake fault	2 miles north	No information
Star Peak shear zone	10 miles northwest	No information
Holcomb fault	13 miles northwest	No information
Yorktown fault	20 miles southwest	No information
Willard fault	2 miles south	No information

<b>Fault</b>	<b>Location and Direction from Planning Area</b>	<b>Alquist-Priolo Fault Zoning for Faults in the Planning Area</b>
Pelican Hill fault	13 miles southwest	No information
Rialto-Colton fault	within	Not zoned
Fresno fault	within	Not zoned
Duarte fault	9 miles west	No information
Upper Duarte fault	10 miles west	No information
<b>Quaternary</b>		
El Modeno fault	7 miles southwest	No information
Little Horsethief Canyon fault	within	Not zoned
Icehouse Canyon fault	within	Not zoned
Pipes Canyon fault	10 miles east	NI
Santa Ana fault	within	Not zoned
Walnut Creek fault	6 miles west	No information
Casa Blanca fault	within	Not zoned
San Gabriel fault	within	Zoned
Stoddard Canyon fault	within	Not zoned
Arrowhead fault	within	Not zoned
North Nadeau fault	17 miles northwest	No information
Holmes fault	15 miles northwest	No information
Mount Eden fault	3 miles southwest	No information
Weber fault	within	Not zoned

Sources: California Geological Survey 2010; Bryant et al. 2002

The State of California considers two aspects of earthquake events to be primary seismic hazards: surface fault rupture (disruption at the ground surface as a result of fault activity) and seismic ground shaking.



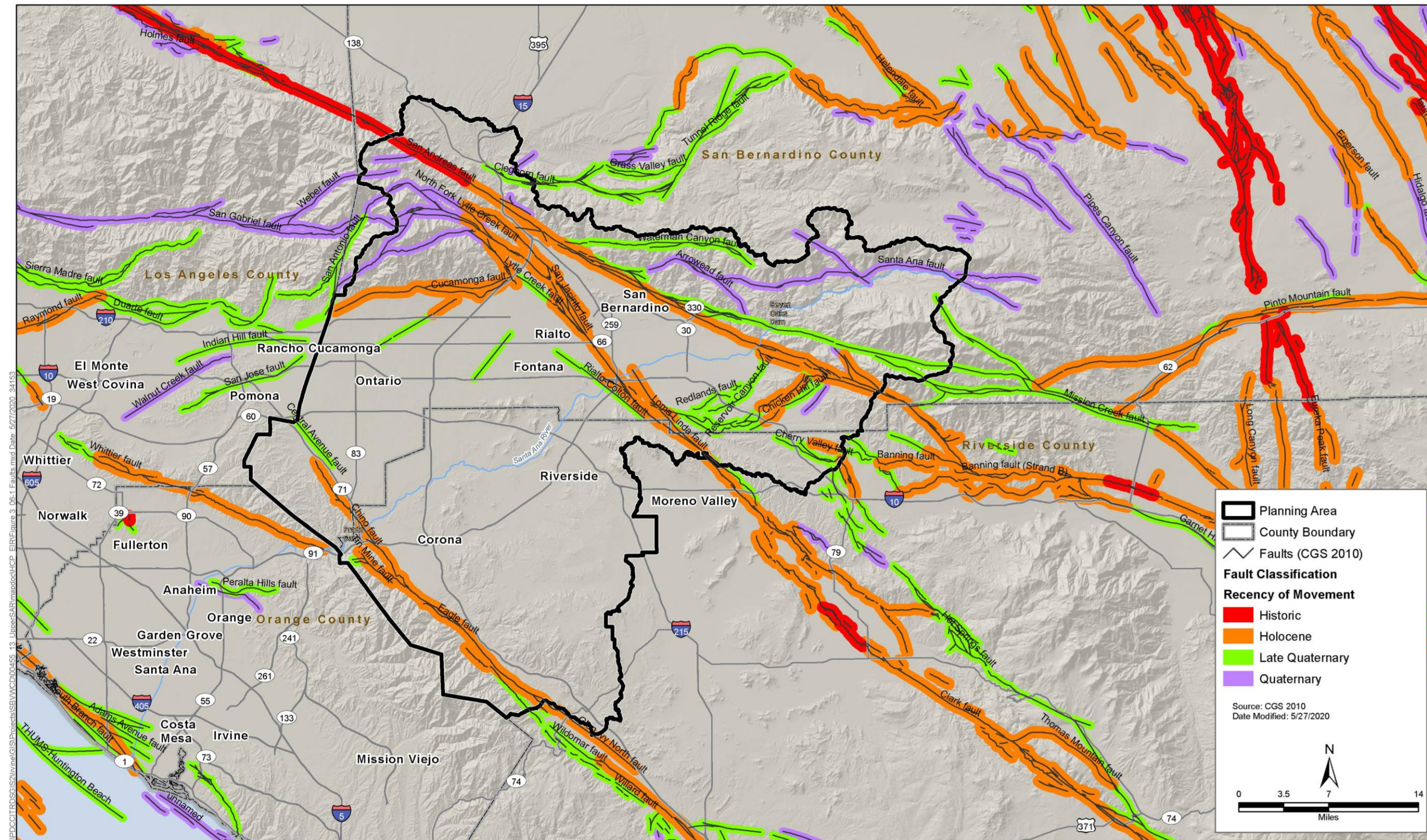


Figure 3.6-1. Regional Faults



*This page intentionally left blank.*

## Primary Seismic Hazards

Primary seismic hazards include surface fault rupture and seismic ground shaking. The State of California is in the process of mapping *zoned* faults, or faults recognized under the Alquist-Priolo Act as active and posing a threat to development. The state is also mapped for seismic hazards. Not all areas of the Planning Area are mapped for special study zones and seismic hazards.

### **Surface Fault Rupture**

*Surface fault rupture* is the surface manifestation of seismic activity, when movement underground propagates to the surface and causes surface displacement of soil and/or rock.

Several faults in the Planning Area are in an Alquist-Priolo Earthquake Fault Zone (Table 3.6-2) (Bryant et al. 2002). Therefore, there is a risk of surface fault rupture in the Planning Area.

### **Strong Seismic Ground Shaking**

Unlike surface rupture, *seismic ground shaking* is not confined to the trace of a fault, but rather propagates into the surrounding areas during an earthquake. The intensity of ground shaking typically diminishes with distance from the fault, but ground shaking may be locally amplified and/or prolonged by some types of substrate materials. Major earthquakes have occurred in the Planning Area in the past and can be expected to occur in the future. The U.S. Geological Survey (2015) estimates that there is a 93% likelihood of an earthquake of magnitude 6.7 occurring in Southern California over the 30-year period beginning in 2014.

## Secondary Seismic Hazards

*Secondary seismic hazards* are liquefaction and related ground failures and seismically induced landsliding. As discussed in Section 3.6.2.2, *State Regulations*, the State of California maps areas that are subject to secondary seismic hazards pursuant to the Seismic Hazards Mapping Act of 1990. The State of California is mapped for secondary seismic hazards, specifically liquefaction and seismically induced landslide. As stated previously under *Primary Seismic Hazards*, not all areas of the Planning Area are mapped for seismic hazards.

### **Liquefaction**

*Liquefaction* is a phenomenon in which saturated, granular sediments such as sands and silts temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude of earthquakes likely to affect the site. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction (California Geological Survey 2008). When a soil liquefies, it loses its ability to support structures and buried utilities. When the liquefaction event ends, settlement occurs, potentially resulting in differential settlement. *Differential settlement* is when the ground underlying one part of a structure settles more or less deeply than the ground underlying other parts of the structure.

Liquefaction can also result in lateral spreading. *Lateral spreading* is the movement of liquefied sediment along a gentle slope toward an unconstrained face such as a creek bank or cliff, beyond which sediments can freely move.

Liquefaction risk in the Planning Area ranges from low to high depending on whether the area is in an upland area characterized by rocky ground or in a low-lying area characterized by alluvium and groundwater that intersects a liquefaction-susceptible sediment (County of San Bernardino 2009a, 2009b; County of Riverside 2016).

### ***Landslide***

The Planning Area includes a portion of the Transverse Ranges. These mountains are characterized by steep slopes, sharp narrow ridges, steep-walled incised canyons, and major faults. These characteristics, particularly when combined with heavy precipitation, can produce landslides. Areas in San Bernardino County in the Planning Area at particular risk for landsliding are the steep fronts of the San Gabriel and southwestern San Bernardino Mountains, especially adjacent to active faults (County of San Bernardino 2019). Areas in Riverside County in the Planning Area at risk for landslide are in the Box Springs and Santa Ana Mountains. Gently sloping areas do not have a landslide risk.

## **Settlement and Subsidence**

### **Settlement and Collapse**

Settlement is the vertical movement of soil. Settlement can result from seismic densification and *hydroconsolidation* (or soil collapse). Seismic densification results when strong ground shaking causes the spaces between soil particles to become smaller and, as a result, the soil particles become more densely packed.

Hydroconsolidation, or soil collapse, typically occurs in Holocene-age sediments that were deposited in an arid or semi-arid environment. Other sediments susceptible to collapse are human-made fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. These soils typically contain minute pores, and the particles may be supported with clay or silt or chemically cemented with carbonates. When collapsible soils become saturated with water, the water can either rearrange the soil particles or remove the cementing material. Rapid settlement, or collapse, then results (County of Riverside 2016). Soil settlement can be differential, resulting in damage to building foundations and structures.

### **Subsidence**

*Subsidence* is the sudden or gradual downward settling and compaction of soil and other surface material with little or no horizontal motion. It can occur as a result of seismic activity, removal of resources from under the ground surface (such as water or petroleum), and other causes (County of San Bernardino 2007a; County of Riverside 2016).

Ground subsidence as a result of falling water tables and of seismic activity along active faults has occurred in both San Bernardino County and Riverside County in the Planning Area (County of San Bernardino 2007a; County of Riverside 2016; U.S. Geological Survey 2018). Areas of particular concern are the Yucaipa Valley, Chino, and Elsinore Trough (U.S. Geological Survey 2018).

## **Soil Hazards**

Based on Natural Resources Conservation Service mapping, the Planning Area includes soils that range from clay to gravelly, sandy soils, that are well drained to poorly drained, that are very

shallow to very deep, and with slopes that range from 0 to 100%. Some areas do not have soil but consist of rock outcrop.

### **Expansive Soil**

An issue of concern in the Planning Area is the shrink-swell potential of several soil map units (Natural Resources Conservation Service 2016). Soils with a high shrink-swell potential, also known as *expansive soils*, respond to changes in soil moisture content by expanding when wet and contracting when dry. The more water they absorb, the more they increase in volume and, conversely, the more they decrease in volume when they dry out. Through this change in volume, expansive soils exert uplift or lateral pressures on foundations or walls in contact with them when they expand and contract, thus providing unstable support for foundations and other structures; linear projects may be displaced. Any structures that are located on expansive soil may thus be damaged by changes in the soil's volume in response to changes in soil moisture without modification to the soil.

In the Planning Area, expansive soils tend to occur in valley areas, particularly the San Bernardino Valley and upstream of Seven Oaks Dam (Natural Resources Conservation Service 2016). Figure 3.6-2 shows areas in the Planning Area where moderately and highly expansive soils are located.

### **Erosion Hazard**

Susceptibility of soils in the Planning Area to water and wind erosion varies from low to very severe for water erosion and low to severe for wind erosion. Figure 3.6-3 and Figure 3.6-4 (water and wind erosion, respectively) show soils with moderate, severe, and very severe susceptibility to erosion. Soils are more susceptible to erosion when they are disturbed and ground cover, such as vegetation or pavement, is removed, such as during construction activities. Erosion can lead to loss of topsoil as well as hydrologic impacts, discussed in Section 3.9, *Hydrology and Water Quality*.

### **Paleontological Resources**

Terrestrial and marine sedimentary deposits underlying the Planning Area that are Pleistocene age or older have potential to contain significant paleontological resources. Some of the geologic formations and assemblages listed in Table 3.6-3 have potential to yield fossils (University of California Museum of Paleontology 2019), many of them bird, mammal, and reptilian fossils.

The Impact Mitigation Guidelines Revisions Committee of the Society of Vertebrate Paleontology (SVP) Standard Guidelines (SVP 2010) include procedures for the investigation, collection, preservation, and cataloguing of fossil-bearing sites, including the designation of paleontological sensitivity. The Standard Guidelines are widely accepted among paleontologists and are followed by most investigators. The Standard Guidelines identify the two key phases of paleontological resource protection as (1) assessment and (2) implementation. Assessment involves identifying the potential for a project site or area to contain significant nonrenewable paleontological resources that could be damaged or destroyed by project excavation or construction. Implementation involves formulating and applying measures to reduce such adverse effects. For the assessment phase, SVP defines the level of potential as one of four sensitivity categories for sedimentary rocks: High, Undetermined, Low, and No Potential (SVP 2010).

- **High Potential.** Assigned to geologic units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered; and sedimentary rock units suitable for the preservation of fossils ("middle Holocene and older, fine-grained fluvial sandstones...fine-

grained marine sandstones, etc.”). Paleontological potential consists of the potential for yielding abundant fossils, a few significant fossils, or “recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data.”

- **Undetermined Potential.** Assigned to geologic units “for which little information is available concerning their paleontological content, geologic age, and depositional environment.” In cases where no subsurface data already exist, paleontological potential can sometimes be assessed by subsurface site investigations.
- **Low Potential.** Field surveys or paleontological research may allow determination that a geologic unit has low potential for yielding significant fossils (e.g., basalt flows). Mitigation is generally not required to protect fossils.
- **No Potential.** Some geologic units have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Mitigation is not required.

Based on data from the University of California Museum of Paleontology database and published literature, the identified formations shown in Table 3.6-3 all have undetermined or high potential to contain significant paleontological resources because they are known to contain bird, mammal, reptile, or bony fish fossils. Table 3.6-3 also shows the number of vertebrate records identified in the University of California Museum of Paleontology database (2019) either within a formation or, if no formation name is available, the applicable county.







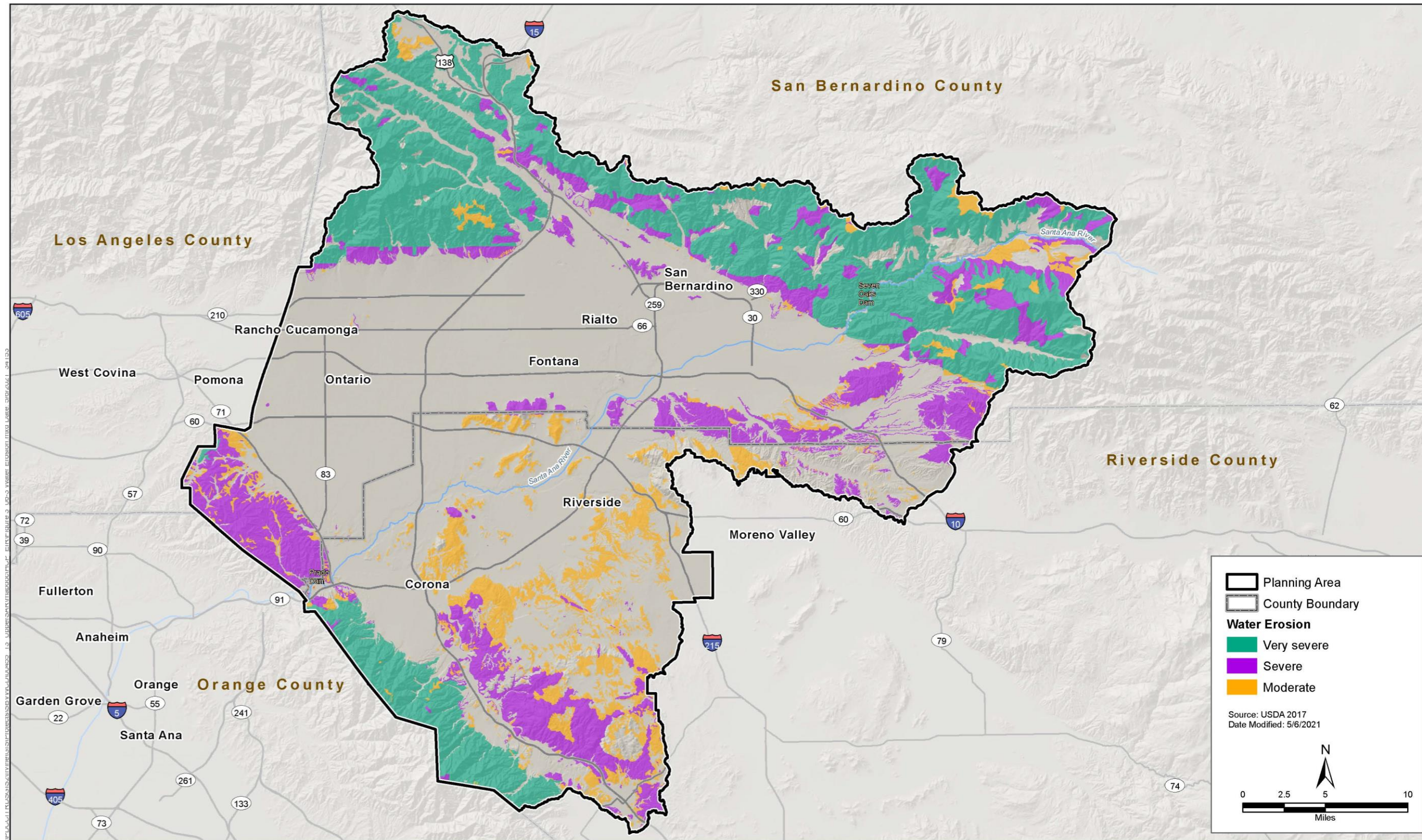


Figure 3.6-3. Soils with Susceptibility to Water Erosion in the Planning Area



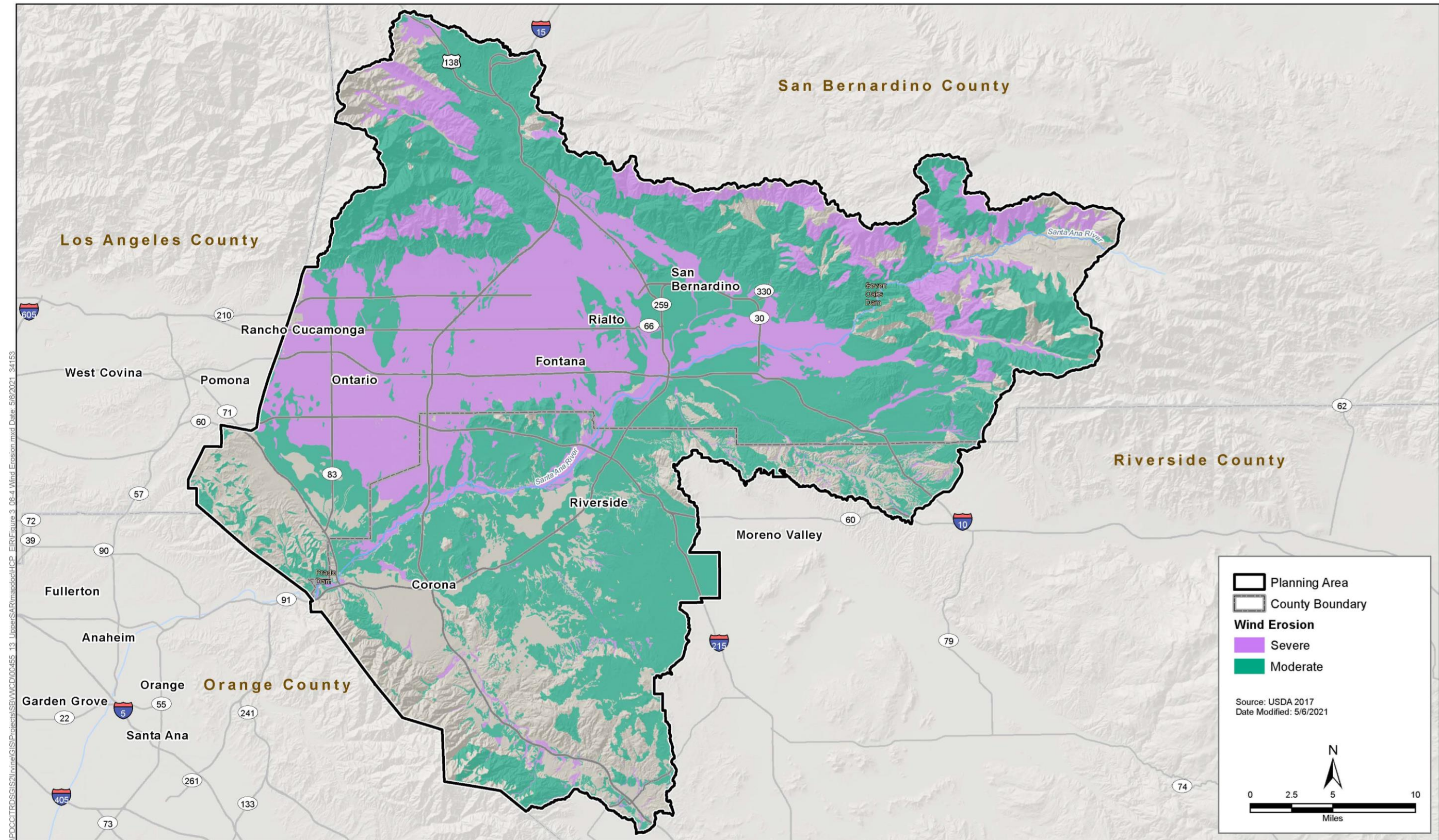


Figure 3.6-4. Soils with Susceptibility to Wind Erosion in the Planning Area



*This page intentionally left blank.*

**Table 3.6-3. Geologic Units and Paleontological Sensitivity in the Planning Area**

<b>Map Symbol</b>	<b>Age</b>	<b>Geologic Unit</b>	<b>Paleontological Sensitivity</b>	<b>Number of UCMP Vertebrate Records<sup>a</sup></b>
<b>San Bernardino County</b>				
Qof	Holocene/ Pleistocene	Older fan deposits	Undetermined	See note (a)
Qo	Holocene/ Pleistocene	Older alluvium (undifferentiated)	Undetermined	See note (a)
Qod	Pleistocene	Well dissected alluvial fans	Undetermined	See note (a)
Pc	Pliocene	Crowder Formation	High	9
Mp	Pliocene/ Miocene	Potato Sandstone	High	1
Msa	Miocene	Santa Ana Sandstone (nonmarine)	Undetermined	See note (a)
Mpe	Miocene	Puente Formation	High	1
Mpv	Miocene	Miocene-Pliocene volcanic rocks	Undetermined	No information
Mb	Miocene	Barstow Formation	High	3,994
Mgv	Miocene	Glendora Volcanics	Undetermined	No information
Mc	Miocene	Unnamed Miocene continental deposits (Poorly sorted sandstone and conglomerate)	Undetermined	See note (a)
Tsf	Paleocene	San Francisquito Formation	High	1
Pzls	Paleozoic	Upper Paleozoic limestone and marble	Undetermined	No information
<b>Riverside County</b>				
Qt	Pleistocene	Quaternary nonmarine terrace deposits	Undetermined	See note (a)
Qc	Pleistocene	Pleistocene nonmarine	Undetermined	See note (a)
PC	Pliocene	Undivided Pliocene nonmarine	Undetermined	See note (a)
Ju	Jurassic	Upper Jurassic marine	Undetermined	No information

Sources: University of California Museum of Paleontology 2019; Bortugno and Spittler 1986; Campbell et al. 2007; Rogers 1965

<sup>a</sup> In San Bernardino County and Riverside County, several geologic units are unnamed and therefore unsearchable in the University of California Museum of Paleontology (UCMP) database. In this case, a countywide search based on the age of the geologic unit provided information about potential fossils. In San Bernardino County, 3,731 vertebrate fossils are reported from the Pleistocene epoch, 197 from the Miocene epoch, and one from the Cretaceous period. In Riverside County, 572 vertebrate fossils are reported from the Pleistocene epoch and one from the Miocene epoch (University of California Museum of Paleontology 2019).

## 3.6.2 Regulatory Framework

### 3.6.2.1 Federal Regulations

#### U.S. Geological Survey National Landslide Hazard Program

To fulfill the requirements of Public Law 106-113, the U.S. Geological Survey created the National Landslide Hazards Program to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies. The Federal Emergency Management Agency is the responsible agency for the long-term management of natural hazards.

#### Clean Water Act Section 402 (National Pollutant Discharge Elimination System Program)

The Clean Water Act (CWA) is discussed in detail in Section 3.9, *Hydrology and Water Quality*. However, because CWA Section 402 is directly relevant to grading activities, additional information is provided here.

CWA Section 402 mandates that certain types of construction activity comply with the requirements of the U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) program. EPA has delegated to the State Water Resources Control Board the authority for the NPDES program in California, where it is implemented by the state's nine Regional Water Quality Control Boards. Construction activity disturbing 1 acre or more must obtain coverage under the state's General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (hereafter the Construction General Permit).

### 3.6.2.2 State Regulations

#### Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (Public Resources Code [PRC] Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce risks to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy<sup>1</sup> across the traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones.

Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are *sufficiently active* and *well defined*. A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as referring to approximately the last 11,000 years). A fault is considered well defined if its trace can be identified clearly by a trained geologist at the ground

---

<sup>1</sup> With reference to the Alquist-Priolo Act, a *structure for human occupancy* is defined as one "used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year" (California Code of Regulations, Title 14, Div. 2, Section 3601(e)).

surface, or in the shallow subsurface using standard professional techniques, criteria, and judgment (California Geological Survey 2018).

### **Seismic Hazards Mapping Act of 1990**

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act—the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped seismic hazard zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by California Geological Survey Special Publication 117a, Guidelines for Evaluating and Mitigating Seismic Hazards (California Geological Survey 2008).

### **Construction Activities Storm Water Construction General Permit**

Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

Coverage under the Construction General Permit is obtained by submitting permit registration documents to the State Water Resources Control Board that include a risk level assessment and a site-specific stormwater pollution prevention plan (SWPPP) identifying an effective combination of erosion control, sediment control, and non-stormwater best management practices (BMPs). The Construction General Permit requires that the SWPPP define a program of regular inspections of the BMPs and, in some cases, sampling of water quality parameters.

More information is available in Section 3.9, *Hydrology and Water Quality*.

### **California Building Standards Code**

The State of California’s minimum standards for structural design and construction are given in the California Building Standards Code (CBSC) (24 California Code of Regulations). The CBSC is based on the International Building Code (International Code Council 2015), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous, more detailed or more stringent regulations. The CBSC requires that “classification of the soil at each building site will be determined when required by the building official” and that “the classification will be based on observation and any necessary

test of the materials disclosed by borings or excavations.” In addition, the CBSC states that “the soil classification and design-bearing capacity will be shown on the (building) plans, unless the foundation conforms to specified requirements.” The CBSC provides standards for various aspects of construction, including, but not limited to, excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, certain aspects of the Proposed Project would be required to comply with all provisions of the CBSC. The CBSC requires extensive geotechnical analysis and engineering for grading, foundations, retaining walls, and other structures, including criteria for seismic design.

Local agencies must ensure that development in their jurisdictions comply with guidelines contained in the CBSC. Cities and counties can, however, adopt building standards beyond those provided in the code.

### **Public Resources Code Section 5097**

PRC Section 5097 addresses paleontological, archaeological, and historic sites on State land that may be disturbed as part of a project being evaluated under the California Environmental Quality Act (CEQA). PRC Section 5097.5 considers it a misdemeanor to knowingly and willfully excavate upon or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, or archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological, or historical feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

### **3.6.2.3 Local Regulations**

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to geology, soils and paleontological resources. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. Also included are policies from the Southern California Association of Governments regarding geologic, soil, and seismic hazards. Appendix B, *Regional and Local Regulations*, includes relevant local plans, policies, ordinances, and programs related to geology, soils, and paleontological resources.

### **Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy**

The Regional Transportation Plan/Sustainable Communities Strategy (2016) provides mitigation measures designed to minimize geologic, soil, and seismic hazards, as follows:

- Comply with Section 4.7.2 of the Alquist-Priolo Act, requiring a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.
- Comply with the CBSC and local regulatory agencies with oversight of development associated with the project, ensuring that projects are designed in accordance with county and city code requirements for seismic ground shaking.

- Adhere to design standards described in the CBSC and all standard geotechnical investigation, design, grading, and construction practices to avoid or reduce impacts from earthquakes, ground shaking, ground failure, and landslides.

## **County of San Bernardino General Plan**

The County of San Bernardino General Plan (County of San Bernardino 2007a) provides goals, policies, and programs designed to minimize geology, soils, and paleontological resources impacts. The relevant goals, policies, and programs are presented in the Conservation, Circulation and Infrastructure, and Safety Elements. Relevant policies from the General Plan include the protection of paleontological resources, productivity and conservation of soil resources, protection from natural and human-made hazards, and adequate protection against seismic hazards, among others. Refer to Appendix B, *Regional and Local Regulations* for a detailed list.

## **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The relevant goals, policies, and programs are presented in the Hazards and Cultural Resources Elements of the Countywide Plan. The relevant goals, policies, and programs presented in the Hazards Element seek to protect people and the natural environment from natural and human-generated hazards and provide appropriate mitigation measures.

## **San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan**

The San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (County of San Bernardino 2017) sets out the hazards present in San Bernardino County, including geologic, soils, and seismic hazards, and provides a description of responsibilities and possible mitigation to reduce hazard risk.

## **County of San Bernardino Code of Ordinances**

San Bernardino County Code of Ordinances, Division 3, Building Regulations, Chapter 1, Section 63.0101, states that San Bernardino County adopts the 2016 CBSC, contained in Part 2 of Title 24 of the California Code of Regulations.

San Bernardino County Code of Ordinances, Title 8, Development Code, Division 2, Land Use Zoning Districts and Allowed Uses, Chapter 82.20, Paleontologic Resources (PR) Overlay, Section 82.20.010 states that the Paleontologic Resources Overlay was created because the identification and preservation of significant paleontologic (fossil) resources is necessary, as many such resources are unique and non-renewable, and because preservation of such paleontologic resources provides a greater knowledge of county natural history, thus promoting county identity and conserving scientific amenities for the benefit of future generations.

## County of Riverside General Plan

The County of Riverside General Plan Safety Element (2016) contains various policies to address geologic, soil, and seismic hazards. Relevant policies include performing geological investigations to identify potential geologic hazards and mitigating and minimizing geologic hazard impacts. The County of Riverside General Plan Multipurpose Open Space Element (County of Riverside 2015) contains policies relevant to paleontological resources, including preparing a paleontological resource impact mitigation program for development projects with a high paleontological sensitivity and curating paleontological resources when found.

## County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan

The County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan (County of Riverside 2018) includes policies and recommendations related to earthquake hazards.

## County of Riverside Code of Ordinances

Riverside County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.12, Uniform Building Code, Section 15.12.010 states that Riverside County adopts the 2001 CBSC, adopted by the California Building Standards Commission into the California Code of Regulations as Title 24, Part 2, based upon the 1997 edition of the Uniform Building Code adopted by the International Conference of Building Officials. Riverside County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.52, Pre-Application Review Procedures for Development Proposals, Section 15.52.060 states that the pre-application review letter shall contain staff comments on the applicant's development proposal, but shall not be considered approval of the development proposal. The letter shall include paleontological studies, as applicable to the Proposed Project.

### 3.6.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate geology, soils, and paleontological resources impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on geology, soils, and paleontological resources. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.6.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
  - ii) Strong seismic ground shaking?
  - iii) Seismic-related ground failure, including liquefaction?



iv) Landslides? (Impact GEO-1)

- Result in substantial soil erosion or the loss of topsoil? (Impact GEO-2)
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? (Impact GEO-3)
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risk to life or property? (Impact GEO-4)
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Impact GEO-5)

Because the Proposed Project would not involve use of septic tanks or alternative wastewater disposal systems, this topic is not discussed further.

### 3.6.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential geology, soils, and paleontological resource impacts of the Proposed Project.

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in geology, soils, and paleontological resource impacts.
- Identify and evaluate potential impacts related to geology, soils, and paleontological resource impacts resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

Impacts related to geology, soils, and paleontological resource were assessed based on review of the HCP, consultation with the Permittees, and review of applicable documents such as general plans for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would have a significant impact related to geology, soils, and paleontological resources. Impacts were assessed based on review of applicable local government authorities such as published maps and reports; geographic information systems analysis of the Planning Area with respect to geologic, soils, seismic, and paleontological resources as listed below; and the County of San Bernardino General Plan and General Plan EIR (County of San Bernardino 2007a, 2007b), the County of Riverside General Plan Multipurpose Open Space Element and Safety Element of the General Plan and General Plan EIR (County of Riverside 2014, 2015, 2016), and applicable ordinances.

Impacts related to construction and operations for geology, soils, and paleontological resources were assessed based on generally accepted analysis techniques that estimate impacts in areas

where physical land disturbance is needed to implement the Proposed Project. Information presented in this section was obtained from the following sources.

- Geologic, soils, and hazards mapping (Bryant et al. 2002; California Geological Survey 2010; Natural Resources Conservation Service 2016; Rogers 1965; Bortugno and Spittler 1986; U.S. Geological Survey 2018)
- Scientific literature (Campbell et al. 2007)
- Record searches from the University of California Museum of Paleontology database (2019)

The methods used to analyze potential impacts on paleontological resources and develop mitigation measures for the identified impacts involved the following steps.

- Assess the likelihood that the sediments affected by implementing the Proposed Project contain scientifically important, nonrenewable paleontological resources that could be directly affected.
- Identify the geologic units in the paleontological study area.
- Evaluate the potential of the identified geologic units to contain significant fossils (paleontological sensitivity).
- Identify the geologic units that would be affected by the Proposed Project, based on each project element's depth of excavation—either at ground surface or below ground surface, defined as at least 5 feet below ground surface.
- Identify and evaluate impacts on paleontologically sensitive geologic units as a result of near-term and longer-term construction and operation that involve ground disturbance.
- Evaluate impact significance.
- According to the identified degree of sensitivity, formulate and implement measures to mitigate potential impacts.

The potential of the Proposed Project to affect paleontological resources relates to ground disturbance. Geologic units in the Planning Area containing bird, mammal, reptile, and bony fish fossils were identified through California Geological Survey regional maps (Bortugno and Spittler 1986; Rogers 1965). Determination of presence of paleontological resources in the units was based on the fossil record as documented by the University of California Museum of Paleontology (2019).

After the records search and literature review, the paleontological sensitivity of the units was assessed according to the Impact Mitigation Guidelines Revisions Committee of the SVP Standard Guidelines (SVP 2010).

For the purposes of this analysis, an impact on paleontological resources was considered to be significant and require mitigation if it would result in any of the following.

- Damage to or destruction of vertebrate paleontological resources
- Damage to or destruction of any paleontological resource that
  - Provides important information about evolutionary trends, including the development of biological communities;
  - Demonstrates unusual circumstances in the history of life;
  - Represents a rare taxon or a rare or unique occurrence;

- Is in short supply and in danger of being destroyed or depleted;
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
- Provides information used to correlate strata for which it may be difficult to obtain other types of age dates.

### 3.6.3.3 Impact Analysis and Mitigation

***Impact GEO-1: Directly or indirectly cause potential substantial adverse effects including the risk of loss, injury, or death involving: (i) rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42); (ii) strong seismic ground shaking; (iii) seismic-related ground failure including liquefaction; (iv) landslides?***

Under the Proposed Project, geology and soils impacts could result from conservation and restoration actions needed to implement the Conservation Strategy. Disturbance of soils and geologic conditions could occur when construction equipment is used that exposes soils for habitat improvement, maintenance, and management. However, management, monitoring, and maintenance activities that could disturb soils and create unstable geologic conditions would occur intermittently and infrequently for habitat management and maintenance. Habitat restoration and construction of in-stream structures may occur more regularly or require the use of more equipment. The Proposed Project would not involve construction and operation of any structures for human habitation.

#### **Surface Fault Rupture and Strong Seismic Ground Shaking**

As shown in Table 3.6-2, multiple faults identified as Alquist-Priolo-zoned faults exist in the Planning Area (California Geological Survey 2008) and are recognized by the State to have risk of surface fault rupture and a high likelihood of strong ground shaking potential. Under the Proposed Project, construction activities needed for conservation and habitat improvement (restoration and/or rehabilitation) activities within an HCP Preserve System for Covered Species habitat could be exposed to surface fault rupture if restoration projects or conservation measure elements are located near the San Andreas, Chino, and Mine faults in the Permit Area (see Figure 3.6-1).

Under the Proposed Project, construction, habitat improvement, monitoring, management, and maintenance activities needed to implement the Conservation Strategy could take place during strong seismic ground shaking. Also, conservation features could be affected, such as the series of structures that would be installed within the stream flow of the Santa Ana River to manipulate water movement and create suitable microhabitats. These structures (made of natural materials) are proposed to increase the total amount of suitable habitat available to sucker, including riffles, small scour pools, and exposed patches of gravel/cobble substrate. If exposed to surface fault rupture or strong seismic ground shaking, these minor structures would not result in risks to people.

#### **Seismic-Related Ground Failure**

As noted, only minor structures are proposed as part of the Proposed Project. These minor structures would utilize mostly natural materials in natural settings to enhance habitats and are not anticipated to cause or exacerbate differential settlement or lateral movement.

## Landslides

If habitat improvement actions are needed in or near steeper slopes in the HCP Preserve Area, Proposed Project conservation measures could be constructed and implemented in portions of the Permit Area that are subject to landslide hazards. Undercutting a slope and placing additional loads at the top can cause a slope to fail, depending on the geologic and soil units and degree of water present. Seismic ground shaking can also cause an unstable slope to fail by destabilizing the cohesion between soil particles, allowing gravity to play a greater role in the position of the slope materials and allowing them to move downhill. Risk of slope failure is greatest where the soil is unconsolidated and saturated, such as at natural waterbody crossings.

Because constructing Proposed Project conservation elements would involve some soil disturbance in areas near known landslide zones, some potential exists for construction equipment to destabilize slopes and existing landslide deposits and to place additional loads on slopes vulnerable to landslides. If habitat improvement projects are located near landslide hazard areas, the potential exists for damage to these sites if a landslide were to occur in the vicinity. Management and monitoring activities are not expected to have an appreciable effect on landslide hazards because these activities would be minor and intermittent, but some safety hazards could occur depending on restoration project locations. However, given the temporary nature of construction activities, should the proposed soil disturbance remain relatively minor by utilizing mostly natural materials in natural settings to enhance habitats, it is unlikely that the Proposed Project could exacerbate or be subject to existing or future landslides, and impacts would be less than significant.

Construction would adhere to applicable laws and regulations, which would reduce the potential for seismic-related impacts on structures in the Permit Area. Furthermore, construction of these facilities would not exacerbate strong seismic ground shaking or expose people or habitable structures to such risks. Also, other monitoring, management, and maintenance activities would not place a substantial new load on the ground because no new large structures would be involved; therefore, these activities would not exacerbate the risk of liquefaction, lateral spreading, seismic densification, and differential settlement. Proposed Project implementation would need to comply with all agency regulations for the Proposed Project sites and adhere to all established design standards, which reduces the potential to cause differential settlement and lateral movement. Additionally, the impact related to the risk of loss, injury, or death involving geologic hazards would be less than significant because of the relatively minor nature of Proposed Project construction and the low potential for hazards being encountered during habitat improvement projects.

Therefore, the Proposed Project impacts related to rupture of a surface fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, and landslides would be **less than significant**.

## Mitigation Measures

No mitigation measures are required.

### ***Impact GEO-2: Result in substantial soil erosion or the loss of topsoil?***

The Proposed Project is located in areas that are subject to severe and very severe risk of water erosion and severe risk of wind erosion. Thus, ground-disturbing activities associated with construction and operations needed for implementation of the Conservation Strategy could result in increased risk of water or wind erosion. Construction and grading would remove the vegetative or other cover that otherwise intercepts and slows water as it reaches the ground. Vegetative cover

thus slows potential water erosion and also reduces wind speeds along the soil surface. Without this protective vegetative or other cover, soils can be subject to scouring high-speed winds and moving water.

Erosion can remove topsoil resources and result in sedimentation in waterways, with some soils being more easily eroded than others. Soils in the Permit Area that have a high potential for water or wind erosion are shown on Figure 3.6-3 and Figure 3.6-4, respectively.

However, during ground-disturbing or construction activities, stormwater BMPs—as required by AMM-31 (see Chapter 5, *Conservation Strategy*, of the HCP)—would be implemented to minimize erosion and loss of topsoil and would comply with local stormwater, grading, and erosion control ordinances and stormwater requirements established by the respective county’s Municipal Separate Storm Sewer System requirements (San Bernardino and Riverside). As part of compliance with the NPDES Construction General Permit, for instance, standard erosion and sediment control measures and other housekeeping BMPs would be identified in the required SWPPP. Other measures in the SWPPP would include a range of stormwater control BMPs (e.g., installing silt fences, staked straw wattles, or geofabric to prevent silt runoff to storm drains or waterways). Furthermore, efforts would be made to conduct most ground-disturbing work outside of the typical wet season and minimize the potential for large rain events to mobilize loose sediment during construction.

Under the Proposed Project, construction, habitat improvement, and monitoring, management, and maintenance activities could be located in areas where the soil has not been previously disturbed, depending on soil resources present, and there is potential for loss of topsoil associated with ground-disturbing activities. The impact on topsoil resources in areas of previously undisturbed topsoil would be reduced through topsoil salvage BMPs included in the HCP. Therefore, impacts related to loss of topsoil would be **less than significant**.

### **Mitigation Measures**

No mitigation measures are required.

### ***Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?***

As discussed in Section 3.6.1.2 under *Settlement and Collapse*, unstable soils exist in the Permit Area. Under the Proposed Project construction, habitat improvement, and monitoring, management, and maintenance activities would involve actions that could destabilize the ground by placing new loads on soils that are vulnerable to hydroconsolidation or through construction dewatering that could result in localized subsidence. However, only minor structures are proposed as part of the Proposed Project, and they would utilize mostly natural materials in natural settings to enhance habitats, which are not anticipated to cause or exacerbate unstable soils in the Permit Area.

As evaluated under *Impact GEO-1*, the Proposed Project could be subjected to geologic hazards, such as strong ground shaking during an earthquake. However, the Proposed Project would not cause or exacerbate geologic hazards. In addition, Proposed Project implementation would be required to comply with geologic hazard and construction design standards, which reduces the potential for soil hydroconsolidation, subsidence, or collapse. Because of the minor nature of habitat improvement activities and other actions and application of standard geologic hazard and design measures at construction sites, soil stability impacts associated with the Proposed Project would be **less than significant**.

### Mitigation Measures

No mitigation measures are required.

#### ***Impact GEO-4: 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?***

As shown on Figure 3.6-2, some soils in the Planning Area are moderately to highly expansive. However, Proposed Project construction, habitat improvement, monitoring, management, and maintenance activities needed for the Conservation Strategy are not anticipated to involve structures that could exacerbate expansive soils by placing rigid structures on soils that undergo expansion and contraction when soil moisture content varies. In addition, the Proposed Project would be required to comply with requirements to reduce the potential for effects from expansive soils and adhere to all established design standards. Therefore, this impact would be **less than significant**.

### Mitigation Measures

No mitigation measures are required.

#### ***Impact GEO-5: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Geologic units known to contain fossils occur in the Permit Area. Under the Proposed Project, construction, habitat improvement, monitoring, management, and maintenance activities could disturb significant paleontological resources, particularly during activities that involve grading and excavation associated with habitat improvement and management.

Such ground-disturbing activities could disturb previously undisturbed geologic units with high paleontological sensitivity, which could be exposed at ground surface or occur below ground surface but within the depth disturbed by construction. Depending on where conservation construction activities occur in the Permit Area, impacts on significant paleontological resources could be potentially significant because some portions of the Permit Area have high sensitivity for paleontological resources that could be disturbed by Proposed Project activities.

Implementation of Mitigation Measure GEO-1 would reduce impacts of construction associated with the Proposed Project by requiring monitoring, collecting uncovered paleontological resources, curating the resources, and filing a report outlining a recovery plan. Implementation of Mitigation Measure GEO-1, including construction monitoring and compliance with a recovery plan for found resources would reduce the impacts to **less-than-significant levels with mitigation**.

### Mitigation Measures

#### **GEO-1: Monitor for Discovery of Paleontological Resources and Prepare and Follow a Recovery Plan for Found Resources**

Before the start of any excavation in high-sensitivity sites, the Permittees for the Proposed Project shall retain a Qualified Paleontologist, as defined by the SVP, who is experienced in teaching non-specialists. The Qualified Paleontologist shall train construction personnel who are involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils that are likely to be seen during ground disturbance, and proper notification procedures should fossils be encountered. Procedures to be conveyed to workers

include halting ground disturbance within 50 feet of any potential fossil find and notifying a Qualified Paleontologist, who will evaluate the significance of the find.

The Qualified Paleontologist shall also make periodic visits during earthmoving in high-sensitivity sites to verify that workers are following the established procedures.

If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work near the find and notify the Permittees for the Proposed Project. Ground-disturbing work in the affected areas will remain stopped or be diverted to allow recovery of fossil remains in a timely manner. The Permittees shall retain a Qualified Paleontologist to evaluate the resource and prepare a recovery plan in accordance with SVP guidelines (SVP 2010). The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the Permittees to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. The Permittees shall be responsible for ensuring that the Qualified Paleontologist's recommendations regarding treatment and reporting are implemented.

### **3.6.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of effects related to geology, soils, and paleontological resources that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create geology, soils, and paleontological resource impacts and potential best practices that could be incorporated into future projects to reduce geology, soils, and paleontological resource impacts.

Covered Activities by type and their possible relationship with permit coverage could result in impacts related to geology, soils, paleontological resources. The activities and their possible relationships to impacts are shown in Table 3.6-4.

**Table 3.6-4. Construction and Operation of Covered Activities and Their Relevance to Geology, Soils, and Paleontological Resources**

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Excavation and grading would remove vegetation cover, potentially exposing soil to erosive forces. Excavation could require groundwater dewatering, potentially leading to soil settlement/collapse. Siting new facilities, both structures and infrastructure, could involve excavation or placing new loads in steep, landslide-prone slopes; areas prone to liquefaction; areas prone to soil collapse; or areas with expansive soils. Grading and excavation could unearth and damage or destroy significant paleontological resources.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	See Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	See Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar projects	See Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area (e.g., bank stabilization, storm-damage repair, maintenance of facilities)	Excavation and grading would remove cover, potentially exposing soil to erosive forces. Bank stabilization could involve steep, landslide-prone slopes or areas prone to soil collapse. Grading and excavation could unearth and damage or destroy significant paleontological resources.

Potential geology, soils, and paleontological resources impacts that could result from implementing the types of Covered Activities, as identified in Table 3.6-4, would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. Construction



activities would result in impacts on significant paleontological resources. Covered Activity construction could also destabilize the ground, exacerbate expansive soil conditions, and destabilize slopes and landslide deposits by placing new loads on soils that are vulnerable to seismic-related ground failure. The potential for construction activity to exacerbate risk of liquefaction, lateral spreading, seismic densification, and differential settlement also exists.

Covered Activity construction in geologic units known to contain fossils in the Planning Area could disturb significant paleontological resources if grading or excavation were to occur.

Recommended best practices to reduce impacts on geology, soils, and paleontological resources of future Covered Activities include project-specific construction site measures for erosion control, geologic hazards, and paleontological resources. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity geology, soils, and paleontological resource impacts and best practices that could be employed to reduce potential impacts.

## 3.7 Greenhouse Gas Emissions and Energy

The process known as the *greenhouse effect* keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. The greenhouse effect is created by sunlight that passes through the atmosphere. Some of the sunlight striking Earth is absorbed and converted to heat, which warms the surface. The surface emits a portion of this heat as infrared radiation, some of which is re-emitted toward the surface by greenhouse gases (GHGs). Human activities that generate GHGs increase the amount of infrared radiation absorbed by the atmosphere, thus enhancing the greenhouse effect and amplifying the warming of Earth. *GHG emissions* refer to airborne pollutants that affect global climate conditions. These gaseous pollutants have the effect of trapping heat in the atmosphere, and consequently altering weather patterns and climatic conditions over long timescales. Consequently, unlike other resource areas that are primarily concerned with localized project impacts (e.g., within 1,000 feet of a project site), the global nature of climate change requires a broader analytic approach. Accordingly, while the GHG analysis focuses on emissions generated from the Proposed Project in the Planning Area, the climate change study area includes the global context.

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, commercial energy refers to electricity that is used by residential, commercial, and industrial uses, often at discounted bulk rates. *Energy* is defined as the amount of heat required to raise the temperature of 1 pound of water by 1 degree Fahrenheit. Energy refers to the power supply required for implementation of the Proposed Project within the Planning Area. This discussion focuses on electricity and natural gas as energy sources.

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution (IPCC 2007). Rising atmospheric concentrations of GHGs in excess of natural levels result in increasing global surface temperatures—a phenomenon commonly referred to as *global warming*. Higher global surface temperatures, in turn, result in changes to Earth's climate system, including increased ocean temperature and acidity, reduced sea ice, variable precipitation, and increased frequency and intensity of extreme weather events (IPCC 2018). Large-scale changes to Earth's system are collectively referred to as *climate change*.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation. IPCC estimates that human-induced warming reached approximately 1 degree Celsius (°C) above pre-industrial levels in 2017, increasing at 0.2°C per decade. Under the current nationally determined contributions of mitigation from each country until 2030, global warming is expected to rise to 3°C by 2100, with warming to continue afterward (IPCC 2018). Large increases in global temperatures could have substantial adverse effects on the natural and human environments worldwide and in California.

The principle anthropogenic (human-made) GHGs contributing to global warming are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated compounds, including sulfur

hexafluoride, hydrofluorocarbons (HFC), and perfluorocarbons. Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic sources.

The primary GHGs of concern associated with the Proposed Project are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Principal characteristics of these pollutants are discussed below.

**Carbon dioxide** enters the atmosphere through fossil fuels (oil, natural gas, and coal) combustion, solid waste decomposition, plant and animal respiration, and chemical reactions (e.g., manufacture of cement). CO<sub>2</sub> is also removed from the atmosphere (or *sequestered*) when it is absorbed by plants as part of the biological carbon cycle.

**Methane** is emitted during the production and transport of coal, natural gas, and oil. CH<sub>4</sub> emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.

**Nitrous oxide** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential methodology defined in IPCC reference documents. IPCC defines the global warming potential of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO<sub>2</sub>e), which compares the gas in question to that of the same mass of CO<sub>2</sub> (CO<sub>2</sub> has a global warming potential of 1 by definition).

Table 3.7-1 lists the global warming potential of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, their lifetimes, and abundances in the atmosphere.

**Table 3.7-1. Lifetimes and Global Warming Potentials of Key Greenhouse Gases**

Greenhouse Gases	Global Warming Potential (100 years)	Lifetime (years)	Current Atmospheric Abundance
CO <sub>2</sub>	1	50–200	400 ppm
CH <sub>4</sub>	25	9–15	1,834 ppb
N <sub>2</sub> O	298	121	328 ppb

Sources: CARB 2018; Blasing 2016

ppb = parts per billion; ppm = parts per million

The California Air Resources Board (CARB) recognizes the importance of short-lived climate pollutants (described in Section 3.7.2, *Regulatory Framework*) and reducing these emissions to achieve the State's overall climate change goals. Short-lived climate pollutants have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO<sub>2</sub>. Recognizing their short-term lifespan and warming impact, short-lived climate pollutants are measured in terms of CO<sub>2</sub>e using a 20-year time period. The use of global warming potential (GWP) with a time horizon of 20 years better captures the importance of the short-lived climate pollutants and gives a better perspective on the speed at which emission controls will affect the atmosphere relative to CO<sub>2</sub> emission controls. The Short-Lived Climate Pollutant (SLCP) Reduction Strategy, which is discussed in Section 3.7.2, *Regulatory Framework*, addresses CH<sub>4</sub>, HFC gases, and anthropogenic black carbon. CH<sub>4</sub> has lifetime of 12 years

and a 20-year GWP of 72. HFC gases have lifetimes of 1.4 to 52 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200.

## 3.7.1 Environmental Setting

### 3.7.1.1 Regional Setting

#### Potential Climate Change Effects

Climate change is a complex process that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea level rise (both globally and regionally) as well as changes in climate and rainfall, among other effects, there remains uncertainty about characterizing precise *local* climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected to occur in the future, although the precise extent will take further research to define. Specifically, the following significant impacts are anticipated from global climate change worldwide and in California.

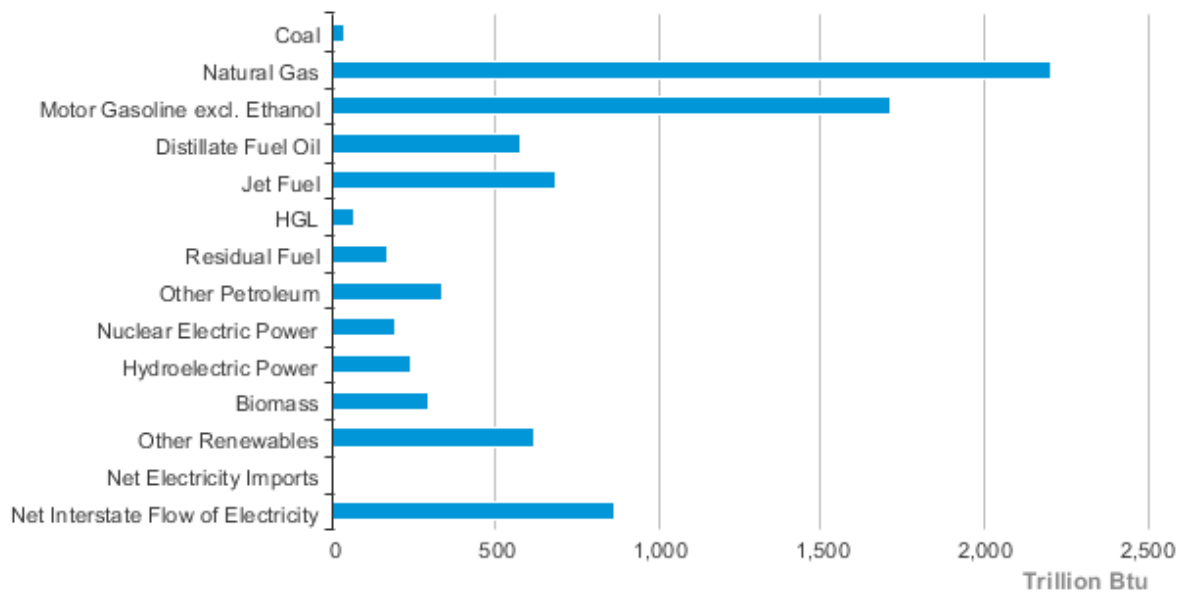
- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor, due to the atmosphere's ability to hold more water vapor at higher temperatures (California Natural Resources Agency 2018)
- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets (IPCC 2018)
- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2013)
- Declining Sierra Mountains snowpack levels, which account for approximately half of the surface water storage in California, by approximately 70% over the next 100 years (Governor's Office of Planning and Research et al. 2018)
- Increasing the number of days conducive to ozone formation (e.g., clear days with intense sunlight) by 25% to 85% (depending on the future temperature scenario) by the end of the twenty-first century in high ozone areas, including Southern California (California Natural Resources Agency 2018)
- Increasing potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level (California Natural Resources Agency 2018)
- Exacerbating the severity of drought conditions in California such that durations and intensities are amplified, ultimately increasing the risk of wildfires and consequential damage incurred (California Natural Resources Agency 2018)
- Lower crop yields due to extreme heat waves, heat stress, and increased water needs of crops and livestock (particularly during dry and warm years), and new and changing pest and disease threats (California Natural Resources Agency 2018)

- Increased heat-related events, droughts, and wildfires, posing direct and indirect risks to public health, as people will experience earlier death and worsening illnesses. Indirect impacts on public health include increased vector-borne diseases, stress and mental trauma due to extreme events and disasters, economic disruptions, and residential displacement (California Natural Resources Agency 2018).

### Energy Production and Consumption

California leads the nation in electricity generation from non-hydroelectric renewable energy sources, including geothermal power, wind power, and solar power. California has some of the most aggressive renewable energy goals in the United States. California’s total energy consumption is second highest in the nation, but, in 2018, the State’s per-capita energy consumption was the fourth-lowest, due in part to its mild climate and its energy efficiency programs. Energy consumption by sector type for 2018 is illustrated on Figure 3.7-1. Natural gas followed by motor gasoline (excluding ethanol) are the top two sources of energy consumption in California. The California Environmental Quality Act (CEQA) establishes goals for conserving energy through wise and efficient use, and places particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

**California Energy Consumption Estimates, 2018**



 Source: Energy Information Administration, State Energy Data System

**Figure 3.7-1. California Energy Consumption Estimates, 2018**

Refer to Section 3.18, *Utilities and Service Systems*, for additional setting information regarding energy sources, including electricity and natural gas providers in the Planning Area.

### 3.7.1.2 Planning Area

#### Greenhouse Gas Emission Inventories in the Planning Area

A GHG inventory is a quantification of all GHG emissions and sinks<sup>1</sup> within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources. Table 3.7-2 outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential emissions associated with the Proposed Project.

**Table 3.7-2. Global, National, State, and Local Greenhouse Gas Emissions (metric tons per year)**

<b>Emissions Inventory</b>	<b>CO<sub>2</sub>e (rounded)</b>
2010 IPCC Global	52,000,000,000
2018 EPA National	6,677,000,000
2017 CARB State	424,100,000
2008 San Bernardino County	17,487,636
2007 Unincorporated San Bernardino County	3,270,000
2008 Riverside County	7,012,938
2007 City of Riverside	3,024,066
2008 City of Ontario	2,503,816
2008 City of Corona	1,745,839
2008 City of San Bernardino	1,587,881
2008 City of Rancho Cucamonga	1,559,136
2008 City of Fontana	1,238,926
2008 City of Chino	1,031,892
2008 City of Redlands	693,087
2008 City of Upland	667,517
2008 City of Rialto	608,779
2008 City of Chino Hills	464,162
2008 City of Yucaipa	327,274
2008 City of Montclair	268,825
2008 City of Highland	267,058

Sources: IPCC 2014; EPA 2020; CARB 2020; San Bernardino Associated Governments 2014; County of San Bernardino 2011; County of Riverside 2018; City of Riverside 2014; City of Corona 2012

#### Existing GHG Emissions

While there are GHG inventories at the county and city level, there is no GHG inventory specifically for the Planning Area. Activities known to produce GHG emissions currently take place throughout the Planning Area; mobile sources (e.g., vehicle trips) produce the largest amounts. Other smaller sources of GHG emissions in the Planning Area are facility operations and maintenance (O&M)

<sup>1</sup> A GHG sink is a process, activity, or mechanism that removes a GHG from the atmosphere.

activities (e.g., recharge basins, wells and water infrastructure) that involve equipment and vehicle use, worker commutes, and material delivery activities.

### Existing Energy Consumption

Table 3.7-3 includes the amount of energy consumed by county for San Bernardino and Riverside Counties and by sector (residential, non-residential) for 2018. According to the California Energy Commission database, San Bernardino County's electricity consumption in 2018 was 35% residential and 65% non-residential, and Riverside County's electricity consumption in 2018 was 49% residential and 51% non-residential (California Energy Commission 2020). The total electricity usage for both counties in 2018 was 31,890 gigawatt hours (GWh).

**Table 3.7-3. Electricity Consumption by County for 2018**

County	Residential	Non-Residential	2018 Total Use
Riverside	7,960.740053	8,295.965387	16,256.70544
San Bernardino	5,443.731723	10,189.923519	15,633.65524
Total	13,404.47178	18,485.88891	31,890.36068

Source: California Energy Commission 2020

Note: All usage is expressed in millions of gigawatt hours.

Table 3.7-4 provides the amount of gas consumption for San Bernardino and Riverside Counties by sector for 2018. According to the California Energy Commission database, San Bernardino County's gas consumption in 2018 was 46% residential and 54% non-residential, and Riverside County's gas consumption in 2018 was 65% residential and 35% non-residential (California Energy Commission 2019). The total gas consumption for both counties in 2018 was 899 therms.

**Table 3.7-4. Gas Consumption by County for 2018**

County	Residential	Non-Residential	2018 Total Use
Riverside	259.344553	139.193875	398.538428
San Bernardino	231.468146	268.614328	500.082474
Total	490.81270	407.80820	898.62090

Source: California Energy Commission 2019

Note: All usage is expressed in millions of therms.

## 3.7.2 Regulatory Framework

### 3.7.2.1 Federal Regulations

There is currently no Federal overarching law specifically related to climate change or the reduction of GHG emissions. Under the Obama administration, the U.S. Environmental Protection Agency (EPA) had been developing regulations under the Clean Air Act. There have also been settlement agreements among EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries, as well as EPA's issuance of an "Endangerment Finding" and a "Cause or Contribute Finding." EPA has also adopted a Mandatory Reporting Rule and Clean Power Plan. Under the Clean Power Plan, EPA issued regulations to control CO<sub>2</sub> emissions from new and existing coal-fired power plants. However, on February 9, 2016, the Supreme Court issued a stay of these regulations pending litigation. Former EPA

Administrator Scott Pruitt also signed a measure to repeal the Clean Power Plan. The fate of the proposed regulations is uncertain given the change in Federal administrations and the pending deliberations in Federal courts.

As discussed in Section 3.3, *Air Quality*, the National Highway Traffic Safety Administration and EPA have also proposed limits on future light-duty vehicle emission standards (SAFE Vehicles Rule). California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the Safe Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). A petition for review of the Part Two of the SAFE Vehicles Rule was also filed on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending legal deliberations.

### **Federal Energy Regulatory Commission**

The Federal Energy Regulatory Commission is an independent agency that regulates the interstate transmission of natural gas, oil, and electricity in the U.S. The Federal Energy Regulatory Commission also regulates natural gas and hydropower projects, the transmission and sale of natural gas for resale in interstate commerce, the transmission of oil by pipeline in interstate commerce, and the transmission and sales of electricity in interstate commerce. The Federal Energy Regulatory Commission also licenses and inspects private, municipal, and state hydroelectric projects; approves the siting and abandonment of interstate natural gas facilities, including pipeline, storage, and liquefied natural gas facilities; oversees environmental matters related to natural gas and hydroelectricity projects as well as major electricity policy initiatives; and administers accounting and financial reporting regulations and the conduct of regulated companies.

#### **3.7.2.2 State Regulations**

California has adopted statewide legislation addressing various aspects of climate change, GHG emissions mitigation, and energy conservation. Much of this legislation establishes a broad framework for the State's long-term GHG reduction and climate change adaptation program. The governor has also issued several executive orders (EOs) related to the State's evolving climate change policy. Of particular importance are Assembly Bill (AB) 32 and Senate Bill (SB) 32, which outline the State's GHG reduction goals of achieving 1990 emissions levels by 2020 and a 40% reduction below 1990 emissions levels by 2030.

In the absence of Federal regulations, control of GHGs is generally regulated at the state level and is typically approached by setting emission reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans. Summaries of key policies, legal cases, regulations, and legislation at the state level that are relevant to the Proposed Project are identified below.

#### **Executive Order S-3-05 (2005)**

EO S-3-05 asserted that California is vulnerable to the effects of climate change. To combat this concern, the order established the following GHG emissions reduction targets.

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.



EOs are legally binding only on State agencies. Accordingly, EO S-3-05 guides State agencies' efforts to control and regulate GHG emissions but has no direct, binding effect on local government or private actions. The secretary of the California Environmental Protection Agency is required to report to the governor and State legislature biannually regarding the impacts of global warming on California, mitigation and adaptation plans, and progress made toward reducing GHG emissions to meet the targets established in this EO.

### **Assembly Bill 32—California Global Warming Solutions Act (2006)**

AB 32 codified the State's GHG emissions target by requiring that the State's global warming emissions be reduced to 1990 levels by 2020. Since AB 32 was adopted, CARB, the California Energy Commission, the California Public Utilities Commission, and the Building Standards Commission have been developing regulations that will help meet the goals of AB 32. Under AB 32, CARB is required to prepare a Scoping Plan and update it every 5 years. The Scoping Plan was approved in 2008, the first update was approved in 2014, and an additional update was approved in 2017 (see discussion of SB 32 below). The Scoping Plan identifies specific measures to reduce GHG emissions to 1990 levels by 2020, and requires CARB and other State agencies to develop and enforce regulations and other initiatives for reducing GHGs. Specifically, the AB 32 Scoping Plan articulates a key role for local governments, recommending they establish GHG reduction goals for both their municipal operations and the community consistent with those of the State.

### **Assembly Bill 1493—Pavley Rules (2002, Amendments 2009, 2012 rulemaking)**

Known as Pavley I, AB 1493 standards are the nation's first GHG standards for automobiles. AB 1493 requires CARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II, now referred to as the Advanced Clean Cars measure) has been proposed for vehicle model years 2017–2025. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025.

### **Executive Order S-01-07—Low Carbon Fuel Standard (2007)**

EO S-01-07 essentially mandates that: (1) a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020; and (2) a Low Carbon Fuel Standard (LCFS) for transportation fuels be established in California. CARB approved the LCFS on April 23, 2009, and the regulation became effective on January 12, 2010. The U.S. District Court for the Eastern District of California ruled in December 2011 that the LCFS violates the Commerce Clause of the U.S. Constitution. CARB appealed this ruling in 2012 and on September 18, 2013, the Ninth U.S. Circuit Court of Appeals upheld the LCFS, ruling that the program does not violate the Commerce Clause and remanding the case to the Eastern District.

### **Senate Bills 1078, 107, and 2—Renewables Portfolio Standard (2011)**

SBs 1078 (2002), 107 (2006) and 2 (2011), California's Renewables Portfolio Standard (RPS), obligates investor-owned utilities, energy service providers, and Community Choice Aggregators to procure additional retail sales per year from eligible renewable sources with the long-range target of procuring 33% of retail sales from renewable resources by 2020. The California Public Utilities Commission and California Energy Commission are jointly responsible for implementing the program.

### **Senate Bill 32 (2016)**

SB 32 (2016) requires CARB to ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. CARB adopted the *2017 Climate Change Scoping Plan* in November 2017 to meet the GHG reduction requirement set forth in SB 32. It proposes continuing the major programs of the previous Scoping Plan, including Cap-and-Trade Regulation; LCFS; more efficient cars, trucks, and freight movement; RPS; and reducing CH<sub>4</sub> emissions from agricultural and other wastes.

### **Assembly Bill 197 (2016)**

The companion bill to SB 32, AB 197, creates requirements to form a Joint Legislative Committee on Climate Change Policies, requires CARB to prioritize direct emission reductions and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit, requires CARB to prepare reports on sources of GHGs and other pollutants, establishes 6-year terms for voting members of CARB, and adds two legislators as non-voting members of CARB.

### **Senate Bill 1386 (2016)**

SB 1386 supports the emission reduction targets of AB 32 with a policy of the State that the protection and management of natural and working lands is an important strategy in meeting the State's GHG reduction goals. SB 1386 requires all relevant State agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands. The bill defines "natural lands" to mean lands consisting of wetlands, watersheds, wildlands, or wildlife habitat, or that used for recreational purposes.

### **Senate Bill 100—The 100 Percent Clean Energy Act of 2018**

SB 100 builds on SB 350, the Clean Energy and Pollution Reduction Act of 2015, which required the following by 2030: (1) an RPS of 50% and (2) a doubling of energy efficiency (electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. SB 100 increases the 2030 RPS target set in SB 350 to 60% and requires an RPS of 100% by 2045.

### **Senate Bill 605 and Senate Bill 1383**

SB 605 directed CARB, in coordination with other State agencies and local air districts, to develop a comprehensive SLCP Reduction Strategy. SB 1383 directed CARB to approve and implement the SLCP Reduction Strategy to achieve the following reductions in SLCPs.

- 40% reduction in CH<sub>4</sub> below 2013 levels by 2030
- 40% reduction in HFC gases below 2013 levels by 2030
- 50% reduction in anthropogenic black carbon below 2013 levels by 2030

The bill also establishes the following targets for reducing organic waste in landfills and CH<sub>4</sub> emissions from dairy and livestock operations as follows.

- 50% reduction in organic waste disposal from the 2014 level by 2020
- 75% reduction in organic waste disposal from the 2014 level by 2025

- 40% reduction in CH<sub>4</sub> emissions from livestock manure management operations and dairy manure management operations below the dairy sector's and livestock sector's 2013 levels by 2030

CARB and the California Department of Resources Recycling and Recovery (CalRecycle) are currently developing regulations to achieve the organic waste reduction goals under SB 1383. In January 2019 and June 2019, CalRecycle proposed new and amended regulations in Titles 14 and 27 of the California Code of Regulations. Among other things, the regulations set forth minimum standards for organic waste collection, hauling, and composting. The final regulations will take effect on or after January 1, 2022.

### **Short-Lived Climate Pollutant Reduction Strategy**

CARB adopted the SLCP Reduction Strategy in March 2017 as a framework for achieving the CH<sub>4</sub>, HFC, and anthropogenic black carbon reduction targets set by SB 1383. The SLCP Reduction Strategy includes 10 measures to reduce SLCPs, which fit within a wide range of ongoing planning efforts throughout the State, including CARB's and CalRecycle's proposed rulemaking on organic waste diversion (discussed above).

### **Executive Order B-55-18 (2018)**

EO B-55-18 establishes a statewide goal to achieve carbon neutrality by 2045 and to achieve and maintain net negative emissions thereafter. This goal is in addition to the statewide targets for reducing GHGs set in EO S-3-05, SB 32, EO N-79-20, and EO N-82-20.

### **Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6)**

The regulation on energy efficiency standards promotes efficient energy use in new buildings constructed in California. The standards regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The standards are enforced through the local building permit process.

## **3.7.2.3 Local Regulations**

### **Air District Guidelines**

As discussed in Section 3.3, *Air Quality*, the South Coast Air Quality Management District (SCAQMD) and the Mojave Desert Air Quality Management District (MDAQMD) are responsible for air quality planning within the South Coast Air Basin and Mojave Desert Air Basin, respectively.

SCAQMD formed a working group to identify GHG emission thresholds for land use projects that local lead agencies should use. The working group developed several different options that are contained in the *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* (SCAQMD 2008). The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the guidance document provides substantial evidence supporting the approaches to significance of GHG emissions that the lead agency can consider in adopting its own threshold. On the other hand, MDAQMD has adopted CEQA guidelines that contain thresholds for GHG emissions.

## Climate Action Plans

Climate action plans (CAPs) have been adopted by San Bernardino County, Riverside County, and several local cities within the Planning Area (see Table 3.7-2 for associated emissions inventory). The CAPs outline existing sources of GHG emissions and contain measures and strategies by sector (e.g., transportation, building, energy, agricultural) to reduce GHG emissions sources and promote sustainable land use.

## General Plans for San Bernardino and Riverside Counties

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and any applicable programs and ordinances. Because these areas encompass the largest areas within the Planning Area, the General Plan goals, programs, ordinances, and policies related to GHG emissions and energy are included to represent the Planning Area.

General plans with GHG goals and policies have been adopted by San Bernardino County, Riverside County, and several local cities within the Planning Area. Goals and policies primarily aim to promote reductions in GHG emissions to support reduction targets. For instance, Riverside County's General Plan includes goals and policies that focus on reducing GHG emissions in various focus areas (e.g., transportation, energy, land use, alternative energy) (County of Riverside 2015), while San Bernardino County's General Plan aims to reduce GHG emissions through preparing emissions inventories and adopting an emissions reduction plan (County of San Bernardino 2014). The following policies from the Riverside County's General Plan focus on reducing GHG emissions.

- Policy AQ 4.1 Require the use of all feasible building materials/methods which reduce emissions.
- Policy AQ 4.6 Require stationary air pollution sources to comply with applicable air district rules and control measures.
- Policy AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.
- Policy AQ 9.2 Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan. (AI 26)

Provisions of San Bernardino and Riverside Counties' general plans and ordinances are included in detail Appendix B, *Regional and Local Regulations*.

## San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The San Bernardino Countywide Plan's Natural Resources Element maintains specific goals and policies related to the preservation of air quality and reduction of greenhouse gas emissions. The Proposed Project may be subject to the following policies from this element.

- Policy NR-1.1 Land use. We promote compact and transit-oriented development countywide and regulate the types and locations of development in unincorporated areas to minimize vehicle miles traveled and greenhouse gas emissions.
- Policy NR-1.3 Coordination on air pollution. We collaborate with air quality management districts and other local agencies to monitor and reduce major pollutants affecting the county at the emission source.
- Policy NR-1.7 Greenhouse gas reduction targets. We strive to meet the 2040 and 2050 greenhouse gas emission reduction targets in accordance with state law.
- Policy NR-1.8 Construction and operations. We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

Additional policies included in the San Bernardino Countywide Plan are reviewed in detail in Appendix B, Regional and Local Regulations.

### **Counties of San Bernardino and Riverside Codes of Ordinances**

San Bernardino and Riverside Counties do not have any ordinances relevant to potential GHG emissions and energy impacts of the Proposed Project.

## **3.7.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate GHG and energy impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on GHG and energy. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.7.3.1 Significance Criteria**

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Impact GHG-1)
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Impact GHG-2)
- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? (Impact ENG-1)

- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency? (Impact ENG-2)

## GHG Emissions

The State CEQA Guidelines §15064.4 provides guidance to lead agencies for determining the significance of environmental impacts pertaining to GHG emissions. Section 15064.4(a) states that a lead agency should make a good-faith effort that is based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions that would result from implementation of a project. Section 15064.4(b) states that, when assessing the significance of impacts from GHG emissions, a lead agency should consider (1) the extent to which the project may increase or reduce GHG emissions compared with existing conditions, (2) whether the project's GHG emissions would exceed a threshold of significance that the lead agency has determined to be applicable to the project, and (3) the extent to which the 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 State CEQA Guidelines allow lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, to evaluate the significance of project-generated GHG emissions, provided that the thresholds are supported by substantial evidence, and/or to develop their own significance threshold. The State CEQA Guidelines also state that the significance criteria established by the applicable air quality management district may be relied upon to make the determination.

Several agencies throughout the state, including multiple air districts (e.g., SCAQMD and MDAQMD), have drafted and/or adopted thresholds and guidance for analyzing GHG emissions in CEQA documents. However, none of these are binding; they are only recommendations for consideration by CEQA lead agencies. Some commonly used threshold approaches include (1) consistency with a qualified GHG reduction strategy, (2) numeric "bright-line" thresholds, (3) performance-based reductions,<sup>2</sup> and (4) efficiency-based thresholds.

The California Supreme Court decision in the *Centers for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company* (November 30, 2015, Case No. S217763) (hereafter Newhall Ranch) confirmed that while efforts at framing GHG significance issues have not yet coalesced into any widely accepted set of numerical significance thresholds, a range of alternative approaches do exist, and when an "agency chooses to rely completely on a single quantitative method to justify a no-significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method."

## Energy

According to Appendix F of the State CEQA Guidelines, an EIR must discuss the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Wise and efficient use of energy may include decreasing overall per-capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas,

---

<sup>2</sup> Performance-based reductions include the "percentage below business-as-usual" threshold approach and are generally based solely on statewide targets, which has been used widely in the past. This approach was the subject of the Newhall Ranch case and presently is subject to uncertainty until the issues raised by the California Supreme Court ruling are resolved.

and oil; and increasing reliance on renewable energy sources. The Proposed Project would have a potentially significant impact on energy use, including energy conservation, if significant long-term operational or direct energy impacts would occur if the Proposed Project were to place substantial demand on regional energy supply, require significant additional capacity, or substantially increase peak- and base-period electricity demand.

### 3.7.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Proposed Project's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in the generation of GHG emissions and energy usage.
- Identify and evaluate impacts on GHG emissions and energy consumption as a result of implementation of the Upper SAR HCP Conservation Strategy.
- Evaluate the level of significance and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide any best practices to reduce impacts.

The methods for analysis are based on review of the Upper SAR HCP, consultation with the Permittee Agencies and Southern California Edison, and review of applicable local government authorities, including the County of Riverside and County of San Bernardino general plans, municipal codes, plans, and applicable ordinances. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts related to GHG emissions and energy consumption. Impacts related to construction and operations were assessed based on generally accepted analysis techniques that estimate the GHG emissions and energy impacts in areas where physical land disturbance is needed to implement the Proposed Project. Where applicable, potential benefits to GHG and energy from implementing the Proposed Project are described.

Conservation actions that do not result in permanent new facilities but require physical changes to the environment, such as habitat restoration actions, would primarily generate construction-related GHG emissions through earthmoving activities (e.g., grading), use of mobile and stationary construction equipment, and on-road vehicle movement, as summarized in Table 3-1 in the *Introduction to the Analysis* section of this chapter. These GHG emissions would be short term and cease once construction activities are complete. Conservation actions that require habitat management, monitoring, and maintenance would generate ongoing GHG emissions primarily from vehicle trips or vehicle miles traveled for site inspections, monitoring, and routine maintenance.

GHG emissions and associated impacts are highly dependent on the type, location, and duration of construction; and the intensity and frequency of maintenance activity. Therefore, effects would vary depending on the activity implemented under the Proposed Project. Because exact details as to location, construction schedule, and types of construction equipment required for the Proposed Project are not reasonably foreseeable, and because the levels of potential long-term management and maintenance activities that may result from implementation of these measures also are not

reasonably foreseeable, a qualitative assessment of GHG and energy impacts resulting from the Proposed Project was performed based on assumptions for similar types of actions using typical equipment within the air basins. The qualitative analysis considers typical construction and management, monitoring, and maintenance activities that would be undertaken for implementation of the Proposed Project, as described in Chapter 2, *Project Description*.

Similar to GHG emissions, energy effects would vary depending on the activity implemented under the Proposed Project. Because exact details as to location, construction schedule, and types of construction required for the Proposed Project are not reasonably foreseeable, this analysis relies on a qualitative assessment of energy impacts resulting from the Proposed Project. Environmental impacts related to energy involve energy requirements and use efficiencies for construction and O&M of the Proposed Project; effects on local and regional energy supplies; effects on energy demands; compliance with existing energy standards; effects on energy resources; and transportation energy use requirements and use of efficient alternatives.

### **GHG Emissions Evaluation Methodology**

As described above, there are multiple methods for evaluating GHG emissions resulting from the implementation of the Proposed Project. Not all methodologies are applicable to every project or emissions source. Some methodologies are only appropriate for emissions generated by stationary sources (e.g., generators), whereas others apply to emissions generated by land use development projects (e.g., residential and commercial projects). Accordingly, no one methodology is globally applicable to the Proposed Project. The following discussion provides additional details on potential methodologies as they relate to the Proposed Project.

### **Compliance with a Qualified GHG Reduction Plan**

As discussed above, some local jurisdictions in the Planning Area have adopted qualified GHG reduction plans and, thus, future projects consistent with those plans may qualify for tiering per State CEQA Guidelines §15183.5. For instance, San Bernardino and Riverside Counties have adopted qualified CAPs with horizon years of 2020 and 2035, respectively. Therefore, conservation actions consistent with these plans that are implemented within the horizon years could tier their GHG analyses from the environmental documents prepared for the CAPs. Conservation actions that can tier from adopted CAPs would have a less-than-significant GHG impact.

### **Numeric Bright-Line Thresholds**

SCAQMD has issued draft 3,000 and 10,000 metric tons of CO<sub>2</sub>e bright-line thresholds for non-industrial and industrial projects, respectively, where construction emissions are amortized over the life of the project (30 years) and added to operation emissions (SCAQMD 2008). MDAQMD has adopted GHG thresholds published in its *CEQA and Federal Conformity Guidelines*. Per MDAQMD, a project would result in a significant impact and must incorporate mitigation if emissions exceed 100,000 tons of CO<sub>2</sub>e per year or 548,000 pounds of CO<sub>2</sub>e per day (MDAQMD 2016). This threshold is closely tied to Federal permitting requirements for major sources under Title V of the Clean Air Act. SCAQMD's and MDAQMD's bright-line thresholds define the level above which individual projects may cumulatively contribute to a significant GHG impact. Projects with emissions below these thresholds would have a less-than-significant GHG impact.

SCAQMD's and MDAQMD's bright-line thresholds are only applicable to certain types of conservation actions. For example, SCAQMD's non-industrial project threshold may apply to



restoration projects, while its industrial project threshold would only apply to new stationary sources, such as generators and boilers, which are not anticipated under the Proposed Project.

### **Efficiency-Based Metric**

Efficiency-based thresholds represent the GHG efficiency needed for a project to achieve California's GHG emissions targets established under AB 32 and SB 32. Efficiency-based thresholds are typically calculated by dividing emissions associated with residential and commercial uses (also termed the "land use sector" in the Scoping Plan) within the state (or a certain geographic area) by the sum of jobs and residents within the same geography. The sum of jobs and residents is called the *service population*, and a project's service population is defined as the people that work and live within the project site. Because typical efficiency-based thresholds are based on the land use sector (residential and commercial uses) and only account for land use-related emissions and residential population and employment, they may not be appropriate to use for the Proposed Project, as the Proposed Project would not involve housing or result in population growth. Therefore, no efficiency-based threshold has been adopted or proposed to date that would address the Proposed Project.

### **Performance-Based Reductions**

Performance-based thresholds are based on a percentage reduction from a projected future condition. The performance-based approach is based on the project's reduction in emissions from an unmitigated condition. Other lead agencies have adopted performance-based targets that are all tied to the AB 32 target of achieving 1990 levels by 2020, but the prescribed percentage reduction can vary depending on the version of the Scoping Plan and targets that were used. With the Newhall Ranch decision, relating a given project to the achievement of State reduction targets likely requires adjustments to CARB's statewide business-as-usual (BAU) model, not only to isolate new emissions but also to consider unique geographic conditions that would be required to use the BAU performance-based methodology for a specific project. To date, this type of adjustment to the statewide BAU target has not been formulated and, therefore, is not appropriate for the Proposed Project's analysis.

### **Compliance with Promulgated Regulatory Program**

Another approach for determining whether a project would result in significant GHG emission impacts is an analysis of whether a proposed project would be in compliance with regulatory programs designed to reduce GHG emissions from particular activities. To the extent a project complies with or exceeds those programs adopted by CARB or other State agencies, a lead agency could rely on this compliance to show less-than significant impacts. The Proposed Project's compliance with regulatory programs adopted by CARB or other State agencies is used, in part, for the Proposed Project's GHG analysis.

## **3.7.3.3 Impact Analysis and Mitigation**

### ***Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

The Proposed Project could result in the generation of GHG emissions from use of heavy-duty equipment, on-road vehicle movement, energy and water consumption, and biological processes (e.g., changes in CO<sub>2</sub> sequestration rates). Emissions would vary substantially depending on the level of activity, length of the activity, specific operations, types of equipment, and number of personnel.

Operational emissions-generating activities may include site inspections, monitoring, surveys, testing, research, upkeep and maintenance, excavations and cleanups, and other components.

The types of conservation actions and their possible relationship to GHG impacts if implemented include activities that support the restoration and maintenance of habitat values in the Planning Area, construction of Conservation Areas, species surveys, monitoring, research, and adaptive management activities. GHG emissions and energy use from equipment, vehicles, employee commutes, and earthmoving activities would likely be required for the construction of new Conservation Areas. GHG emissions and energy consumption from equipment, vehicles, and employee commutes required for inspections, work areas, repairs, vegetation management, and access road management may also occur.

The Proposed Project is anticipated to result in similar construction and operational GHG emissions as other restoration projects associated with the Preserve Area, specifically the Upper Santa Ana River Tributaries Restoration Project. Like the restoration projects analyzed in the *Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program EIR* (Tributaries EIR) adopted by San Bernardino Valley Municipal Water District (Valley District) in November 2019,<sup>3</sup> construction activities associated with the project are anticipated to occur over a period of 4 to 8 months at various sites with comparable equipment and vehicle durations and intensities. Management, monitoring, and maintenance activities (e.g., vegetation management, monitoring activities, surveys and research) like those analyzed in the Tributaries EIR would also occur in the Preserve Area with implementation of the Proposed Project. Given that the Upper Santa Ana River Tributaries Restoration Project would result in similar construction and O&M activities as the Proposed Project in terms of their duration, intensity, and magnitude, emissions estimated for the Upper Santa Ana River Tributaries Restoration Project in the Tributaries EIR are considered representative of emissions likely to be generated by the Proposed Project. More specifically, the Tributaries EIR assumed up to four sites would be constructed, and all four sites would require annual management and maintenance. The Proposed Project would construct up to 10 Conservation Areas during phase 1 (0 to 5 years) in various locations throughout the Permit Area (although fewer are anticipated), and management and maintenance activities of all 10 Conservation Areas would occur concurrently throughout the year once in operation. As such, construction GHG emissions from the Proposed Project are estimated to be 2.5 times the emissions presented Tributaries EIR.

Table 3.7-5 and Table 3.7-6 present estimated GHG emissions from the Tributaries EIR and the Proposed Project. Estimated emissions from the Proposed Project are used to assess GHG impacts. These tables present the construction and management, monitoring, and maintenance-related GHG emissions, respectively. Table 3.7-7 presents the estimated annual amortized construction and management, monitoring, and maintenance-related GHG emissions.

**Table 3.7-5. GHG Emissions from Construction Activities (metric tons per year)**

GHG Emissions	CO <sub>2</sub> e
Tributaries EIR <sup>a</sup>	252
Proposed Project <sup>b</sup>	630
Amortized over 30-year period	21

<sup>3</sup> The Tributaries EIR analyzed early action projects associated with the Upper SAR HCP. These early action projects included restoration, management and monitoring, and maintenance activities, which are similar in nature to those under the Proposed Project.

<b>GHG Emissions</b>	<b>CO<sub>2</sub>e</b>
SCAQMD Threshold	3,000
MDAQMD Threshold	100,000

Note: Emissions from the Tributaries EIR are presented in this table.

<sup>a</sup> GHG emissions were estimated for the construction of four restoration sites in the Tributaries EIR.

<sup>b</sup> The Tributaries EIR assumed up to four sites would be constructed. The Proposed Project could construct up to 10 Conservation Areas during Phase 1, a period of 5 years. As such, Proposed Project emissions are estimated to be 2.5 times the emissions presented in the Tributaries EIR and shown in this table as a conservative estimate.

**Table 3.7-6. Estimated Annual Management, Monitoring, and Maintenance-Related GHG Emissions (metric tons per year)**

<b>GHG Emissions</b>	<b>CO<sub>2</sub>e</b>
Tributaries EIR <sup>a</sup>	824
Proposed Project <sup>b</sup>	2,060
SCAQMD Threshold	3,000
MDAQMD Threshold	100,000

Note: Emissions from the Tributaries EIR are presented in this table.

<sup>a</sup> GHG emissions were estimated for the consecutive management and monitoring, and maintenance of four restoration areas in the Tributaries EIR. GHG emissions were increased by a factor of 4 to conservatively represent concurrent activities.

<sup>b</sup> The Tributaries EIR assumed up four sites would be managed, monitored, and maintained concurrently. The Proposed Project would manage, monitor, and maintain up to 10 Conservation Areas concurrently. As such, Proposed Project emissions are estimated to be 2.5 times the emissions presented in the Tributaries EIR and shown in this table.

**Table 3.7-7. Estimated Annual Amortized Construction and Operations- and Maintenance-Related GHG Emissions (metric tons per year)**

<b>Maintenance Activity with Amortized Construction</b>	<b>CO<sub>2</sub>e</b>
Maximum Annual Emissions	2,081
SCAQMD Threshold	3,000
MDAQMD Threshold	100,000

Note: Emissions in table are summed from Table 3.7-5 and Table 3.7-6.

The following discussion generally describes the anticipated GHG impacts of the Proposed Project based on the emissions presented in Table 3.7-5 through Table 3.7-7.

### **Construction Activities**

Habitat improvement and management activities may affect long-term carbon sequestration rates and GHG flux. Different types of vegetation have varying rates of carbon sequestration and respiration depending on several factors, including the vegetation type, climate, soil content, and rainfall. Converting land from one type to another can also change the rate of sequestration and decomposition. Similarly, enhancing land uses and restoring them to more productive ecosystems can affect these rates. Initial habitat changes can result in a loss of carbon storage during construction, but over time newly restored/enhanced lands can increase carbon sequestration capacity. Conversely, some land types like wetlands release carbon and CH<sub>4</sub>, which may result in a net increase in GHG emissions, relative to existing conditions.

The Proposed Project would restore and/or rehabilitate habitats in the Permit Area. Habitat restoration and/or rehabilitation would occur on a temporary basis and generally involve limited soil disturbance, vegetation removal and management (e.g., animal grazing, herbicide application, mowing, burning), and grading. Some monitoring and surveys would also take place, along with other management activities. Based on emissions modeling conducted for similar restoration sites (specifically Covered Activities Rest.1, Rest.4, and Rest.5 in the Tributaries EIR; see Table 3.7-5 and Table 3.7-7), construction activities associated with these types of activities are not anticipated to result in GHG emissions exceeding applicable SCAQMD and MDAQMD thresholds.

### **Management, Monitoring, and Maintenance Activities**

The Proposed Project would carry out routine maintenance and management activities in the Permit Area associated with the HCP Preserve System. Activities are generally performed periodically and include actions such as minor construction, earth moving, vegetation management, program staff support, and monitoring of habitat success. Construction equipment, including excavators, applicators and compressors, mowers and tractors, and vehicle use, are anticipated, which would result in GHG emissions from equipment and vehicle exhaust. Management and maintenance activities generally include visual inspections, repairs, vegetation management, and access road management. These activities may generate minor amounts of emissions from employee commute and worker truck trips. Repairs and vegetation management may also require off-road equipment, such as backhoes or chainsaws.

Based on operational emissions modeling conducted for a similar project (specifically the restoration projects in the Tributaries EIR; see Table 3.7-6 and Table 3.7-7), management and monitoring activities are not anticipated to result in GHG emissions exceeding applicable SCAQMD and MDAQMD thresholds. The annual maintenance emissions shown in Table 3.7-6 would be a worst-case scenario because GHG emissions would decrease in future years from statewide implementation of cleaner fuels, more efficient technology, and alternative-fuel vehicles (i.e., electrified equipment). As such, annual emissions would decrease with time.

Construction and management and maintenance activities implemented by the Proposed Project are not anticipated to result GHG emissions exceeding adopted thresholds. Impacts would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

### ***Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?***

AB 32 and SB 32 outline the State's GHG emissions reduction targets for 2020 and 2030, respectively. While not legislatively adopted, EO S-03-05 establishes the State's long-term goal to reduce GHG emissions 80% from 1990 levels by 2050. EO B-55-18 sets a more ambitious State goal of net zero GHG emissions by 2045.

In 2008 and 2014, CARB adopted the Scoping Plan and First Update, respectively, as a framework for achieving AB 32. The Scoping Plan and First Update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted the Climate Change Scoping Plan in November 2017 as a framework to achieve the 2030 GHG reduction goal described in SB 32. There is no State plan for addressing GHG reductions beyond 2030. As discussed above,

many jurisdictions in the Planning Area have adopted local CAPs that include measures and policies to reduce local emissions consistent with the State's GHG reduction targets.

Based on CARB's 2017 Scoping Plan, many of the reductions needed to meet the 2030 target will come from State regulations, including cap-and-trade, the requirement for increased renewable energy sources in California's energy supply, updates to Title 24, and increased emission reduction requirements for mobile sources. The Scoping Plan indicates that reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards, changes pertaining to sources of electricity and increased energy efficiency at existing facilities, and State and local plans, policies, or regulations that will lower GHG emissions relative to BAU conditions. The 2017 Scoping Plan carries forward GHG reduction measures from the First Update, as well as new potential measures to help achieve the State's 2030 target across all sectors of the California economy, including transportation, energy, and industry.

The purpose of the Proposed Project is to balance the effects of water supply management activities in the Permit Area with the conservation needs of special-status plants and wildlife and their habitats. The Proposed Project would not involve any land use development that would directly result in population growth, and, as such, the GHG reduction measures in the 2017 Scoping Plan and regional and local CAPs (e.g., public transit expansion, travel demand strategies, waste diversion, land use planning) largely do not apply. The Proposed Project would be affected by the Scoping Plan and CAP measures related to fuel and clean vehicle standards because activities would involve the use of equipment required for construction, management, and maintenance activities. These measures would lead to cleaner vehicles and equipment for the Proposed Project and thus lower GHG emissions. For instance, the Proposed Project would comply with County of Riverside CAP measure R2-T8, Anti-Idling Enforcement. This policy prohibits the idling of on- and off-road heavy-duty diesel vehicles for more than 5 minutes. Although this policy is aimed mostly at new commercial and industrial projects with loading docks or delivery trucks, it also requires employers who own and operate truck fleets to inform their drivers of the anti-idling policy. Compliance with this CAP measure would reduce idling GHG emissions.

Most GHG emissions generated by the Proposed Project would be short term and would cease once construction is complete. Management, monitoring, and maintenance activities for the Proposed Project in the Permit Area would be long term, but emissions from minor amounts of equipment and vehicles would be generally be limited and infrequent. Declining emission factors associated with vehicles, equipment, and energy would further reduce emissions intensities over time. As the Proposed Project is not anticipated to result in substantial GHG emissions or impede attainment of State or local reduction targets, and this impact would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

### ***Impact ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?***

Proposed Project activities include construction, management, and maintenance of the HCP Preserve System in the Permit Area, and other activities as noted in Chapter 2, *Project Description*. Construction, management, and maintenance activities associated with implementation of the Proposed Project would involve onsite energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling, and materials delivery

truck trips; and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide supplemental electricity for temporary onsite uses such as welding, and supplying energy to areas of the site where energy supply cannot be met by way of a hookup to the existing electricity grid during construction.

Construction activities required for some Proposed Project activities may be relatively minor. Proposed Project activities would use a minimal amount of energy during construction and would comply with local general plan policies in order to avoid inefficient and unnecessary energy use. Thus, electricity use associated with construction of the Proposed Project would not be considered an inefficient, wasteful, and unnecessary consumption of energy, and significant impacts on electricity resources are not anticipated.

Similarly, Proposed Project activities would require a minimal amount of energy use during operation and would comply with local general plan policies and plans to avoid inefficient and unnecessary energy use. Energy consumption of potential long-term maintenance, monitoring, and management activities that may result from implementation of the Proposed Project would not substantially increase relative to existing conditions regarding routine site cleanup and other maintenance activities. Other activities that require new Preserve Areas would not represent a new long-term source of energy use that would result in larger amounts of energy consumption.

In summary, the Proposed Project may result in a commitment of energy resources in the form of diesel fuel, gasoline, and electricity during construction and operation. However, it would not result in the wasteful, inefficient, or unnecessary consumption of energy given compliance with local general plan policies and plans. Energy consumption during construction and operation would not substantially contribute to an increase in energy consumption or be any different than any other similar restoration, maintenance, or management project, and therefore would not substantially affect local and regional energy supplies or result in wasteful or inefficient use of energy. Impacts during construction and operation related to energy consumption would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

### ***Impact ENG-2: Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?***

As described under *Impact ENG-1*, the Proposed Project would consume energy during construction, preserve management, and maintenance but would not substantially contribute to an increase in energy use in a regional context. The purpose of the Proposed Project is to balance the effects of water supply management activities in the Permit Area with the conservation needs of special-status plants and wildlife and their habitats. Proposed Project activities would not involve any land use development that would directly result in population growth, and, as such, the GHG reduction measures in the 2017 Scoping Plan and regional and local CAPs (e.g., public transit expansion, travel demand strategies, waste diversion, land use planning) largely do not apply. The Proposed Project may be affected by the Scoping Plan and CAP measures related to fuel and clean vehicle standards because activities would involve the use of equipment required for construction and maintenance and monitoring activities. These measures would lead to cleaner vehicles and equipment for the Proposed Project activities and thus lower GHG emissions and energy use. Accordingly, the Proposed Project would not conflict with or obstruct implementation of an applicable plan, policy,

or regulation adopted for the purpose of reducing the emissions of GHGs or renewable energy or energy efficiencies, and this impact would be **less than significant**.

#### Mitigation Measures

No mitigation is required.

### 3.7.4 Summary of Potential Types of Impacts of Covered Activities

As noted under the *Introduction to the Analysis* in this chapter, a brief summary of the types of GHG and energy impacts that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could result in GHG and energy impacts and potential best practices that could be incorporated into future projects to reduce GHG impacts.

Covered Activities by type and their possible relationship to GHG and energy impacts if implemented with permit coverage are shown in Table 3.7-8 and discussed below.

**Table 3.7-8. Construction and Operation of Covered Activities and Their Relevance to Greenhouse Gas Emissions and Energy Consumption**

Covered Activity	Activities	Relevance
Water Reuse Projects	New facilities construction with equipment/vehicle use, and employee commutes. Potential loss of stored carbon if trees or vegetation are removed.	Emissions from equipment, vehicles, employee commutes, energy and water consumption, waste generation, and treatment processes required for new facilities. No additional emissions from existing facilities.
Groundwater Recharge	Geotechnical drilling and testing, new recharge basin construction, and access roads with equipment/vehicle use, and employee commutes. Potential loss of stored carbon if trees or vegetation are removed.	Emissions from equipment, vehicles, and energy consumption required for debris, vegetation, and sediment removal of new facilities. No additional emissions from existing facilities. Potential increase in emissions from some existing basins. Energy consumption required for levees and access roads management, repairs, equipment operation, and debris, vegetation, and sediment removal.
Wells and Water Conveyance Infrastructure	Wells and pipeline installation, vegetation management, grading, and trenching equipment and vehicle use. Potential loss of stored carbon if trees or vegetation are removed.	Emissions from equipment, vehicles, employee commutes, and energy consumption required for new facilities, repairs, vegetation management, and access road management. No additional emissions from existing facilities.

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Solar Energy Development	Solar panel and equipment installation, vegetation management, and grading equipment/vehicle use. Potential loss of stored carbon if trees or vegetation are removed.	Emissions from equipment, vehicles, and employee commutes required for new panel washing and vegetation removal. Potential offset of GHG emissions from renewable energy generation.
Routine Operations and Maintenance	Minor or in-kind construction and vegetation management.	Exhaust emissions and fugitive dust from equipment, vehicles, and employee commutes required for inspections, work areas, repairs, vegetation management, and access road management.

Potential GHG and energy impacts that could result from implementing the types of Covered Activities identified in Table 3.7-8 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.7-8, GHG and energy impacts associated with constructing, operating, and maintaining these types of Covered Activities could generate short-term and longer-term GHG emissions and energy consumption. In some cases, these Covered Activities would result in generation of GHG emissions that would exceed adopted thresholds.

GHG emissions from construction and O&M of Covered Activities could exceed SCAQMD and MDAQMD thresholds, and conflict with or obstruct implementation of applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions.

Recommended best practices to reduce GHG impacts of future Covered Activities include those described in Section 3.3, *Air Quality*, and implementation of GHG control measures. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity GHG impacts and best practices that could be employed to reduce potential impacts.

Covered Activities would involve the consumption of energy during construction and O&M. With implementation of recommended best practice measures incorporated for the reduction of air quality and GHG emissions, there would not be a substantial contribution to an increase in energy use in a regional context and no conflict with any State or local plan for renewable energy efficiency. Best practice measures that could reduce energy impacts include reducing construction equipment and vehicle exhaust emissions during construction and operation (i.e., use of alternative fuels), and implementing GHG emissions control measures, such as increasing energy efficiency of new buildings or installing solar, among other measures.



## 3.8 Hazards and Hazardous Materials

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, a *hazardous material* is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under California Code of Regulations (CCR) Title 22, the term *hazardous substance* refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (CCR Title 22, Chapter 11, and Article 3). A hazardous material is defined in CCR Title 22 as:

[a] substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (CCR Title 22 Section 66260.10).

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials. *Household hazardous waste* refers to used or leftover contents of consumer products that contain materials with one of the four characteristics of a hazardous waste: toxicity, ignitability, corrosivity, or reactivity.

Other important areas of concern for hazards and hazardous materials under the California Environmental Quality Act (CEQA) are *airport influence areas*, which are used in land use planning to identify areas commonly overflown by aircraft as they approach and depart an airport, or as they fly within established airport traffic patterns; and *disaster preparedness* and *emergency response*, which are important for establishing the most effective and efficient ways to address hazards and minimize the effects of hazards on life and property, reduce the potential for disasters, and recover from the effects of disasters as quickly as possible.

### 3.8.1 Environmental Setting

#### 3.8.1.1 Regional and Planning Area Setting

Wildland fire conditions, risks, and firefighting capabilities in the Planning Area are described in detail in Section 3.19, *Wildfire*.

A large portion of the Planning Area is composed of unincorporated lands in San Bernardino and Riverside Counties, which are largely rural areas with undeveloped lands. The Planning Area also includes a number of cities: Chino, Chino Hills, Colton, Fontana, Grand Terrace, Highland, Loma Linda, Montclair, Ontario, Rancho Cucamonga, Redlands, Rialto, San Bernardino, Upland, and Yucaipa in San Bernardino County and the cities of Beaumont, Calimesa, Corona, Eastvale, Jurupa Valley, Lake Elsinore, Moreno Valley, Norco, and Riverside in Riverside County. In general, the portions of the Planning Area that are located within cities are more urban areas. Often, the principal land use within cities is residential, along with urban land uses (e.g., retail, commercial,

schools) developed to support the residential uses. There may also be industrial development in these more urban areas. Sensitive receptors in the Planning Area include residential uses, transient lodging such as hotels, schools, hospitals, places of worship, and recreational parks.

The Conservation Areas for the Proposed Project are currently within the more natural areas of the Planning Area. Most of the Proposed Project activities would occur on the mainstem of the Santa Ana River or its tributaries within the Planning Area.

## **Hazardous Materials**

### **Household Hazardous Waste**

Typically, residential and institutional land uses are not associated with a risk of a significant impact from hazardous materials. While there are several chemicals and other materials used in the household that may be hazardous, including automobile batteries and fluids, used oil, paint, and cleaning chemicals, there are several programs and facilities established to properly dispose of these materials. The County of San Bernardino Fire Department, Household Hazardous Waste Division is responsible for hazardous waste management services, as the designated Certified Unified Program Agency (CUPA). It has 14 permanent household hazardous waste collection facilities and three Antifreeze, Batteries, Oil, and Paint collection facilities, and sponsors collection and public education events (County of San Bernardino 2019a). The County of Riverside Department of Waste Resources operates permanent and temporary household hazardous waste collection facilities. These materials are not typically handled in significant amounts, and most household hazardous materials are not categorized as acutely hazardous.

### **Agricultural Hazardous Materials**

Agricultural land uses have the potential for hazardous materials impacts, due to the use of pesticides, herbicides, and other agricultural chemicals that are applied to crops. Land historically used for agricultural purposes may have residual chemicals from pesticide/herbicide use present in the soils long after the application. Agricultural chemicals in use today are applied in diluted concentrations and, when used properly, degrade relatively quickly; however, older pesticides can linger in the soil for several years. According to the Farmland Mapping and Monitoring Program, the Planning Area encompasses 42,263 acres of Important Farmland within both San Bernardino and Riverside Counties, although not all land designated as Important Farmland is currently being used for agricultural purposes (see Section 3.2, *Agriculture and Forestry Resources*, for further discussion of agricultural resources). There are limited areas designated for agricultural land uses in unincorporated Riverside County, northwest of Lake Mathews, and in the cities of Ontario and Chino in San Bernardino County. The land where Conservation Area Conserv. 1 would be constructed was previously farmland.

### **Industrial Hazardous Materials**

Industrial land uses can encompass a wide range of business operations that have the potential to create hazardous materials impacts. Industrial facilities store hazardous materials in underground storage tanks (USTs) and/or aboveground storage tanks, and in designated storage locations. Age and improper maintenance of storage tanks are common causes of soil and groundwater contamination. Improper handling and storage of hazardous material containers can lead to hazardous material incidents, including leaking USTs. Industrial land uses in the Planning Area include heavy industrial uses, such as manufacturing and more intense industrial activities, and light

industrial uses, such as warehousing, maintenance and repair, or distribution facilities. Industrial uses are concentrated in certain areas of the Planning Area, including the city of Colton, the southern area of the city of Highland, eastern Rancho Cucamonga, and western Fontana.

### **Commercial Facilities**

Commercial uses that may involve the handling or disposal of hazardous materials would include automobile repair garages, gasoline stations, and dry cleaning facilities. Like industrial facilities, some commercial sites store hazardous materials in storage tanks and in designated areas within the facility. Hazardous materials spills and leaks in vehicle repair and fueling locations can lead to hydrocarbon-impacted soil and groundwater. Improper storage and use of hazardous materials in dry cleaning facilities can lead to chlorofluorocarbon contaminated soil and groundwater. Commercial land uses exist throughout the Planning Area, except for the national forests in the northern and southwestern portions of the Planning Area, which are not developed.

### **Known Hazardous Conditions within the Permit Area**

The Proposed Project sites, specifically the Conservation Areas, typically contain unhoused encampment sites, including garbage and structures (e.g., trailers, vehicles, solar panels, electronic devices, fencing materials) and other common hazardous materials (e.g., fuel). In particular, trash includes multiple cathode-ray television sets that have been observed smashed in the river channel. Other trash includes large and small appliances such as refrigerators and microwaves. Electronics and appliances of this kind are a source of heavy metal contamination and represent a human and wildlife health risk. Other types of trash, including concrete construction debris, clothes, and plastic, were pervasive throughout the channel but concentrated in the upstream portion. The trash on the sites may also include other household hazardous waste items such as medical waste (syringes and lancets).

The Permit Area for the Proposed Project also contains two known landfills. The Tequesquite Landfill site, adjacent to Conservation Area Conserv. 5, is directly where the Santa Ana River used to flow. The presence of this landfill on the upstream boundary of the Proposed Project Conservation Area at Conserv. 5 likely constrains the ability of the Santa Ana River to migrate south into the area it formerly occupied. The Pedley Landfill is within a potential future Conservation Area proposed by Conserv. 9. The County of Riverside began a burn operation at the site based on a verbal lease of the land from the City of Riverside in 1932. Cut and fill operations at the site began in August 1957 and ended in August 1958 due to insufficient onsite soil cover. As a result of the risk for continued erosion into the landfill as well as potentially hazardous refuse materials currently in the landfill site, a project was initiated by the Riverside County Department of Waste Resources (RCDWR) to excavate approximately 1.3 acres of the landfill and install interlocking concrete mat on the river's south bank. RCDWR is currently planning and permitting additional reinforcement and site improvements to protect public health by removing exposed landfilled material and armoring the landfill slope with articulated concrete blocks. While the northern slopes of the landfill adjacent to the Santa Ana River have been protected with articulated concrete blocks, the majority of Lower Hole Creek has not been protected, and potentially hazardous materials in the landfill could be released into adjacent areas (Valley District 2019).

### **Airports**

The CEQA checklist for hazardous wastes and materials requires analysis of the potential for the Proposed Project to result in a safety hazard for hazardous wastes and materials within 2 miles of a

public airport or public use airport. There are several airports within the Planning Area. The Cable Airport, Chino Airport, Redlands Municipal Airport, Ontario International Airport, San Bernardino International Airport, and Rialto Municipal Airport are within San Bernardino County. March Air Reserve Base, Corona Municipal Airport, Flabob Airport, and Riverside Municipal Airport are in the Riverside County.

## **Schools**

The CEQA checklist for hazardous wastes and materials also requires analysis of the potential for the Proposed Project to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. The Planning Area covers unincorporated areas of the Counties of San Bernardino and Riverside, and 24 incorporated cities. The Planning Area encompasses 29 school districts, as enumerated below (San Bernardino County Superintendent of Schools n.d.; Riverside County Office of Education 2019).

### **County of San Bernardino**

- Alta Loma School District
- Bear Valley Unified School District
- Central School District
- Chaffey Joint Union High School District
- Chino Valley Unified School District
- Colton Joint Unified School District
- Cucamonga School District
- Etiwanda School District
- Fontana Unified School District
- Hesperia Unified School District
- Mountain View School District
- Mt Baldy School District
- Ontario-Montclair School District
- Redlands Unified School District
- Rialto Unified School District
- Rim of the World Unified School District
- San Bernardino City Unified School District
- Snowline Joint Unified School District
- Upland Unified School District
- Yucaipa-Calimesa Joint Unified School District

### **County of Riverside**

- Alvord Unified School District

- Beaumont Unified School District
- Corona-Norco Unified School District
- Jurupa Unified School District
- Lake Elsinore Unified School District
- Moreno Valley Unified School District
- Perris Elementary School District
- Perris Union High School District
- Riverside Unified School District
- Val Verde Unified School District

Individual schools may be within 0.25 mile of a conservation site that is part of the Proposed Project, including the following:

- Bryant Elementary School (4324 3rd Street, Riverside), Riverside Unified School District, is within 0.25 mile of the Evans Lake Conservation Area (Conserv. 6).
- Peralta Elementary School (6450 Peralta Place, Jurupa Valley), Jurupa Unified School District, is within 0.25 mile of the Louis Rubidoux Nature Center and Sunnyslope Creek Conservation Area (Conserv. 7).

## **Emergency Response**

### **San Bernardino County**

The San Bernardino County Fire Department's Office of Emergency Services is responsible for coordinating and administering the Emergency Management Program for San Bernardino County. The Emergency Operations Plan (EOP) provides a strategy for emergency response to any type of incident affecting the county, and is part of the larger framework of emergency management plans that supports the State and the Operational Area (County of San Bernardino 2018). A number of other plans support the County EOP at the county level, and individual communities within the county may maintain similar plans at a localized level. The Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), adopted in 2017, identifies hazards to residents in the county and provides mitigation strategies (County of San Bernardino 2017). The Disaster Recovery Plan, Phase I, was approved in 2017 and is intended to provide coordination and organization for recovery efforts from disaster within the Operational Area (County of San Bernardino 2018). Each San Bernardino County department is required to prepare a Department EOP to facilitate the coordination of emergency response across the county to be compliant with the 2017 County Policy Manual No. 13-1 (County of San Bernardino 2018). Each Department EOP describes the strategies, policies, and responsibilities that each department/agency will utilize to guide and support emergency response efforts.

### **Riverside County**

The Riverside County Emergency Management Department provides emergency response, public health disaster management, and emergency medical services. The Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) identifies potential hazards, assesses past disasters, and provides goals

and policies for mitigation of future disasters. Forty-five incorporated cities, tribes, and special districts participated in the development of MJLHMP (County of Riverside 2012).

### **Wildland Fires**

Wildfires are a concern in the region, as addressed in Section 3.19, *Wildfire*.

## **3.8.2 Regulatory Framework**

### **3.8.2.1 Federal Regulations**

#### **Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act**

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a U.S. Environmental Protection Agency (EPA)-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes.

#### **Comprehensive Environmental Response, Compensation, and Liability Act/ Superfund Amendments and Reauthorization Act**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” was enacted by Congress on December 11, 1980. This law (42 United States Code [USC] 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 enabled the revision of the National Contingency Plan. The National Contingency Plan (40 Code of Federal Regulations [CFR] 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

#### **Occupational Safety and Health Administration**

The Occupational Safety and Health Administration’s (OSHA’s) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. OSHA establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

#### **Toxic Substances Control Act**

The Toxic Substances Control Act came into law on October 11, 1976. The Toxic Substances Control Act authorized EPA to secure information on all new and existing chemical substances, as well as to

control any of the substances that were determined to cause unreasonable risk to public health or the environment.

### **Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)**

U.S. Department of Transportation Hazardous Materials regulations cover all aspects of hazardous materials packaging, handling, and transportation. Some of the topics covered include Parts 107 (Hazard Materials Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance).

### **Federal Insecticide, Fungicide, and Rodenticide Act, 7 USC Section 136 et seq. (1996)**

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for Federal regulation of pesticide distribution, sale, and use (“pesticides” includes any herbicide, insecticide, rodenticide, algaecide, fungicide, or any combination of substances intended to prevent, destroy, or repel any pest). All pesticides distributed or sold in the United States must be registered (licensed) by EPA. Before EPA may register a pesticide under the FIFRA, the applicant must show, among other things, that using the pesticide according to specifications “will not generally cause unreasonable adverse effects on the environment.” The FIFRA defines the term “unreasonable adverse effects on the environment” to mean: (1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide, or (2) a human dietary risk from residues that result from a use of a pesticide in or on any food inconsistent with the standard under section 408 of the Federal Food, Drug, and Cosmetic Act. Training is required for workers in pesticide-treated areas and certification and training is required for applicators of restricted use pesticides.

## **3.8.2.2 State Regulations**

### **California Environmental Protection Agency**

The California Environmental Protection Agency (Cal/EPA) was created in 1991. It unified California’s environmental authority in a single cabinet-level agency and brought the California Air Resources Board, State Water Resources Control Board, Regional Water Quality Control Board, California Department of Resources Recovery and Recycling, Department of Toxic Substances Control (DTSC), Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed under the Cal/EPA “umbrella” for the protection of human health and the environment to ensure the coordinated deployment of State resources. Their mission is to restore, protect, and enhance the environment and ensure public health, environmental quality, and economic vitality.

### **Department of Toxic Substances Control**

DTSC, a department of Cal/EPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the Federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5 through 10.6,

and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Government Code Section 65962.5, which pertains to what is commonly referred to as the Cortese List, regulates DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Resources Control Board as having UST leaks or a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

### **Hazardous Waste Control Act (Section 25100 et seq.)**

DTSC is responsible for enforcing the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a State hazardous waste program that administers and implements the provisions of the Federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than Federal requirements.

### **Unified Hazardous Waste and Hazardous Materials Management Regulatory Program**

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9) provides authority to the CUPA. The CUPA for Riverside County is the Riverside County Department of Environmental Health, Hazardous Materials Branch (County of Riverside 2019). The CUPA for San Bernardino County is the Hazardous Materials Division of the San Bernardino County Fire Department (County of San Bernardino 2019a). Each CUPA for the Planning Area oversees six hazardous materials programs for the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of hazardous materials programs, including the HazMat Business Plan Program, California Accidental Release Prevention Program, UST Program, Aboveground Storage Tank Program, Hazardous Waste Generator Program, and Incident Response.

### **California Code of Regulations, Title 8—Industrial Relations**

Occupational safety standards exist in Federal and State laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the Federal OSHA are the agencies responsible for assuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would apply to construction activities.

### **California Hazardous Materials Release Response Plans and Inventory Law of 1985**

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous



materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State. Local agencies are responsible for administering these regulations.

Several State agencies regulate the transport and use of hazardous materials to minimize potential risks to public health and safety, including Cal/EPA and California Emergency Management Agency. The California Highway Patrol and California Department of Transportation enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transport on public roadways.

### **California Labor Code (Division 5, Parts 1, 6, 7, and 7.5)**

The California Labor Code is a collection of regulations that include regulation of the workplace to ensure appropriate training on the use and handling of hazardous materials and operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5 ensures that employees who are in charge of handling hazardous materials are appropriately trained and informed with respect to the materials they handle. Division 5, Part 7 ensures that employees who work with volatile flammable liquids are outfitted with appropriate safety gear and clothing.

### **Health and Safety Code, Section 2550 et seq.**

This code and the related regulations in 19 CCR 2620, et seq. require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a hazardous materials business plan to their local CUPA and to report releases to their CUPA and the State Office of Emergency Services.

### **California Division of Occupational Safety and Health**

Cal OSHA is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead.

### **California Accidental Release Prevention Program**

The purpose of the California Accidental Release Prevention Program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan. A Risk Management Plan is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The Risk Management Plan contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures (California OES 2016).

## Utility Notification Requirements Title 8

Section 1541 of the CCR requires excavators to determine the approximate locations of subsurface utility installations (i.e., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members or participate and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig.

## California Department of Pesticide Regulation, 3 CCR Food and Agriculture, Division 6, Pesticides and Pest Control Operations

This section of the CCR addresses the use of pesticides and pest control operations. These regulations provide pesticide registration and licensing procedures, lists of restricted materials, work and worker safety requirements, and environmental protections for groundwater, surface water, air, and aquatic environments.

### 3.8.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to hazardous materials and fire hazards. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties' general plans and other local plans, policies, ordinances, and programs related to hazardous materials. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to hazards and hazardous materials in full.

## County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) Safety Element identifies potential hazards and contains goals and policies pertaining to the management and minimization of risk or danger to residents and property in San Bernardino County. The goals and policies relevant to the Proposed Project are summarized below.

The County will minimize the generation of hazardous waste in the county and reduce the risk posed by storage, handling, transportation, and disposal of hazardous wastes and ensure environmental review is conducted for the Proposed Project on sites that have been identified as contaminated.

Programs require a conditional use permit and a General Plan Amendment from applicants for hazardous waste facilities in order to protect groundwater resources and other natural resources from contamination for present and future beneficial uses. They are to follow regulations of the Fire

Safety Overlay Ordinance to areas subject to wildland/urban intermix fire hazards including all mountain and foothill areas.

General plan goals seek to protect its residents and visitors from injury and loss of life and protect property from fires and promote public safety and to provide a Hazard Mitigation Plan. Programs are required to complete pre-disaster and post-disaster actions and track all projects.

### **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Hazards Element of the Countywide Plan enumerates goals and policies for protecting residents and property from the exposure to hazards and pollution from hazardous materials, and the Personal Property Protection Element provides goals and policies to provide public safety and an integrated response to emergencies and natural disasters.

### **County of San Bernardino Hazardous Waste Management Plan**

The County of San Bernardino Hazardous Waste Management Plan was adopted by the County of San Bernardino Board of Supervisors and approved by the California Health Services in 1990. The Hazardous Waste Management Plan serves as the primary planning document for the countywide management and safe disposal of hazardous waste. The plan identifies types of hazardous wastes found in San Bernardino County; establishes programs for managing this waste; outlines a process for the siting of hazardous waste facilities; identifies strategies for reducing hazardous waste generated in San Bernardino County; and identifies goals, policies, and actions for achieving effective hazardous waste management.

### **County of San Bernardino Code of Ordinances**

#### **Fire Safety Overlay 82.01.020 and 82.01.030 (Overlays)**

The Fire Safety Overlay is established by the San Bernardino County Development Code. The Fire Safety Overlay is mapped based on distinct geographic areas and the associated wildland fire hazard. The purpose of the Fire Safety Overlay is to establish general development standards to provide greater public safety in these areas associated with greater wildland fire hazard.

### **County of San Bernardino CUPA Program**

San Bernardino County Fire Department's Hazardous Materials Division has been designated by the State Secretary for Environmental Protection as the CUPA for the County of San Bernardino jurisdiction and oversees six hazardous waste programs: (1) Hazardous Materials Release Response Plans and Inventory; (2) Hazardous Waste Generation and Onsite Treatment; (3) Aboveground

Petroleum Storage Act/Spill Prevention, Control, and Countermeasure Plan; (4) Underground Storage Tanks; (5) California Accidental Release Program; and (6) Hazardous Materials Management Plans and Inventory Statements under the California Fire Code.

Facilities that would handle hazardous materials or produce hazardous waste are required to have a CUPA permit and modifying an existing facility may also require additional permitting.

### **County of San Bernardino Multi-Jurisdictional Hazard Mitigation Plan**

The MJHMP was developed to reduce or eliminate loss of life and property for unincorporated areas of the County of San Bernardino and within areas managed by the Flood Control District, Fire District, and Special District Departments in accordance with the Disaster Mitigation Act. The MJHMP provides coordinated goals and objectives to support an effective mitigation program and addresses hazards associated with geologic hazards, wildfire, floods, drought, terrorism, and climate change (County of San Bernardino 2017).

### **County of San Bernardino Disaster Recovery Plan**

The Disaster Recovery Plan outlines roles and responsibilities, operational concepts, and organizations required to accomplish effective disaster recovery efforts. The plan also identifies sources of support, such as other jurisdictions, State and Federal agencies, and the private sector, through mutual aid or specific statutory authorities.

### **County of Riverside General Plan**

The County of Riverside General Plan's Safety Element provides a framework for considering safety issues in the land use planning process, and presents policies for identifying hazards and reducing exposure to hazardous conditions. Relevant goals and policies include construction and design standards that ensure proposed development incorporates fire prevention features, limits or prohibits development or activities in areas lacking water and access roads, and encourages proposed development in Fire Hazard Severity Zones to develop where fire and emergency services are available or planned. The Safety Element also enforces land use policies and siting criteria through implementation of programs identified in the County of Riverside Hazardous Waste Management Plan.

### **County of Riverside Code of Ordinances**

Ordinance No. 615 (as amended through 615.4) is intended to implement the Hazardous Waste Control Law of California, Health and Safety Code, Chapter 6.5, Division 20, Sections 25100, et seq., as amended, and the regulations adopted pursuant to that law, Title 22 of the CCR, Division 4.5, Chapter 10 as amended, and to establish a system of permitting and enforcing regulations for businesses that handle hazardous materials or waste. Ordinance No. 615 also establishes the Department of Environmental Health as the CUPA for the County of Riverside and provides regulation for the inspection and permitting of businesses that use or produce hazardous materials.

### **Riverside Countywide Integrated Waste Management Plan**

The plan was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095 (Assembly Bill 939) and contains the Countywide Siting Element, the Source

Reduction and Recycling Element, the Household Hazardous Waste Element, and the non-Disposal Facility Element.

### **Riverside County Department of Waste Resources**

RCDWR was previously named the Waste Disposal Division of the County Road Department and the Riverside County Waste Management Department until it was renamed RCDWR in 2015. RCDWR has three divisions that manage and operate open and closed landfills: Administration, Engineering/Operations, and Environmental. RCDWR is responsible for 39 landfills, 32 of which are closed, including the first Riverside County landfill, the nearby Pedley Landfill. RCDWR provides an opportunity for Riverside County residents to keep hazardous waste out of Riverside County landfills and ensure it is properly managed.

### **County of Riverside CUPA Program**

As the CUPA for Riverside County, the Hazardous Materials Branch oversees the six programs for the management and enforcement of hazardous materials facilities in Riverside County. The CUPA also coordinates with Corona Fire Department and Riverside County Fire Department.

### **County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan**

The MJLHMP identifies hazards present in the county, assesses previous disaster occurrences, and sets goals and objectives to mitigate potential risks to reduce or eliminate the risk of loss of life or property due to natural or human-made hazards.

## **3.8.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate hazards and hazardous materials impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on hazards and hazardous materials. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.8.3.1 Significance Criteria**

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Impact HAZ-1)
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? (Impact HAZ-2)
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school? (Impact HAZ-3)

- 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? (Impact HAZ-4)
- For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? (Impact HAZ-5)
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Impact HAZ-6)
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? (Impact HAZ-7)

### 3.8.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential hazards and hazardous materials impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in hazards and hazardous materials exposure.
- Identify and evaluate potential impacts related to hazards and hazardous materials resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

The following impact analysis evaluates the effects from human-made or natural hazards or hazardous materials that may result from the implementation of the Proposed Project. Impacts were assessed based on generally accepted analysis techniques of the potential effects from the Proposed Project, consultation with the Permittees, and a review of applicable local government authorities such as general plans and ordinances for San Bernardino and Riverside Counties, regulations, and related materials. Criteria from Appendix G of the State CEQA Guidelines and standard professional practice were used to determine whether the Proposed Project would have a significant impact related to hazards and hazardous materials.

### 3.8.3.3 Impact Analysis and Mitigation

#### ***Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

The Proposed Project would include construction activities from conservation actions, including construction in the HCP Preserve System, and implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Construction would not require the use of acutely hazardous materials. The transport of hazardous materials is regulated by the U.S. Department of

Transportation Hazardous Materials regulations, as described in Section 3.8.2.1, *Federal Regulations*. The use and disposal of hazardous materials is regulated by several Federal, State, and local regulations, as described in Section 3.8.2, *Regulatory Framework*. In addition, the use of hazardous materials during construction generally involves small amounts, and for short time periods, due to the nature of construction, which generally occurs in phases. Compliance with the existing regulatory framework is intended to reduce potential impacts from construction activities associated with the transport, use, or disposal of hazardous materials.

### **Conservation Activities**

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area for the benefit of Covered Species. Conservation activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may be conducted related to hydrologic manipulation and substrate management. Conservation activities at Conservation Areas may also require cleanup and removal of the homeless encampments and the associated trash that may also be considered hazardous wastes, including household hazardous and medical wastes. Additionally, hazardous wastes that may be encountered in the Conservation Areas include chemicals potentially used for the cultivation of marijuana. Many of these activities could involve the use of construction equipment. For example, restoration projects such as restoring existing stream channels or recreating the channels and constructing wood and rock structures within stream channels (along with other activities not listed here) could involve soil disturbance with equipment such as a loader or excavator and limited grading, which could include the use of hazardous materials. However, the use and amount of hazardous materials are anticipated to be negligible in nature because of the limited extent of construction activities and compliance with the existing regulatory framework. In addition, these potential effects would be addressed by a number of avoidance and minimization measures (AMMs) (see Chapter 5, *Conservation Strategy*, of the HCP), including AMM-32, which contains specific practices to reduce and remediate spills, and AMM-33, which contains specific practices to control pollutants.

A few of the Conservation Areas are within or bordered by former landfills, and proposed habitat improvement activities would not create reasonably foreseeable disturbance and accident conditions at either former landfill, as compliance with existing regulations will require that work at or immediately adjacent to the Pedley and Tequesquite Landfills not disturb waste. San Bernardino Valley Municipal Water District and RCDWR, in partnership with the California Department of Fish and Wildlife, will continue to coordinate regarding RCDWR's proposed improvements at the Pedley Landfill to jointly pursue a long-term solution that addresses improvements that would result in increased stability of the landfill and the ecological health of the Santa Ana River adjacent to the landfill. Any disturbance or removal of landfill materials that would occur as a result of the Proposed Project would occur in compliance with Federal and State regulations regarding landfill operations, as approved by RCDWR. With this coordination, including information sharing regarding design plans involving the Pedley Landfill, impacts on the landfill would be minimized and no conflicts would result.

### **HCP Preserve System Management and Monitoring Activities**

Monitoring, management and maintenance activities throughout the Permit Area would require the transport, use, and disposal of hazardous materials such as oils and fuels. Construction equipment,

like a backhoe, trimmer, and other small equipment, may be needed to remove nonnative invasive plant species and support plant establishment for site maintenance, which may release small amounts of oil or fuel. These hazardous materials would generally be used in small amounts, and acutely hazardous materials would not be required for activities during operations. Upon completion of initial habitat improvement activities (e.g., typically the first 5 years of habitat management) at the Conservation Areas, the management and maintenance of the Proposed Project would not require the use of substantial quantities of hazardous materials and would generally not involve activities involving release of hazardous materials. These hazardous materials would be used for management and maintenance activities and would be compliant with the applicable regulations described in Section 3.8.2, *Regulatory Framework*. In addition, these potential effects would be addressed by a number of AMMs (see Chapter 5, *Conservation Strategy*, of the HCP), including AMM-32, which contains specific practices to reduce and remediate spills, and AMM-33, which contains specific practices to control pollutants. Impacts would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

***Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

### **Conservation Activities**

Implementation of the Proposed Project would involve the transport, use, and disposal of hazardous materials, which could result in the accidental release of hazardous materials during the routine use of such materials. As discussed in the analysis of *Impact HAZ-1*, implementation of AMMs included in the HCP, and compliance with existing regulations related to the correct handling, reporting, and processing of hazardous materials would generally prevent accidental releases of hazardous materials, and, where releases did occur, these regulations provide guidance for the appropriate cleanup and mitigation process.

Construction activities in the Permit Area could occur on properties previously used for agriculture, industrial, or other land uses that may have historically utilized hazardous materials. However, construction would likely occur in natural areas, often far from existing other land uses. Ground-disturbing construction may disturb buried hazardous materials (for example, legacy pesticides or USTs) and release these contaminants into the environment. Properties that have known historical or current documented releases of hazardous materials can be identified on statewide databases, including the National Priorities List, EnviroStor (maintained by DTSC), GeoTracker (maintained by the State Water Resources Control Board), and the Cortese List (maintained by Cal/EPA; see *Impact-HAZ-4*), and can be screened before initiation of a Covered Activity. If record of historical releases is found, appropriate mitigation and/or remediation activities must be performed to prevent disturbing the contamination or releasing it into the environment during ground-disturbing construction activities.

### **HCP Preserve System Management and Monitoring Activities**

Monitoring, management, and maintenance activities in the Permit Area would be expected to occur under the Proposed Project. These types of maintenance activities are generally performed periodically, and include actions such as minor construction, earth moving, vegetation management,



and monitoring of structures and facilities. However, many of these routine maintenance activities would occur in natural areas, and often would be relatively far from existing other land uses. Construction equipment, including excavators or backhoes, applicators and compressors, mowers, tractors, and maintenance vehicle use are anticipated.

Monitoring, management, and maintenance activities at newly constructed and existing Conservation Areas in the Permit Area would include the use, transport, and disposal of typical hazardous materials used for maintenance, cleaning, or repair, such as oil and fuels. These materials would generally be used in small quantities and in short durations and would not include the use of acutely hazardous materials. The use of such materials would be compliant with applicable regulations described in Section 3.8.2, *Regulatory Framework*, intended to prevent the spill or release of hazardous materials. In addition, these potential effects would be addressed by a number of AMMs (see Chapter 5, *Conservation Strategy*, of the HCP), including AMM-32, which contains specific practices to reduce and remediate spills, and AMM-33, which contains specific practices to control pollutants.

Impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

***Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?***

#### **Conservation Activities**

The Proposed Project includes conservation actions that are a part of the conservation strategy, including the construction of the HCP Preserve System, and the implementation of conservation measures to improve habitats for the benefit of Covered Species in the Permit Area. The areas within the Permit Area on which conservation activities, such as habitat restoration/rehabilitation, could occur are mostly open space or relatively rural areas. As stated in Section 3.8.1, *Environmental Setting*, there are approximately two schools within 0.25 mile of a proposed Conservation Area. As such, it is possible that a nearby school could be affected by a specific relatively short-term construction activity in the Permit Area, such as grading, or the release of fuel, solvents, chemicals, and oils for the operation of construction equipment. The use of such materials would be compliant with applicable regulations described in Section 3.8.2, *Regulatory Framework*, intended to prevent the spill or release of hazardous materials. In addition, these potential effects would be addressed by a number of AMMs (see Chapter 5, *Conservation Strategy*, of the HCP), including AMM-32, which contains specific practices to reduce and remediate spills, and AMM-33, which contains specific practices to control pollutants.

#### **HCP Preserve System Monitoring, Management, and Monitoring Activities**

Monitoring, management, and maintenance activity procedures would require the use of hazardous materials such as oil and fuel. Routine monitoring, management, and maintenance activities in the Permit Area would not require the use of acutely hazardous materials, nor would routine maintenance produce hazardous emissions or waste. The use of the hazardous materials would generally be for operation of machinery and equipment, and would comply with the existing regulatory framework described in Section 3.8.2. If these activities were to occur on a property with a historical or ongoing release of hazardous material to the environment, the ground disturbance

could expose contamination to the public or the environment within 0.25 mile of a school. Implementation of Mitigation Measures HAZ-1 and HAZ-2 would ensure listed sites with historical contamination would be screened, and potential contamination discovered on site during routine maintenance activities would be properly and safely managed to prevent the exposure of contamination within 0.25 mile of a school. With implementation of mitigation, impacts from construction and maintenance or management of Conservation Areas associated with the Proposed Project would be reduced. Therefore, hazardous materials impacts for the Proposed Project would be **less than significant with mitigation**.

### **Mitigation Measures**

#### **HAZ-1: Conduct a Database Review and Retain a Hazardous Materials Specialist**

For any activities that would involve ground-disturbing projects within the Permit Area, where substantial amounts of onsite soil or groundwater would be disturbed, such as trenching and excavation, the National Priorities List, Cal/EPA Cortese List, the DTSC EnviroStor database, and the State Water Resources Control Board GeoTracker database shall be reviewed by the Permittees prior to commencement of construction. If sites with releases or contamination are discovered during this process, the services of a qualified environmental professional specializing in contamination characterization and remediation shall be retained, and the recommendations from the qualified environmental professional as described in Mitigation Measure HAZ-2 shall be followed.

#### **HAZ-2: Prepare a Soil Investigation and/or Soil Management Plan**

If sites with releases or contamination are discovered or identified, and the activities would include substantial ground-disturbing activities, a soil investigation shall be conducted by a qualified environmental professional. If contaminated soils are identified, and if deemed necessary by the qualified environmental professional, a soil management plan shall be prepared to address the nature of the onsite contamination and the proper remediation and disposal process, including disposal of contaminated soils in compliance with regulations. Likewise, if contaminated groundwater is identified prior to or during construction, and the project would expose contaminated groundwater to the public or the environment, a groundwater investigation shall be conducted by a qualified environmental professional. If deemed necessary by the qualified environmental professional, a groundwater management plan shall be prepared to address the potential spread of contaminated groundwater.

***Impact HAZ-4: 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?***

As discussed in Section 3.8.2.2, *State Regulations*, the Cortese List includes hazardous waste facilities, contaminated drinking water wells, leaking USTs, sites that have discharged hazardous materials to water or groundwater, and sites with a known migration of hazardous waste or material. The activities in the Permit Area may be located on a site on the Cortese List. According to the State Water Resources Control Board's GeoTracker search performed for the *Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program Environmental Impact Report* (Valley District 2019), there are no known active hazardous materials sites that are within or up-gradient of these restoration sites (Covered Activities Rest. 1, Rest. 3, and Rest. 4). However, there is one closed site (Tequesquite Landfill) found in the records for Covered Activity Rest. 5. According to

GeoTracker, Tequesquite Landfill is a closed Class III solid waste disposal facility owned by the City of Riverside and located inside a 120-acre parcel in a small northeast/southwest-trending valley known as Tequesquite Arroyo. Other Proposed Project sites could be listed on a list of hazardous materials sites.

Conservation activities within the HCP Preserve System on a site on the Cortese List could result in the release of contaminated groundwater or soil to the environment, which could adversely affect onsite workers or the general public. Therefore, the Proposed Project would result in a potentially significant impact related to exposure of the public or the environment to contaminated materials as a result of being located on a site on the Cortese List. However, the potential impact would be reduced by the implementation of Mitigation Measures HAZ-1 and HAZ-2 by screening out potentially contaminated sites, or sites with active hazardous waste facilities, and ensuring the proper characterization and necessary remediation by a qualified environmental professional. With implementation of Mitigation Measures HAZ-1 and HAZ-2, impacts would be reduced. Therefore, hazardous materials impacts for the Proposed Project would be **less than significant with mitigation**.

#### **Mitigation Measures**

Implement Mitigation Measures HAZ-1 and HAZ-2.

***Impact HAZ-5: For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 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?***

There are ten airports within the Planning Area: one military air base and nine municipal airports. Under the Proposed Project, conservation activities could occur within 2 miles of an airport (for example, Flabob Airport and Riverside Municipal Airport north of the Santa Ana River in Riverside County, and Redlands Airport and San Bernardino International Airport in San Bernardino County). However, construction activities are generally temporary and do not include features that would conflict with the operations of an airport and result in a safety hazard to the general public. The Proposed Project would not include elevated features that could interfere with navigable airspace. No residences are proposed as part of the Proposed Project, so the Proposed Project would not result in a safety hazard for people residing in the Proposed Project area. Site preparation, planting, and maintenance and monitoring activities would have no effect on air traffic patterns. Therefore, the Proposed Project would not result in a change in air traffic patterns or result in a safety hazard or excessive noise for people working in the Project area. There would be **no impact**.

#### **Mitigation Measures**

No mitigation is required.

***Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

The Planning Area encompasses several jurisdictions with coordinated emergency response strategies. The EOP, the MJHMP, and the Disaster Recovery Plan, Phase I, provide a coordinated framework for the Operational Area of the County of San Bernardino. The Riverside County Operational Area MJLHMP as well as the Riverside County General Plan provide strategy and regulation for emergency response in the County of Riverside. The Proposed Project sites are mostly within natural areas, and the conservation activities would not alter any roadways that could impair

implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. None of the habitat improvement, management, maintenance, or monitoring activities would involve modifications to facilities that are critical to emergency response, such as police, fire, and hospital facilities, and the Proposed Project would not impede access to these facilities in an emergency.

Construction of the conservation actions could temporarily result in impacts on emergency response, such as temporary traffic stops or road closures. This could result in some conflict with existing emergency response or evacuation plans. However, compliance with applicable regulations, policies, and guidelines would reduce impacts related to any interference with emergency response and evacuation plans. Impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

#### ***Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?***

The risk of the Proposed Project resulting in wildfire is discussed in *Impact WF-2* and *Impact WF-3* in Section 3.19, *Wildfire*. As noted in the assessment of such impacts, the risk is low, and implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk. Therefore, impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

### **3.8.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of hazards and hazardous waste effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create hazards and hazardous waste impacts and potential best practices that could be incorporated into future projects to reduce impacts.

Covered Activities by type and their possible relationship to hazardous wastes and hazard impacts if implemented with permit coverage are shown in Table 3.8-1 and discussed below.

**Table 3.8-1. Construction and Operation of Covered Activities and Their Relevance to Hazardous Materials**

<b>Covered Activity</b>	<b>Description</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Excavation and grading may disturb buried hazardous materials and expose contaminated soils, and soils would be hauled off site. Activities may involve transport, use, and disposal of hazardous materials.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance (O&M)	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	O&M activities for new and existing facilities could generate relatively minor hazardous wastes. This type of waste would be in small quantities and would be used for a short duration.

Potential hazards impacts that could result from implementing the types of Covered Activities identified in Table 3.8-1 would include impacts from constructing and operating water supply and other infrastructure projects proposed in the Permit Area. Compliance with the existing regulatory framework would reduce potential impacts from construction activities associated with the transport, use, or disposal of hazardous materials. Construction activities in the Permit Area could occur on properties previously used for agriculture, industrial, or other land uses that may have historically utilized hazardous materials. Ground-disturbing construction may disturb buried hazardous materials (for example, legacy pesticides or USTs) and release these contaminants into the environment. It is possible future development sites could have historical releases of hazardous materials on site, and construction activities have the possibility of disturbing contaminated soil or groundwater.

If a Covered Activity site has had a historical spill or release of a hazardous material, ground-disturbing construction activities could inadvertently disturb contaminated soils or groundwater, which could lead to a release of a hazardous material within 0.25 mile of a school. As such, the

Covered Activities could result in a release of hazardous materials within 0.25 mile of a school, and the impact would be potentially significant.

Construction of the Covered Activities in the Permit Area may include features that could result in impacts on emergency response, such as temporary traffic stops or road closures. This could result in a potential conflict with existing emergency response or evacuation plans.

The Covered Activities would not result in residential or commercial development that would directly result in increased population growth beyond estimated growth, nor would it result in indirect population growth by increasing capacity of existing water and wastewater facilities or extending the service area of utility providers. The Covered Activities would not include any residential, commercial, or institutional development or other facilities that would increase population or prompt more people to live in an area with high risk for wildland fires.

Recommended best practices to reduce hazards and hazardous wastes impacts of future Covered Activities include preparing a soil investigation and/or soil management plan and conducting database research to identify potential hazardous sites within Covered Activity locations. Furthermore, if contaminated soil is identified by the Permittees in the Permit Area prior to construction, or is discovered during construction, and the Covered Activities would include substantial ground-disturbing activities, a soil investigation should be conducted by a qualified environmental professional. Another best practice measure related to hazardous wastes and materials states that the Permittees should obtain Federal Aviation Administration approval and Airport Land Use Commission review and determination for construction equipment and operational structures. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity hazards and hazardous materials impacts and best practices that could be employed to reduce potential impacts.

## 3.9 Hydrology and Water Quality

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *hydrology* is the process, circulation, quantity and quality of water on and below the Earth's surface and in the atmosphere. *Water quality* is the degree to which water is clean and suitable for use by living creatures (humans, animals, plants, etc.) to sustain a healthy life. Hydrology is commonly defined as the occurrence and movement of water, the physical and chemical properties of water, and its relationship with the living and material components of the environment. Because the Santa Ana River watershed is the largest watershed in coastal Southern California and traverses the length of the Proposed Project this analysis considers the environmental impacts of the Proposed Project on the entire watershed.

### 3.9.1 Environmental Setting

#### 3.9.1.1 Regional and Planning Area Setting

##### Climate and Precipitation

The Project Area is characterized by a Mediterranean climate, with long, dry summers and short, wet winters. Average daily temperatures in the winter (December through March) are about 56 degrees Fahrenheit (°F), with the lowest average temperature (41°F) occurring in December. In the summer (June through September), average daily temperatures are about 76°F, with the highest average temperature (95°F) occurring in August. Annual average daily temperatures for the range from approximately 51°F to 80°F (U.S. Climate Data 2017a, 2017b). Average annual precipitation ranges from 12 inches in the coastal plain, 10 to 24 inches in the inland alluvial valleys, and 24 to 48 inches in the San Bernardino Mountains (USGS 2016, 2009). The average total annual precipitation recorded in the city of San Bernardino from 1893 through 2004 is 16.12 inches. Most of the precipitation occurs between November and April, and rainless periods are common in the summer.

##### Topography

The Planning Area extends from Prado Dam along the San Bernardino County and Los Angeles County line to the north within San Bernardino County, and then along the Santa Ana River watershed boundary west to east in the San Gabriel and San Bernardino Mountains, reaching elevations of approximately 2,000 to 8,000 feet. The Planning Area then continues south into Riverside County to the Box Spring Mountains (elevation up to approximately 2,500 feet in the Planning Area), and then southwest through the Moreno Valley to eastern slopes of the Santa Ana Mountains (elevation up to approximately 3,500 feet in the Planning Area) where it runs north again along the Orange County line. Elevation in the valleys ranges from approximately 500 feet at Prado Basin to approximately 2,000 feet in at the eastern end of San Bernardino Valley.

##### Surface Water Hydrology

The Planning Area lies within the Santa Ana River watershed (Hydrologic Unit Code 180702) and is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where

the water resource agency boundaries extend beyond the watershed or where the Planning Area is constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Proposed Project, and no conservation activities under the Upper SAR HCP are planned therein.

The Santa Ana River is the largest watershed in Southern California, covering an area of approximately 2,800 square miles, and contains approximately 50 mapped tributaries. Surface waters in the Planning Area include freshwater rivers and streams, lakes, reservoirs, and wetlands. The mainstem of the river is divided into six reaches, starting from upstream of the Seven Oaks Dam down to the tidal zone flowing into the ocean. Reaches 3 through 6 are within the Planning Area; reaches 1 and 2 are downstream of the Planning Area. Major Santa Ana River tributaries in the watershed include Mill Creek, City Creek, Plunge Creek, Mission Creek, San Timoteo Wash, East Twin Creek, Cajon Wash, Lytle Creek, Rialto Channel, San Sevaine Creek, Day Creek, Chino Creek, and Temescal Wash. Figure 3.9-1 shows the main reaches of the Santa Ana River and the sub-watersheds in the Planning Area. Each of these water bodies is described further below.

The northern boundary of the Planning Area follows the Santa Ana River watershed boundary, including the Upper Cajon Wash, Cable Creek, East Twin Creek, City Creek, Plunge Creek, Alder Creek-Santa Ana River, Siberia Creek-Bear Creek, and Deer Creek-Santa Ana River sub-watersheds. All of these sub-watersheds contain habitat for the Covered Species where conservation activities could occur. The eastern boundary follows the boundaries of the Deer Creek-Santa Ana River, Mill Creek, Yucaipa Creek, and San Timoteo Canyon-San Timoteo Wash sub-watersheds. These sub-watersheds contain Covered Species habitat where conservation activities could occur. The southern boundary includes San Timoteo Canyon-San Timoteo Wash, Reche Canyon, East Etiwanda Creek-Santa Ana River, Tequesquite Arroyo, Lake Mathews, Arroyo Del Toro-Temescal Wash, and Dawson Canyon-Temescal Wash. The East Etiwanda Creek-Santa Ana River watershed is the largest sub-watershed included in the Planning Area, and its downstream extent terminates at Prado Dam. The western boundary of the Planning Area corresponds with the San Bernardino-Los Angeles, San Bernardino-Orange County, and Riverside-Orange County lines. The western region of the Planning Area includes the Middle Chino Creek, Lower Chino Creek, and San Antonio Creek sub-watersheds. The southwestern portion includes the Bedford Wash-Temescal Wash, Main Street Wash-Temescal Wash, and Lake Norconian-Temescal Wash sub-watersheds. The northwestern portion includes the North Fork Lytle Creek, Upper Cajon Wash, and Lower Cajon Wash sub-watersheds.

## **Santa Ana River**

The flow of the Santa Ana River begins high in the San Bernardino Mountains and travels over 100 miles southwestward where it discharges into the Pacific Ocean at the city of Huntington Beach. The following description of the six main reaches of the Santa Ana River is adapted from the Santa Ana River Basin Water Quality Control Plan (Santa Ana RWQCB 2019); therefore, the reach numbers used below are consistent with the numbering in the Water Quality Control Plan.

**Reach 6** includes the river upstream of Seven Oaks Dam. Flows consist largely of snowmelt and storm runoff. Other than Big Bear Reservoir, hydrologic conditions are relatively unaltered compared to downstream reaches.



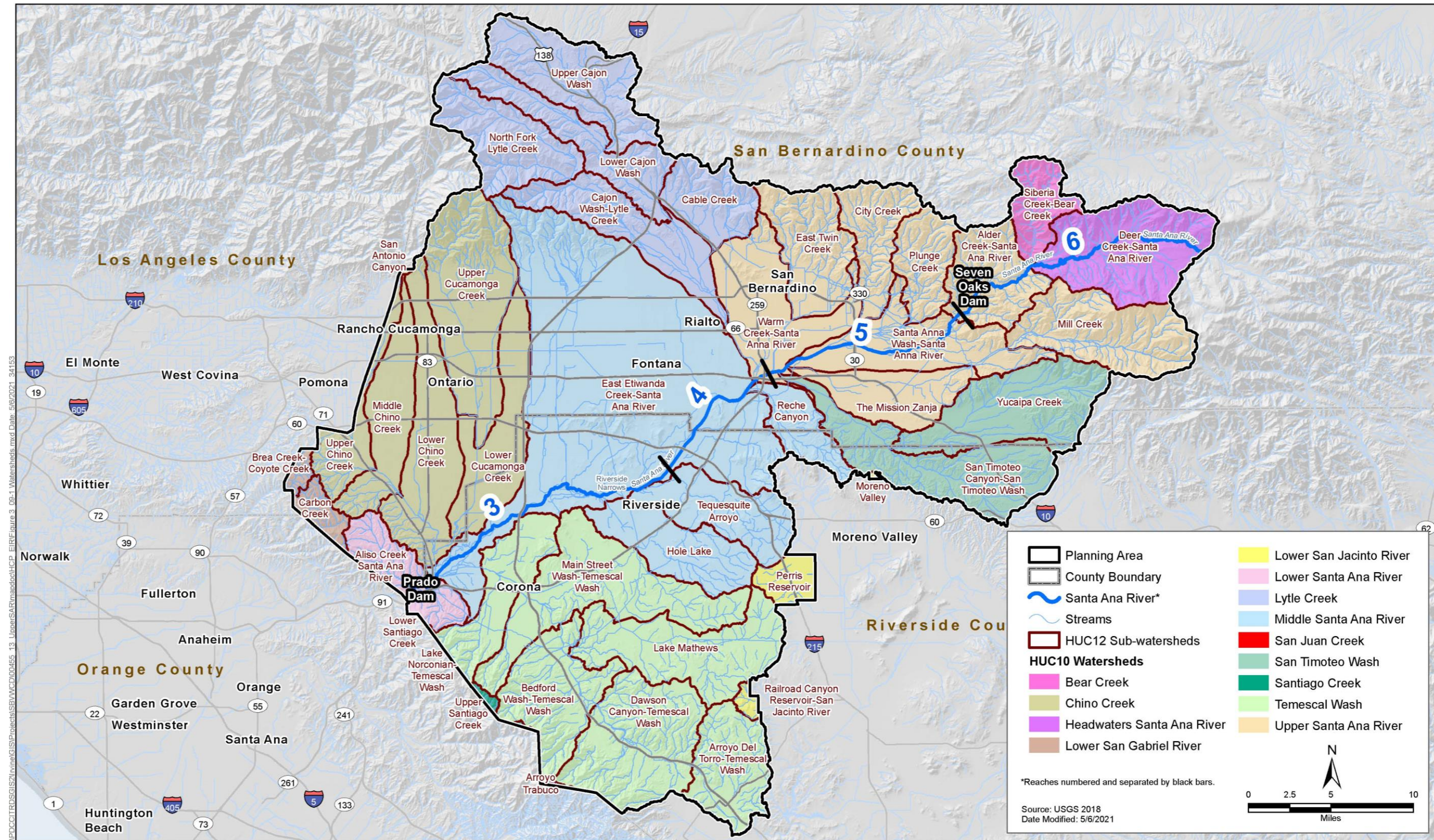


Figure 3.9-1. Watersheds and Sub-Watersheds in the Planning Area



*This page intentionally left blank.*

**Reach 5** extends from Seven Oaks Dam to the city of San Bernardino at the San Jacinto fault (Bunker Hill Dike), which marks the downstream edge of the Bunker Hill groundwater basin. Most of this reach tends to be dry, except as a result of storm flows. The extreme lower end of this reach historically includes rising groundwater and flows from major Santa Ana River tributaries such as Mill Creek, Lytle Creek, and San Timoteo Creek, which flows intermittently and includes effluent from the city of Beaumont and Yucaipa Valley Water District wastewater treatment plants.

**Reach 4** includes the river from the Bunker Hill Dike down to Mission Boulevard Bridge in the city of Riverside. That bridge marks the upstream limit of rising water induced by the flow constriction in the Riverside Narrows downstream in Reach 3. Until about 1985, most water in the reach percolated to the local groundwater, leaving the lower part of the reach dry. However, flows in the lower end of this reach may now intermittently contain rising groundwater and are supplemented with effluent from the Rialto wastewater treatment plant and San Bernardino/Colton Rapid Infiltration and Extraction Facility.

**Reach 3** includes the river from Mission Bridge to Prado Dam at the downstream end of the Planning Area. In the Riverside Narrows, rising water feeds several small tributaries (Tequesquite Arroyo, Anza Park Drain, Sunnyslope Channel, and Hole Creek) which historically were breeding and nursery areas for the native fishes. Temescal, Chino, and Mill/Cucamonga Creeks in Prado Basin are also important river tributaries. Reach 3 also includes major tributaries of San Sevaine Creek, Day Creek, Cucamonga Creek, San Antonio Creek/Chino Creek, and Temescal Wash. Flow is supplemented with effluent from the City of Riverside Regional Water Quality Control Plant and Western Riverside County Regional Wastewater Authority. Many of the tributaries in this reach are channelized, flood-control facilities with little resemblance to natural conditions.

### **Santa Ana River Tributaries**

The Santa Ana River includes over 20 significant tributaries, 11 of which occur within the Planning Area.

**Mill Creek** is a 17.8-mile-long stream that originates in the San Bernardino Mountains and has a confluence with the Santa Ana River just downstream of the mouth of the upper Santa Ana Canyon. This creek is in relatively better condition than lower portions of the Santa Ana River watershed because its drainage area is less urbanized. This creek is the site of two hydroelectric plants owned by Southern California Edison (SCE).

**City Creek** is a 7.5-mile-long stream that originates in the San Bernardino National Forest and rises in two forks of similar length and size: the West Fork City Creek and East Fork City Creek. The two forks combine in a steep ravine under a bridge of California State Route 330 (City Creek Road) and flows through a deep gorge between McKinley and Harrison Mountains where it drops into the plains near the city of Highland.

**Plunge Creek** is a 13-mile-long stream that originates in the San Bernardino Mountains as a high-gradient, single-thread stream and continues southwest to the Santa Ana River just east of the San Bernardino International Airport. The stream widens into braided channels for approximately 6 miles of its length from the San Andreas Rift Zone southwest of Greenspot Road to the San Bernardino International Airport. Portions of the stream are scheduled for restoration within the Upper Santa Ana River Wash HCP planning area.

**Mission Creek** is an approximately 5-mile-long stream that has a confluence with Mill Creek before it continues to the west where it meets the Santa Ana River. It is just north of the Crafton Hills in a relatively low topography area within the Planning Area east of the town of Mentone. The entirety of this creek is channelized.

**San Timoteo Wash** is formed by the confluence of Little San Antonio Creek and Noble Creek west of the city of Beaumont in Riverside County. This wash flows northwest through San Timoteo Canyon, north of the Badlands in the southern hills of the city of Redlands. It joins the Santa Ana River near the Interstate (I-) 10 and I-215 interchange. The creek flowed intermittently in the past; however, today it flows nearly year-round due to agricultural runoff and tertiary treatment discharge from a water plant in Yucaipa.

**East Twin Creek** originates southwest of Strawberry Creek and is joined by West Twin Creek, which is tributary to Warm Creek, which, in turn, is tributary to the Santa Ana River.

**Lytle Creek** is approximately 18 miles long and originates in southwestern San Bernardino County near the city of San Bernardino. It is a tributary of Warm Creek, which feeds into the Santa Ana River 1 mile after Warm Creek joins the Santa Ana River. SCE operates a hydroelectric plant on Lytle Creek at Miller Narrows.

**Cajon Wash** is an approximately 20-mile-long tributary to Lytle Creek. It is a braided channel that originates in the northwestern portion of the Planning Area within Cajon Canyon and extends south to Lytle Creek at West Foothill Boulevard.

**Rialto Channel** is a concrete conveyance channel that flows south for approximately 9 miles before meeting the Santa Ana River. The flow in this channel is outflow from the Rialto wastewater treatment plant.

**San Sevaine Creek** is a concrete conveyance channel that runs south for approximately 11 miles through San Bernardino County, which is joined by Day Creek and ultimately connects with the Santa Ana River.

**Day Creek** or **Day Canyon Wash** originates in the San Gabriel Mountains as a high-gradient, single-thread stream and becomes a concrete conveyance channel as it continues south to its confluence with the Santa Ana River.

**Chino Creek** is approximately 12.7 miles long and originates in the San Gabriel Mountains from an underground stormwater channel and flows south from southern Pomona in eastern Los Angeles County. The channelized stream enters southwestern San Bernardino County and runs southeast across the Chino Valley between the Chino Hills to the south and the city of Chino to the northeast. From here, the creek flows parallel to State Route 71 through industrial and agricultural areas of Chino and joins the Santa Ana River north of Prado Dam.

**Temescal Wash** is approximately 29 miles long and is the largest tributary of the Santa Ana River. Temescal Wash originates in the Elsinore Spillway Channel, an overflow channel that is confined to Lake Elsinore and passes northwest into the Warm Springs Valley. The wash flows through the rain shadow zone of the Santa Ana Mountains and where it emerges from Temescal Canyon, north of El Cerrito, it enters a second reservoir from which point it is channelized before entering into the Prado Flood Control Basin, which consists of a series of wetlands where Temescal Wash merges with the Santa Ana River. Temescal Wash is diverted heavily for human use and, as a result, is

ephemeral for most of its length, except in areas where runoff from housing and agricultural development return flows.

### Streamflow Conditions

Streamflow in the Santa Ana River and its tributaries is highly variable in response to precipitation patterns. The Santa Ana River and most of its tributaries have intermittent flow with periods of little or no flow in the summer months, but contain seasonal flows, including large flood flows in the winter and spring, and perennial flows in some stream reaches from groundwater upwelling. Average annual discharges determined from hydrology models for select locations along the Santa Ana River and its major tributaries are listed in Table 3.9-1.

**Table 3.9-1. Mean Annual Flow for the Upper Santa Ana River and Major Tributaries**

<b>Location</b>	<b>Mean Annual Flow (acre-feet/year)<sup>a,b</sup></b>
<b>Santa Ana River Mainstem</b>	
Seven Oaks Dam Inflow (Reach 6)	33,032
Santa Ana River at Mount Vernon Avenue (Reach 5)	56,815
Santa Ana River at Mission Boulevard (Reach 4)	84,961
Santa Ana River at Prado Dam <sup>c</sup>	291,663
<b>Major Tributaries</b>	
Mill Creek	14,362
City Creek (includes 3,694 acre-feet/year from Plunge Creek tributary)	9,423
Plunge Creek	3,694
Mission Creek	3,029
San Timoteo Wash	3,419
East Twin Creek	6,195
Lytle Creek	9,471
Rialto Channel	12,822
San Sevaine Creek	17,934
Day Creek	13,473
Chino Creek	96,318
Temescal Wash	30,068

<sup>a</sup> Discharge values are from modeled hydrology described in the Upper SAR HCP (Valley District 2019).

<sup>b</sup> Hydrology values include flow regulation by Seven Oaks Dam.

<sup>c</sup> Discharge from wastewater treatment plants and groundwater upwelling contribute to the total Santa Ana River mainstem flow at Prado Dam.

Due to urbanization, flood control, inter-basin water transfers, and other water-supply projects throughout the Santa Ana River basin, the natural hydrology of watershed runoff and streamflow for most streams have been substantially altered. Existing alterations to natural hydrologic conditions, including diversions, constructed drainages, channels, and other impervious surfaces, are especially prevalent in the San Bernardino Mountains foothills and the Santa Ana River Valley, causing decreased groundwater infiltration and increased runoff from urban areas. Modification of natural flow patterns also stems from water storage and controlled releases from reservoirs, groundwater withdrawal, hydraulic structures, diversion into groundwater recharge basins, vegetation management, and irrigation runoff and wastewater effluent that create perennial flow in some

streams that would otherwise be dry. Stormwater and flood management is an ongoing concern in the region. Flood control facilities, such as detention basins, have provided control of flood flows. The region's groundwater managers are working with flood control agencies to optimize the use of flood control facilities to increase the recharge of stormwater into the groundwater basin.

Major reservoirs and lakes in the Planning Area include Prado Reservoir and Seven Oaks Reservoir in the northern portion and Lake Mathews in the southern portion. Lake Elsinore and Canyon Lake are located adjacent to the Planning Area, outside of the Planning Area boundary.

Several major dams are located on the Santa Ana River, including Big Bear Dam, Seven Oaks Dam, and Prado Dam. The surface water of Bear Creek (a tributary to the Santa Ana River) is impounded high in the mountains by Big Bear Dam beyond the northeast boundary of the Planning Area, which was constructed as a reservoir to supply water for surrounding communities. Seven Oaks Dam and Prado Dam were constructed for flood control purposes.

### **Classification of Stream Channels in the Planning Area**

Stream reach classification is a process of categorizing natural variation in measured characteristics among a group of streams and rivers to delineate channel types that are similar in terms of hydrologic, geomorphic, and other environmental features. Categorization of the river and streams in the Planning Area is important to be able to describe the range of channel types and to understand and analyze the potential changes in each channel type as a response to the different Covered Activities associated with Proposed Project conservation measures.

By assigning stream channels or segments to a particular channel type category, relationships between ecological metrics and potential flow alteration from proposed conservation measures can be developed for each channel type based on data obtained from a representative set of channels of each type within the Planning Area. For each channel type there is a range of natural hydrologic variation that regulates characteristic ecological processes and habitat characteristics.

### **Channel Pattern**

Channel pattern is commonly used to characterize the geomorphic state of streams in the watershed. A channel's pattern is often related to other important geomorphic variables, such as channel stability, the texture and volume of sediment supply, slope (stream gradient), and mode of sediment transport (bedload vs. suspended load). Channels with different patterns will typically respond differently to changes in sediment supply, discharge, riparian vegetation removal, and other alterations, making channel pattern an effective approach to characterizing the geomorphic conditions of the watershed. Nine channel patterns were identified to capture the range of variability in the Planning Area, as described below. The distribution of these channel patterns is illustrated on Figure 3.9-2, and their prevalence in the Planning Area is summarized in Table 3.9-2.



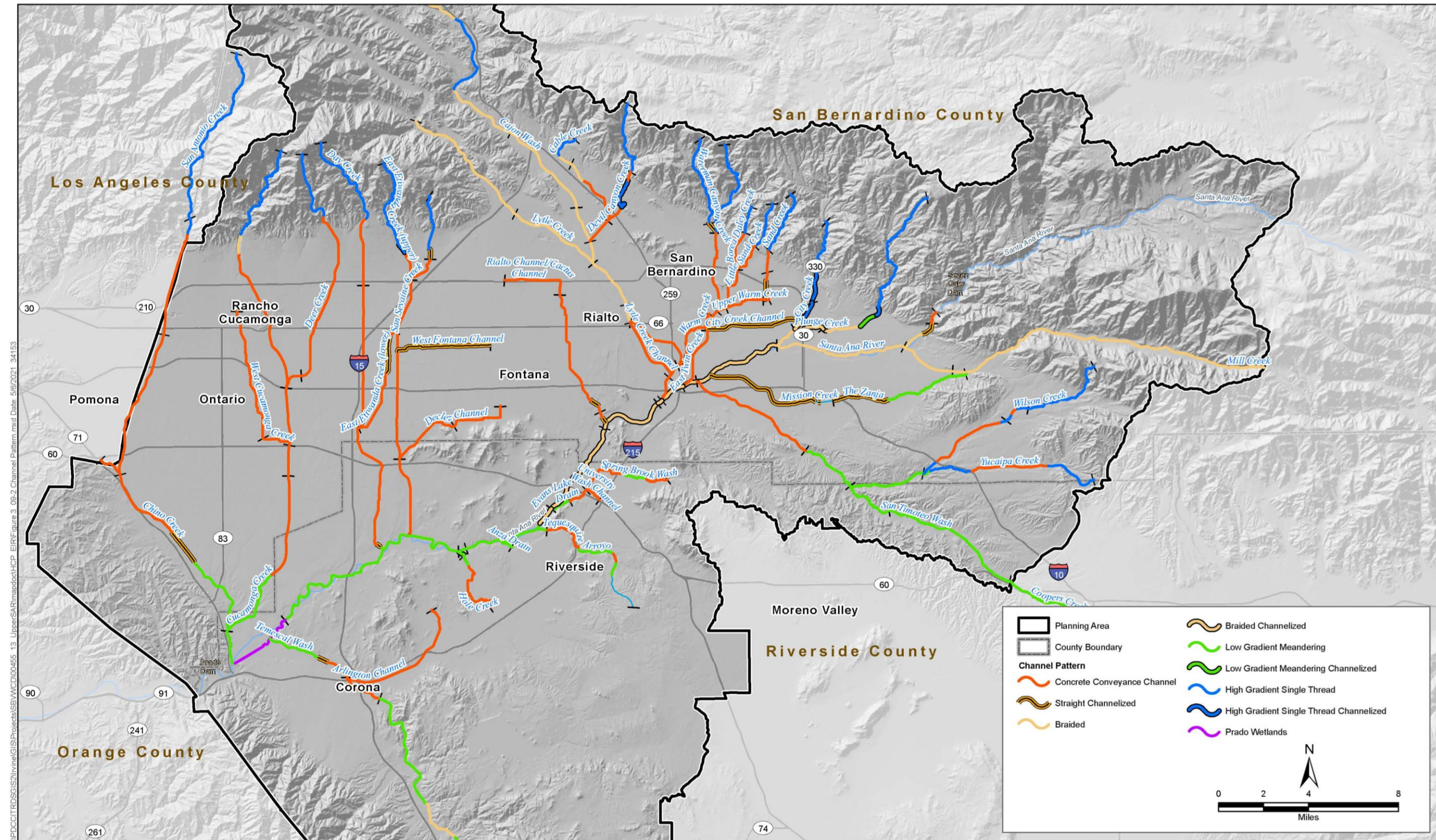


Figure 3.9-2. Channel Patterns in the Planning Area



*This page intentionally left blank.*



The following nine categories of channel patterns are noted in the Planning Area:

- **Concrete conveyance channels** are streams with concrete bed and banks that function as flood control channels designed to quickly route water off the landscape. These highly altered channels account for the largest percentage of the channel pattern, comprising 40% (171 miles) of the total channel length evaluated in the Planning Area.
- **Straight channelized reaches** comprise 4% of the total channel length in the Planning Area and are similar to concrete conveyance channels except they do not have concrete beds and thus have more ecological value than just being flood conveyance channels. Examples in the Planning Area include reaches on Chino Creek and City Creek Channel.
- **High-gradient, single-thread channels** are channels with slopes greater than 2%. They make up 18% of the total channel length, and in the Planning Area they are typically unaltered channels in the foothills and mountainous areas upstream of diversions or other alterations. High-gradient, single-thread channels typically have coarse bed substrate (gravel, cobble, boulder) and are often confined to valleys with little developed floodplain.
- **High-gradient, single-thread channelized** occur on 1% of the total channel length, and are similar to high-gradient, single-thread channels except that they have been channelized for flood control purposes.
- **Low-gradient, meandering channelized** occur on less than 1% of the total channel length, and are similar to low-gradient, single-thread channels except that they have been channelized for flood control purposes.
- **Braided channels** comprise 15% of the total channel length in the Planning Area, largely located on the upper reaches of the Santa Ana River and on Lytle Creek, Cajon Wash, and Mill Creek. The braided channels are located on alluvial washes at the transition from the mountainous regions to the lower alluvial plain reaches below. They are characterized by high sediment loads, also often with high slopes, and erodible banks in which the channel has multiple braids that routinely shift in response to flood events.
- **Braided channelized reaches** cover 4% of the total channel length, and are similar to the braided reaches, but are laterally confined by levees and often have been straightened for flood control purposes.
- **Prado Wetlands** classifies the channel pattern of the Santa Ana River as it flows through the wetlands in Prado Reservoir.
- **Low-gradient, meandering channels**, defined as having slopes less than 2%, account for 17% of the total channel length in the Planning Area. Most of the low-gradient, meandering channels are located on the downstream portion of the Santa Ana River and San Timoteo Wash. They are differentiated from braided channels in the Planning Area by lower channel slopes, increased channel stability with channel paths typically separated by vegetated bars or islands, and floodplain creation (at least in areas where the floodplain has not been developed or the stream leveed).

**Table 3.9-2. Categorization of Streams by Channel Pattern in the Planning Area**

<b>Channel Pattern</b>	<b>Miles of Channel</b>	<b>Percentage of Total Channel Miles</b>
Concrete Conveyance Channel	171	40
Straight Channelized	17	4
High-Gradient, Single-Thread	77	18
High-Gradient, Single-Thread Channelized	4	1
Low-Gradient, Meandering	74	17
Braided	66	15
Braided Channelized	17	4
Prado Wetlands	3	1
Low-Gradient, Meandering Channelized	1	0
<b>Total</b>	<b>431</b>	<b>100</b>

### Surface Water Quality

Water quality in a typical surface water body is influenced by processes and activities that take place within the watershed. The quality of the stormwater runoff from the Planning Area and surrounding urban and forested areas is typical of watersheds where water quality is affected primarily by discharges from both point and nonpoint sources. Point-source discharges are those that one can point to as known sources of pollutants, while nonpoint source discharges generally result from diffuse sources, such as land runoff, precipitation, or seepage. Point and nonpoint sources include outfalls, winter storms, overland flow, exposed soil, roofs, parking lots, and streets. Water quality in the Planning Area is directly affected by stormwater runoff from adjacent streets and properties that deliver fertilizers, pesticides, automobile pollutants (e.g., oil, grease, metals), sediment with associated pollutants from soil erosion, trash, and other pollutants. With the diversion of most of the Santa Ana River's natural surface flow for agricultural and domestic uses, creeks and rivers dried up, carrying only storm flows and runoff. Ultimately, treated wastewater replaced some of the flows in some streams. As a result, water quality in the Santa Ana River is effluent-dominated for portions of the year.

The Santa Ana Regional Water Quality Control Board (RWQCB) uses planning, permitting, and enforcement authorities to meet the responsibility of adopting the Water Quality Control Plan for the Santa Ana River Basin (Santa Ana RWQCB 2019) to implement plans, policies, and provisions for water quality management. Beneficial uses are described in the Water Quality Control Plan for the Santa Ana River Basin and are designated for major surface waters and their tributaries, as well as groundwater. Beneficial uses form the cornerstone of water quality protection under the basin plans. Once beneficial uses are designated, appropriate water quality objectives can be established, and programs that maintain or enhance water quality can be implemented to ensure the protection of beneficial uses. The designated beneficial uses, together with water quality objectives, form water quality standards.

Impaired water bodies are defined as those water bodies that do not meet water quality standards. Constituents or pollutants in stormwater runoff vary with surrounding land uses, impervious surface area, and topography as well as with the intensity and frequency of rainfall or irrigation. Stormwater runoff generated at the onset of the wet season, or the "first-flush," typically contains the highest pollutant concentrations. As shown in Table 3.9-3, pH, indicator bacteria, and nutrients

are listed as Clean Water Act (CWA) Section 303(d) impairments in surface waters within the Planning Area. Paints, solvents, soap products, and other toxic materials may be inadvertently or deliberately deposited in storm drains in residential and industrial areas. Polychlorinated biphenyls (PCBs) can be found in automobile engines and other sources that are common in urban areas. Pesticides, herbicides, fungicides, and fertilizers that are used for landscape maintenance can be washed into storm drains when irrigation exceeds the rate of soil infiltration and plant uptake or when the chemicals are applied in excess.

**Table 3.9-3. CWA Section 303(d) Impairments for Surface Waters in the Planning Area**

<b>Water Body</b>	<b>Pollutant</b>	<b>Source</b>	<b>TMDL Completion Date</b>
Santa Ana Reach 6	Cadmium	Unknown	Estimated 2021
	Copper	Unknown	Estimated 2021
	Lead	Unknown	Estimated 2021
Santa Ana Reach 4	Indicator bacteria	Unknown	Estimated 2019
Santa Ana Reach 3	Copper	Unknown	Estimated 2023
	Indicator bacteria	Dairies	May 6, 2007 <sup>a</sup>
	Lead	Unknown	Estimated 2023
Warm Creek	Indicator bacteria	Unknown	Estimated 2029
Mountain Home Creek	Indicator bacteria	Unknown	Estimated 2019 <sup>b</sup>
	Toxicity	Unknown	Estimated 2027
Mountain Home Creek, East Fork	Indicator bacteria	Unknown	Estimated 2019
Mill Creek Reach 1	Indicator bacteria	Unknown	Estimated 2019
San Timoteo River Reach 1A (Santa Ana River to confluence to Barton Road)	Indicator bacteria	Unknown	Estimated 2029
San Timoteo River Reach 2 (gage at San Timoteo to confluence with Yucalpa Creek)	Indicator bacteria	Unknown	Estimated 2029
San Timoteo River Reach 3 (Yucalpa Creek to headwaters)	Indicator bacteria	Unknown	Estimated 2029
Cucamonga Creek Reach 1 (Valley Reach)	Cadmium	Unknown	Estimated 2021
	Copper	Unknown	Estimated 2021
	Lead	Unknown	Estimated 2021
	Zinc	Unknown	Estimated 2019
Chino Creek Reach 1B (Mill Creek confluence to start of concrete-lined channel)	Chemical oxygen demand	Unknown	Estimated 2019
	Indicator bacteria	Agriculture; dairies; urban runoff/storm sewers	May 16, 2007 <sup>c</sup>
	Nutrients	Unknown	Estimated 2019

<b>Water Body</b>	<b>Pollutant</b>	<b>Source</b>	<b>TMDL Completion Date</b>
Chino Creek Reach 1A (Santa Ana R5 confluence to just downstream of confluence with Mill Creek)	Indicator bacteria	Agriculture; dairies; urban runoff/storm sewers	May 16, 2007 <sup>c</sup>
	Nutrients	Unknown	Estimated 2019
Chino Creek Reach 2 (beginning of concrete channel to confluence with San Antonio Creek)	Indicator bacteria	Unknown nonpoint source	May 16, 2007 <sup>c</sup>
	pH	Unknown	Estimated 2021
San Antonio Creek	pH	Unknown	Estimated 2021
Prado Flood Control Basin	pH	Unknown	Estimated 2027
Mill Creek (Prado Area)	Indicator bacteria	Dairies	May 16, 2007 <sup>c</sup>
	Nutrients	Unknown	Estimated 2019
	Total Suspended Sediment	Unknown	Estimated 2019
Goldenstar Creek	Indicator bacteria	Unknown	Estimated 2021
Lake Elsinore	DDT	Unknown	Estimated 2027
	Nutrients	Unknown nonpoint source	September 30, 2005 <sup>d</sup>
	Organic enrichment/low dissolved oxygen	Unknown nonpoint source	September 30, 2005 <sup>d</sup>
	PCBs	Unknown	Estimated 2027
	Toxicity	Unknown	Estimated 2027

Source: SWRCB 2018.

<sup>a</sup> Middle Santa Ana River Waterbodies – Nitrogen Compounds TMDLs

<sup>b</sup> The list for indicator bacteria was carried over from the previous 2010 303(d) listing cycle. Indicator bacteria data were collected by the Santa Ana RWQCB in 2012, outside of the 2014 listing cycle. There is support to delist indicator bacteria in the next listing cycle.

<sup>c</sup> Prado Area Streams Pathogen TMDL

<sup>d</sup> Lake Elsinore Watershed Nutrient TMDL

DDT = dichlorodiphenyltrichloroethane; PCBs = polychlorinated biphenyls; TMDL = Total Maximum Daily Load

## Groundwater Hydrology and Water Quality

The Planning Area is within the Upper Santa Ana Valley groundwater basin, although some areas around Lake Mathews are not within a recognized groundwater basin. The larger Upper Santa Ana Valley Groundwater basin is divided into nine sub-basins, all within the Planning Area: the Cucamonga, Chino, Cajon, Rialto-Colton, Bunker Hill, Yucaipa, Riverside-Arlington, Temescal, and San Timoteo groundwater sub-basins. The Seven Oaks Valley sub-basin (within the Seven Oaks Valley groundwater basin), Big Meadows Valley sub-basin (within the Big Meadows Valley groundwater basin), and Elsinore-Bedford-Coldwater and Elsinore-Elsinore Valley sub-basins within the larger Elsinore groundwater basin are also within the Planning Area. A small portion of the San Jacinto sub-basin within the larger San Jacinto groundwater basin is also within the Planning Area.

The northeastern boundary of Upper Santa Ana Valley groundwater basin is bound by the San Bernardino Mountains and the San Andreas fault, on the west by the Santa Ana and Elsinore Mountains, and on the north by impermeable rocks of the San Gabriel Mountains and the Cucamonga fault. The central and southern area is occupied by non-water-bearing rocks of the Peninsular Ranges, and not within a recognized groundwater basin.

Recharge to the groundwater system occurs through direct infiltration or precipitation, return irrigation flow, and stream-channel infiltration from the Santa Ana and San Jacinto Rivers and their tributaries, and from numerous engineered recharge facilities operating in the Upper Santa Ana, San Jacinto, and Elsinore groundwater basins. Groundwater recharge also occurs by underflow of groundwater from adjacent basins. The primary sources of discharge are water pumped for municipal supply, evaporation from areas with a shallow depth to water, and discharge to streams (USGS 2012; DWR 2006).

Channel morphology also influences the degree to which groundwater is sustained near the surface, regulating the extent to which streams lose surface water to groundwater or gain surface water from groundwater. The interchange of water between surface flows in the stream channel and adjacent groundwater plays a major role in supporting riparian and aquatic communities during the dry season as well as extended drought periods.

A number of faults are within groundwater basin or form the boundary of the basin and smaller sub-basins. Faults form groundwater barriers, limiting groundwater movement, and form discontinuities in groundwater elevations. The San Jacinto fault forms a strong barrier to groundwater that raises the water table nearly to the surface below the course of the Santa Ana River. Within the Chino sub-basin, the largest sub-basin within the larger Upper Santa Ana River basin, groundwater levels declined approximately 80 feet from historical high marks in the 1920s. By 2000, water levels had recovered approximately 20 feet (DWR 2006). Groundwater levels within the Bunker Hill sub-basin, the second largest sub-basin within the larger Santa Ana River groundwater basin, had the largest decreases in the far eastern and northwestern portions of the sub-basin, while the rest of the sub-basin had mostly stable or increasing groundwater elevations. Average changes in groundwater level elevations between fall 1998 and fall 1999 ranged up to an increase of about 3 feet (DWR 2004).

Water quality in the primary aquifers may differ from that in the shallower and deeper parts of the aquifer system. Many inorganic constituents occur naturally in groundwater, but can also be affected by human activities. In the Upper Santa Ana, San Jacinto, and Elsinore groundwater basins, one or more inorganic constituents were present at high concentrations in about 33% of the primary aquifers and at moderate concentrations in about 29% of the primary aquifers. Nutrients, such as nitrate and nitrite, can be naturally present at low concentrations in groundwater. Generally, nutrient concentrations occur as a result of human activities, such as fertilizer application, from livestock, and septic systems. Nitrate plus nitrite was present at high concentrations in about 25% of the primary aquifers, and at moderate concentrations in about 25% of the primary aquifers. Arsenic, boron, and molybdenum were the trace elements that most frequently occurred at high concentrations, while aluminum, fluoride, lead, uranium, and vanadium were also detected at high concentrations, but each in less than 2% of the primary aquifers (USGS 2012).

Total dissolved solids were present at high concentrations in about 5% of the primary aquifers. About 25% of the primary aquifers had moderate total dissolved solids concentrations (between the recommended and upper limit). Anoxic conditions (low amounts of dissolved oxygen) in

groundwater can result from the release of naturally occurring iron and manganese into groundwater. However, iron, manganese, or both were present at low concentrations in about 90% of the primary aquifers, and at high concentrations in about 4% of the primary aquifers (USGS 2012).

Unless otherwise designated by the RWQCB, all groundwaters in the region are considered suitable or potentially suitable, at a minimum, for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO) (Santa Ana RWQCB 2019).

## **Flood Hazards**

The majority of the Planning Area is outside of the Federal Emergency Management Agency (FEMA) 100-year floodplain, and not within a special flood hazard area (Figure 3.9-3). However, some areas, specifically along and adjacent to the Santa Ana River, and other rivers, streams, and waterways, are within the FEMA 100-year floodplain and are subject to flooding. Areas within the 100-year flood-hazard area are subject to a 100-year flood, which means that, in any given year, the risk of flooding in the designated area is 1%. The Santa Ana River and the drainage area northeast of the Prado Dam are within FEMA 100-year Flood Zone AE, areas with known base flood elevations. Lake Mathews and Cajon Wash are within FEMA 100-year Flood Zone A, areas with no known depths or base flood elevations (FEMA 2016). In addition, some areas in the southwestern portion of San Bernardino County and scattered throughout the Planning Area are within the 500-year flood zone. Areas within the 500-year flood-hazard area are subject to a 500-year flood, which means that, in any given year, the risk of flooding is 0.2%.

With the construction of the Seven Oaks Dam, much of the Santa Ana River watershed upstream of the dam is controlled. However, major tributaries such as Mill Creek, City Creek, Lytle Creek, and Cajon Creek still have the potential to flood areas of the valley if levees fail. The San Antonio Dam on the southwestern side of the county provides more than 100-year flood protection to the western end of the San Bernardino Valley (County of San Bernardino 2017).

Flooding susceptibility in Riverside County is primarily associated with several major stream drainages, as well as smaller scale and flash flood events on many of the alluvial fans that flank Riverside County's hillsides. Large-scale developments have utilized golf courses and greenbelts as part of a network of channels that collect flood flows and disperse it on the downstream side. However, given the low permeabilities of the underlying bedrock, heavy runoff from the surrounding hills and mountains during strong storms cannot be prevented (County of Riverside 2016).



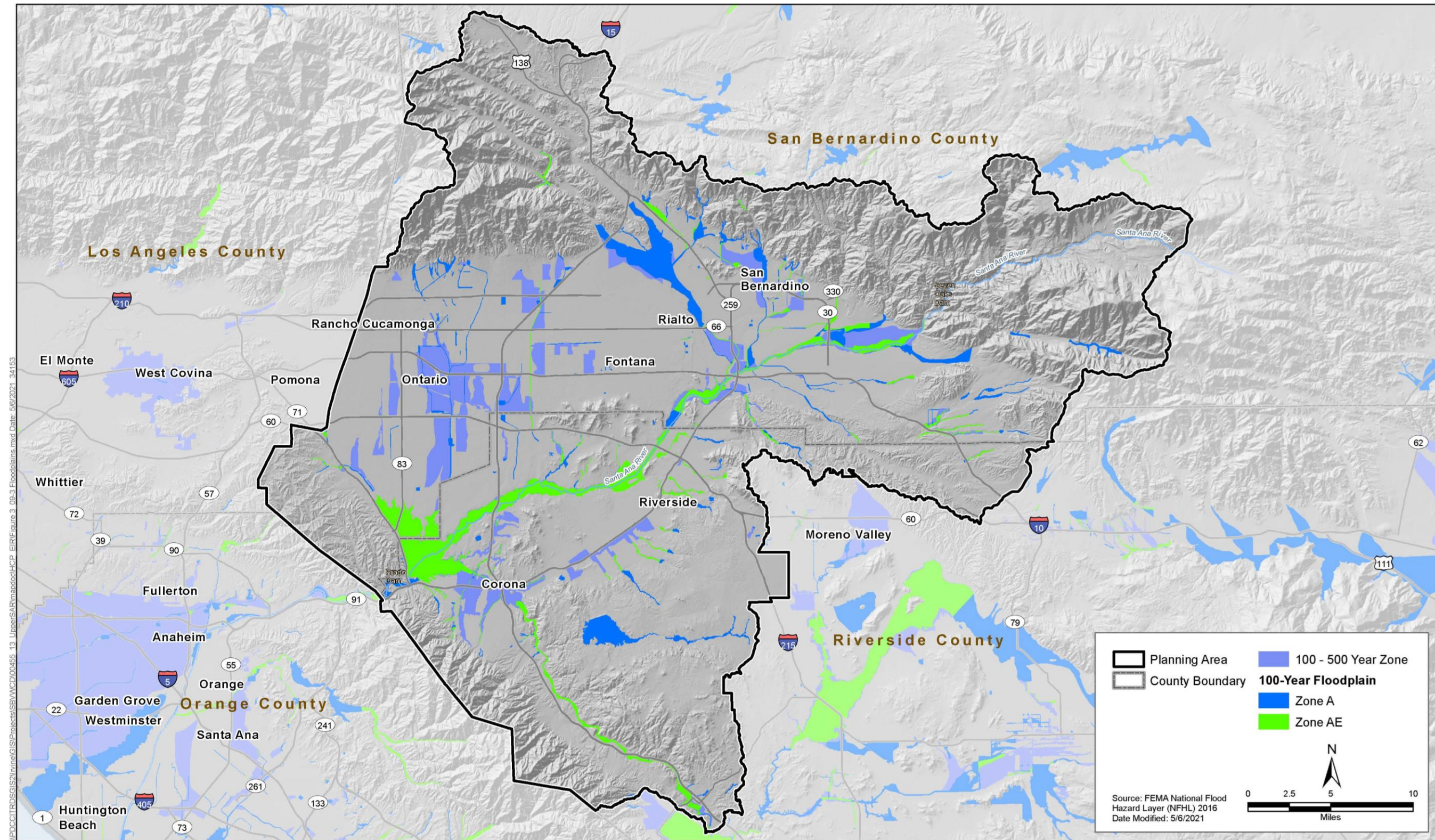


Figure 3.9-3. FEMA Flood Zones within the Planning Area



*This page intentionally left blank.*



Major flood events along several tributaries of the Santa Ana River prompted flood control improvements, including the construction of Prado Dam. The Santa Ana River Mainstem Project was authorized in the Water Resources Development Act to improve flood control. Construction of the Santa Ana River Mainstem Project began in 1989 and is ongoing. Construction elements associated with the Santa Ana River Mainstem Project include several bank and bridge protection features and associated mitigation actions along the Santa Ana River, generally between Seven Oaks Dam (6 miles east of the city of Highland) and the Pacific Ocean. Flood risk management features associated with the Santa Ana River Mainstem Project also occur at San Timoteo Creek. Seven Oaks Dam was completed as part of the Santa Ana River Mainstem Project and provides flood control protection by temporarily retaining storm flows and snowmelt from the San Bernardino Mountains.

## 3.9.2 Regulatory Framework

### 3.9.2.1 Federal Regulations

#### Clean Water Act

Several sections of the CWA pertain to regulating impacts on waters of the United States. The CWA sections listed here pertain to the Proposed Project. The term *waters of the United States* refers to the territorial seas and traditional navigable waters; tributaries of such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters (other than waters that are themselves wetlands). The U.S. Environmental Protection Agency is the overarching authority for protecting the quality of waters of the United States. However, the California State Water Resources Control Board (SWRCB) administers CWA Sections 303, 401, and 402; the U.S. Army Corps of Engineers (USACE) has jurisdiction over waters of the United States under CWA Section 404.

#### Section 303 – Impaired Waters

The State of California adopts water quality standards to protect beneficial uses of waters of the State, as required by Section 303(d) of the CWA and the Porter Cologne Water Quality Control Act (Porter Cologne Act). Section 303(d) of the CWA established the total maximum daily load process to guide the application of State water quality standards (refer to Section 3.9.2.2, *State Regulations*). To identify candidate water bodies for total maximum daily load analysis, a list of water quality-limited segments was generated by the SWRCB. These stream or river segments are impaired by the presence of pollutants and are more sensitive to disturbance because of this impairment.

In addition to the impaired water body list required by CWA Section 303(d), CWA Section 305(b) requires states to develop a report that assesses statewide surface water quality. Both CWA requirements are addressed through the development of a 303(d)/305(b) Integrated Report, which addresses both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The SWRCB's statewide 2014/2016 California Integrated Report was based on Integrated Reports from each of the State's nine RWQCBs. After approval of the 303(d) List portion of the California Integrated Report by the SWRCB, the complete 2014 and 2016 California Integrated Report was approved by the U.S. Environmental Protection Agency on April 6, 2018.

### **Section 401 – Water Quality Certification**

Section 401 of the CWA requires an applicant who pursues a Federal permit for conducting an activity that may result in a discharge of a pollutant to obtain Water Quality Certification (or waiver). Water Quality Certification requires the evaluation of water quality considerations associated with dredging or the placement of fill materials into waters of the United States. Water Quality Certifications are issued by one of the nine geographically separated RWQCBs in California. Under the CWA, the RWQCB must issue Section 401 Water Quality Certification for a project to be permitted under CWA Section 404.

### **Section 402 – National Pollutant Discharge Elimination System**

The 1972 amendments to the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources. NPDES is the primary Federal program that regulates point-source and nonpoint-source discharges to waters of the United States.

The 1987 amendments to the CWA created a new section that was devoted to stormwater permitting (Section 402). The U.S. Environmental Protection Agency has granted the State of California primacy in administering and enforcing the provisions of the CWA and NPDES within state boundaries. NPDES permits are issued by one of the nine RWQCBs.

The Proposed Project is required to comply with both construction and municipal NPDES stormwater requirements. More information is provided in Section 3.9.2.2, *State Regulations*.

### **Section 404 – Dredge/Fill Permitting**

The discharge of dredged or fill material into waters of the United States is subject to permitting specified under Title IV (Permits and Licenses) of the CWA and, specifically, Section 404 (Discharges of Dredged or Fill Material) of the CWA. Section 404 of the CWA regulates the placement of fill materials into the waters of the United States. Section 404 permits are administered by USACE.

### **River and Harbors Act**

The Rivers and Harbors Act of 1899 prohibits the construction of infrastructure over or in navigable waterways of the United States without Congressional approval and prohibits the fill of, or discharge of contaminated sediment to, waters of the United States without approval of USACE. Navigable waters under the act are “subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce” (Title 33 Code of Federal Regulations Section 3294). Section 10 of the Rivers and Harbors Act prohibits work that affects the course, location, conditions, or capacity of navigable waters of the United States without a permit from USACE. Section 10 requires authorization from USACE for the construction of any structure in or over navigable waters of the United States, activities such as the excavation/dredging or deposition of material in these waters, or any obstruction or alteration in navigable water.

### **National Flood Insurance Program**

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods. Congress also passed the Flood Disaster Protection Act of 1973. The NFIP makes Federally

backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. FEMA administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains. FEMA creates official community maps called Flood Insurance Rate Maps that designate 100-year floodplain zones (Special Flood Hazard Areas) and delineate flood hazard areas. A 100-year floodplain zone is the area that has a one in one hundred (1%) chance of being flooded in any one year based on historical data. Executive Order 11988 (Floodplain Management) directs all Federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative.

### 3.9.2.2 State Regulations

#### Porter-Cologne Water Quality Control Act

The Porter-Cologne Act was established and implemented by the SWRCB and nine RWQCBs. The SWRCB is the primary State agency with responsibility for protecting the quality of the State's surface and groundwater, or waters of the State. Waters of the State are defined more broadly than waters of the United States (i.e., any surface water or groundwater, including saline waters, within the boundaries of the state). This includes waters in both natural and artificial channels. It also includes surface waters that are not waters of the United States or non-jurisdictional wetlands, which are essentially distinguished by whether they are navigable. If waters are not navigable, they are considered to be isolated and, therefore, fall under the jurisdiction of only the Porter-Cologne Act and not the CWA. The RWQCBs are responsible for implementing CWA Sections 303(d), 401, and 402, as mentioned in Section 3.9.2.1, *Federal Regulations*.

The Porter-Cologne Act authorizes the SWRCB to draft State policies regarding water quality. The act requires projects that are discharging, or proposing to discharge, wastes that could affect the quality of the State's water to file a Report of Waste Discharge with the appropriate RWQCB to obtain Waste Discharge Requirements. The act also requires the SWRCB or a RWQCB to adopt basin plans for the protection of water quality, as described below.

#### State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

The State Wetlands Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State was established and implemented by the SWRCB. The SWRCB adopted the new policy on May 28, 2020. The procedures provide a common definition of what constitutes a wetland and consistency with the way the SWRCB regulates activities to protect wetlands. The procedures consist of four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

#### Regional Water Quality Control Plan (Basin Plan)

The Santa Ana drainage basin is under the jurisdiction of the Santa Ana RWQCB. RWQCBs establish regulatory standards and objectives for water quality for waters in their respective jurisdictions in their Water Quality Control Plans (commonly referred to as basin plans). Each RWQCB is required to develop, adopt (after public hearing), and implement a basin plan for its region. Basin plans are

updated and reviewed every 3 years. They provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. A basin plan must include (1) a statement of beneficial water uses that the RWQCB will protect, (2) the water quality objectives needed to protect the designated beneficial water uses, and (3) strategies to be implemented, with time schedules for achieving the water quality objectives. The Santa Ana Region Basin Plan was updated in June 2019.

In basin plans, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set the criteria necessary to protect and support these uses. Consequently, the water quality objectives developed for particular water segments are based on the designated use and vary depending on that use. Each RWQCB has region-wide and water body-specific beneficial uses and sets numeric and narrative water quality objectives for several substances and parameters in numerous surface waters in its region. The RWQCBs have set specific water quality objectives for concentrations of chemical constituents for all bodies of water according to their designated beneficial uses for the following substances and parameters: ammonia, bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity. For water bodies that do not have specific beneficial uses or water quality objectives designated in the basin plan, the tributary rule applies. In addition, the SWRCB identifies waters that fail to meet standards for specific pollutants, which are then State listed in accordance with CWA Section 303(d). RWQCBs are responsible for the protection of the beneficial uses of water resources within their respective regions. More information on beneficial uses and the 303(d) impairments that apply to the Proposed Project are provided in Section 3.9.1, *Environmental Setting*.

### **NPDES General Construction Stormwater Permit**

The General NPDES Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit) regulates stormwater discharges related to construction activities. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that, in total, disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must list best management practices (BMPs) that the discharger will use to reduce or eliminate pollutants associated with construction activities in stormwater runoff and document the placement and maintenance of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “nonvisible” pollutants, to be implemented in case of a BMP failure; and a monitoring plan for turbidity and pH for projects that meet defined risk criteria. The requirements of the SWPPP are based on the construction design specifications detailed in the final design plans of a project and the hydrology and geology of the site expected to be encountered during construction. The local or lead agency requires proof of coverage under the Construction General Permit prior to building permit issuance. The SWPPP is submitted to the SWRCB, and a copy is kept at the jobsite where it is updated during different phases of construction. The SWPPP must be available for inspection and review upon request.

## NPDES General Municipal Stormwater Permit

CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4s). Phase I MS4 regulations cover municipalities with more than 100,000 residents, certain industrial processes, or construction activities that disturb an area of 5 acres or more. Phase II “small” MS4 regulations require stormwater management plans (SWMPs) to be developed by municipalities with fewer than 100,000 residents and construction activities that disturb 1 or more acres of land. The SWRCB adopted a Statewide Phase II Small MS4 General Permit in 2013 to efficiently regulate discharges from numerous qualifying small MS4s under a single permit. Small MS4s were categorized as either “traditional” or “nontraditional.” Traditional MS4s operate throughout a community. Nontraditional MS4s are similar to traditional MS4s but operate at a separate campus facility. Most nontraditional MS4s in California are not designated as having to comply with the Statewide Phase II Small MS4 General Permit, although the SWRCB reserves the right to allow the RWQCBs to designate through due process any single nontraditional MS4 if it is deemed necessary.

MS4 permits require cities and counties to develop and implement programs and measures, including management practices, control techniques, system design and engineering methods, and other measures, as appropriate, to reduce the discharge of pollutants in stormwater discharges to the maximum extent possible. As part of permit compliance, permit holders have created SWMPs for their respective locations. These plans outline the requirements for municipal operations, industrial and commercial businesses, construction sites, and planning and land development. The requirements may include multiple measures to control pollutants in stormwater discharges. During implementation of specific projects under the program, project applicants are required to follow the guidance contained in the SWMPs, as defined by the permit holder in that location. The SWRCB is advancing Low-Impact Development (LID) in California as a means of complying with municipal stormwater permits. LID incorporates site design, including, among other things, the use of vegetated swales and retention basins and minimizing impermeable surfaces, to manage stormwater and maintain a site’s predevelopment runoff rates and volumes.

San Bernardino County is considered a Phase I MS4 permittee, and is covered under the municipal MS4 permit (National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements for the San Bernardino County Flood Control District, the County of San Bernardino, and the Incorporated Cities of San Bernardino County within the Santa Ana Region [NPDES Order No. R8-2010-0036; NPDES No. CAS618036]). Riverside County is also considered a Phase I MS4 permittee, and is covered under the municipal MS4 permit (National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County within the Santa Ana Region [NPDES Order No. R8-2010-0033; NPDES No. CAS618033]). The Santa Ana RWQCB amended the permit on June 7, 2013 (Order No. R8-2013-0024), and the permittees received an administrative extension of the Riverside County Municipal Stormwater Permit on January 29, 2015.

## California Department of Fish and Wildlife

Under Section 1600 et seq. of the California Fish and Game Code, the California Department of Fish and Wildlife (CDFW) is responsible for the protection and conservation of the state’s fish and wildlife resources. CDFW regulates projects that affect the flow, bed, channel, or banks of rivers, streams, and lakes. Section 1602 requires public agencies, utilities, and private individuals, to notify

CDFW prior to commencing any activity that may do one or more of the following: “divert or obstruct the natural flow of, or change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.” CDFW identifies that “any river, stream, or lake” includes those that are episodic or perennial, including ephemeral streams, desert washes and watercourses with subsurface flow. Activities undertaken within the floodplain may also apply.

Following receipt of a complete notification CDFW will determine if the proposed activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration Agreement is required. A Lake and Streambed Alteration Agreement will include measures necessary to protect existing fish and wildlife resources.

### **California Department of Pesticides Regulation**

The California Department of Pesticides Regulation is the lead agency for regulating the registration, sales, and use of pesticides in California. The agency is required by law to protect the environment, including surface waters, from environmental impacts of pesticides by prohibiting, regulating, or controlling the uses of such pesticides. The California Department of Pesticides Regulation has both a Surface Water Protection Program and Groundwater Protection Program that address sources of pesticide residues in surface waters and have preventive and response components to reduce the presence of pesticides in surface and groundwater. The preventive component includes local outreach to promote management practices that reduce pesticide runoff and prevent continued movement to groundwater in contaminated areas. In order to promote cooperation to protect water quality from the adverse effects of pesticides, the California Department of Pesticides Regulation and the SWRCB signed a Management Agency Agreement. The Management Agency Agreement, and its companion document, the California Pesticide Management Plan for Water Quality, are intended to coordinate interaction, facilitate communication, promote problem solving, and ultimately ensure the protection of water quality.

### **3.9.2.3 Local Regulations**

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to hydrology and water quality. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties’ general plans and other local plans, policies, ordinances, and programs related to hydrology and water quality. Appendix B, *Regional and Local Regulations*, describes the relevant local plans, policies, ordinances, and programs related to hydrology and water quality in detail.

### **County of San Bernardino General Plan**

The County of San Bernardino General Plan (County of San Bernardino 2007) provides goals and policies to ensure safe and available water supply and minimize water quality impacts. The Circulation and Infrastructure, Conservation, and Safety Elements of the general plan address, among other issues, surface and groundwater resources and quality, storm drainage and flood

control, and flood protection goals, policies, and programs. The policies that would be applicable to the Proposed Project from the Circulation and Infrastructure Element, Conservation Element, and Safety Element include the provision of safe, reliable, and high quality water supply; minimizing impacts on stormwater; conservation and protection of surface and groundwater and other water sources; water and soil conservation, adequate flood protection, minimization of soil and water erosion, and others.

### **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The goals, policies, and programs from the Infrastructure and Utilities, Natural Resources, and Hazards Elements of the Countywide Plan include provision of sufficient and a safe water supply, safe and sanitary conditions for wastewater systems, and stormwater drainage facilities and minimizing risk from natural environmental hazards.

### **San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan**

The San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (County of San Bernardino 2017) is a document that sets out the hazards present in San Bernardino County, including flood hazards, and provides a description of responsibilities and possible mitigation to reduce hazard risk. Goals and policies include the provision of adequate flood protection to minimize hazards and structural damage and improving or constructing new facilities to minimize and mitigate flooding hazards.

### **County of San Bernardino Code of Ordinances**

San Bernardino County Code of Ordinances, Chapter 85.11: Pre-Construction Flood Hazard Mitigation and Erosion Control Inspection, Section 85.11.030, Erosion Control Plan and Inspection Required, states that no construction activity that has that potential to cause erosion may commence without first obtaining approval of erosion-control measures to ensure that erosion would not reasonably be expected to occur. BMPs would be implemented at all land disturbance sites, regardless of the area of disturbance. The required features of the approved Erosion Control Plan will be implemented during the land-disturbing activity and maintained thereafter in accordance with the approved plan.

The County of San Bernardino 2007 Development Code and Zoning Ordinances create a comprehensive and stable pattern of land uses for planning drainage/flood control and other public facilities and utilities. The following chapters of the development code address floodways, flood control, and development:

- Chapter 82.14 Flood Plain Safety (FP) Overlay

- Chapter 85.07 Flood Hazard Development Review
- Chapter 86.04 Flood Plain Management Administrator

The County of San Bernardino has also adopted Zoning Ordinances that are not part of the County Code but are part of the General Plan. These ordinances regulate land use and map the official land use and hazard overlay districts to include safety hazard and environmental protection areas.

In addition, San Bernardino County Code of Ordinances, Division 3, Building Regulations, Chapter 1, Section 63.0101, states that San Bernardino County adopts the 2016 California Building Code, contained in Part 2 of Title 24 of the California Code of Regulations.

### **County of Riverside General Plan**

The County of Riverside General Plan (2016) includes the Multipurpose Open Space and Safety Elements, which address, among other issues, water quality, stormwater management, and flood hazard policies to address countywide hydrology and water quality issues. The relevant policies from the Multipurpose Open Space Element and Safety Element include water resource and runoff management, minimizing pollutant discharges, preservation of aquifers, encouraging natural drainage systems into development, retentions of stormwater, preservation and enhancement of existing native riparian habitat, assessing and minimizing flooding risks from development, and balancing flood control mitigation with open space and environmental protection, among others.

### **County of Riverside Code of Ordinances**

Riverside County Ordinance No. 754 (as amended through 754.2), known as the Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance, provides regulations related to stormwater, discharges to the storm drain system, and reducing pollutants in stormwater discharges to the maximum extent practicable. Ordinance No. 458 (as amended through 458.15) provides guidance to regulate special flood hazard areas and implement the NFIP.

Riverside County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.12, Uniform Building Code, Section 15.12.010, states that Riverside County adopts the 2001 California Building Code, adopted by the California Building Standards Commission into the California Code of Regulations as Title 24, Part 2, based upon the 1997 edition of the Uniform Building Code adopted by the International Conference of Building Officials.

### **Water Quality Management Plans and Watershed Action Plans**

A Water Quality Management Plan (WQMP) is a guidance document that ensures project design is in compliance with Santa Ana RWQCB requirements for Priority Development Projects. These requirements are specified in the NPDES MS4 permit issued to the Riverside County Flood Control and Water Conservation District, County of Riverside, and other cities within the Santa Ana River watershed in the 2010 MS4 Permit. The WQMP is implemented by the co-permittees within Riverside County in the Santa Ana Region, in compliance with the Riverside County 2010 MS4 Permit.

The 2010 MS4 Permit, adopted by the Santa Ana RWQCB and issued to San Bernardino County, requires all new development and significant redevelopment projects to incorporate LID BMPs to the maximum extent practicable. In addition, the permit requires development of a standard design and post-development BMP guidance for incorporation, where feasible and applicable, of site



design/LID, source control, and treatment control BMPs, and hydrologic conditions of concern mitigation measures to the maximum extent practicable for transportation projects to reduce the discharge of pollutants to receiving waters. Prior to project approval, a WQMP and Stormwater Best Management Practices Transfer, Access, and Maintenance Agreement must be prepared, which is administered by the San Bernardino County Department of Public Works for projects within San Bernardino County.

The Watershed Action Plan for the Santa Ana Watershed Region of Riverside County and its permittees is a requirement of the Riverside County 2010 MS4 Permit. The purpose is to coordinate existing watershed approaches to address water quality and hydromodification impacts resulting from urbanization within the Santa Ana River. This requirement is to be achieved by evaluating existing programs relating to the integration of water quality, stream protection, stormwater management, and re-use strategies with land planning policies, ordinances, and plans within each jurisdiction to the maximum extent practicable.

### 3.9.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate hydrology and water quality impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on hydrology and water quality. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts are found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.9.3.1 Significance Criteria

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would be considered to have a significant impact if it would result in any of the conditions listed below:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? (Impact HYD-1)
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Impact HYD-2)
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:
  - (i) Result in substantial erosion or siltation on- or off-site;
  - (ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite;
  - (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? (Impact HYD-3)

- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Impact HYD-4)
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Impact HYD-5)

### 3.9.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential hydrology and water quality impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on hydrology and water quality conditions in the Planning Area.
- Identify and evaluate the potential impacts on hydrology and water quality as a result of implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts and apply mitigation as needed.
- Identify potential types of impacts related to implementing conservation measures and provide recommended best practices to reduced potential impacts.

Impacts related to hydrology and water quality were assessed based on review of the HCP, consultation with the Permittees, and review of applicable local government authorities, such as general plans and ordinances for San Bernardino and Riverside Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts on hydrology and water quality. Impacts related to hydrology and water quality were assessed by utilizing a hydrologic model comparing baseline conditions, as described in Section 3.9.1, *Environmental Setting*, to conditions assumed to be implemented during construction and/or operation of the Proposed Project.

The hydrological model used includes two primary conditions for stream flow (described as daily, weekly, monthly, or seasonal average flow as needed for analysis): (1) existing conditions and (2) future conditions as would be expected with all Covered Activities in place (see Appendices B through D in the HCP, for the detailed methods used to determine these existing streamflow conditions). The model developed is a composite model that integrates two separate models, one for the Planning Area upstream of Rialto Channel (known as the Geoscience Hydrology Model), and another for the Planning Area downstream of Rialto Channel (known as the Wildermuth Hydrology Model). The composite model is identified as the *HCP Hydrology Model*. The HCP Hydrology Model predicts mean daily flow values under existing conditions on the Santa Ana River and major tributaries located between the Seven Oaks Dam and Prado Basin. The HCP Hydrology Model is used to predict the direct effects of the Covered Activities on the surface hydrology of the river and tributaries, which are then used to estimate potential direct and indirect effects on habitat and species based on those model-predicted changes to surface flow.

### 3.9.3.3 Impact Analysis and Mitigation

#### ***Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?***

Under the Proposed Project, habitat improvement activities needed to implement the Conservation Strategy would include activities that could result in short-term effects on surface water quality near the Santa Ana River and its tributaries. Short-term water quality effects from habitat improvement activities could involve temporary disturbance of sediment that could increase surface water turbidity and accidental release of oil, gas and other fluids from construction equipment. These potential effects would be addressed by a number of avoidance and minimization measures (AMMs) in the HCP, including AMM-19, requiring covering or mulching exposed soils prior to precipitation, AMM-32, which contains specific practices to reduce and remediate spills, and AMM-33, which contains specific practices to control pollutants affecting water quality. Because restoration/rehabilitation actions proposed under the Conservation Strategy are intended to improve habitat for Covered Species it is anticipated that the long term effect of implementing the Proposed Project would be to improve water quality conditions in the Santa Ana River and its tributaries compared to existing conditions because watershed conditions would generally be improved over the permit term. No substantial groundwater quality effects would be expected because the proposed conservation measures do not involve actions that could change groundwater quality conditions.

The Proposed Project would result in the Permittees, through formation of a Joint Powers Authority, providing improvements to and long-term management of aquatic and aquatic-dependent biological resources through restoration and/or rehabilitation activities that will increase the quantity, quality, and function of these vulnerable habitats. Habitat improvement activities associated with the Proposed Project will include conservation actions to support the reestablishment, restoration, rehabilitation, and long-term management of biological and aquatic resource quantity, quality, and function. These activities are intended to help support and protect listed Covered Species in the Permit Area by improving habitat value and function.

Permittees would be able to anticipate, prevent, and resolve potential conflicts over current and future resource needs through implementation of the Proposed Project. The HCP provides a long-term commitment to natural resources by agreeing to conserve, monitor, and manage Covered Species and their habitats. Routine operations, monitoring, and habitat maintenance activities, including bank stabilization and storm-damage repair, would ultimately improve surface water quality. Bank stabilization would also minimize the potential for erosion and sedimentation in nearby storm drains or surface waters.

Even with the proposed stream and habitat improvements in the Upper Santa Ana River, which could potentially have positive effects, reducing streamflow by substantial amounts in some cases would likely result in effects on temperature and potentially water quality constituent concentrations. These potential effects could be partially offset by implementing standard construction-site stormwater BMPs to minimize degradation of water quality associated with erosion, stormwater runoff, or construction-related pollutants as required by AMM-31, which requires implementation of a SWPPP, in addition to AMM-32 and AMM-33, described above. Construction effects on water quality could also be reduced by proper construction vehicle maintenance, material delivery and storage, and solid and liquid waste management in accordance with an approved SWPPP as required by AMM-31. However, even with implementation of these

standard construction measures, surface water quality impacts would likely continue to be significant due to the reduction in flow in the Santa Ana River, and no additional feasible mitigation measures are available to reduce this impact. Therefore, impacts of the Proposed Project on surface water quality would be **significant and unavoidable**.

#### **Mitigation Measures**

No additional feasible mitigation measures are available to reduce this impact.

#### ***Impact HYD-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?***

Under the Proposed Project, conservation, and habitat improvement activities (restoration and/or rehabilitation) needed to implement the Conservation Strategy would likely have a positive effect on groundwater recharge, supplies, and management conditions in certain creeks in the Permit Area. Channel rehabilitation and restoration (including re-establishment) measures proposed for Hidden Valley Creek, Anza Creek, Old Ranch Creek, Lower Hole Creek, and Evans Lake Creek could improve groundwater recharge conditions in these areas. Requiring a permanent water source from the Covered Activity, Santa Ana River Sustainable Parks and Tributaries Reuse Project (RPU.10) for some creeks could also improve the amount of water recharged in these areas.

Additional Conservation Strategy actions include habitat improvement, management, and monitoring to maintain and improve existing habitat conditions and the function of natural communities through the adaptive management process. Creek restoration/rehabilitation at tributary sites would maintain groundwater levels to minimize downwelling and contribute to surface flows, and manage surface water, groundwater, and hydrologic processes to maintain or improve suitable habitat for Covered Species in the watershed. Rehabilitated and restored (including re-established) habitats would allow natural groundwater recharge and infiltration of precipitation into the Upper Santa Ana Valley, Elsinore, Seven Oaks Valley, Big Meadows Valley, and San Jacinto groundwater basins.

Implementation of creek rehabilitation and restoration by the Proposed Project would improve groundwater recharge in the affected creeks. Within the context of the potential groundwater management in the Permit Area, the overall effect of implementing the Proposed Project on groundwater resources would be **less than significant** because the effect of conservation, rehabilitation, and restoration would be improvements in multiple groundwater basins.

#### **Mitigation Measures**

No mitigation is required.

***Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would, (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite; (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?***

Under the Proposed Project, implementing conservation measures would improve tributary and stream conditions to provide habitat for Santa Ana sucker and other Covered Species as presented in the Upper Santa Ana River HCP. These actions would involve improving and restoring streambed and water flow conditions for these streams and species, and would not require introduction of substantial impervious surfaces that could create substantial erosion, siltation, or flooding conditions. Stream restoration/rehabilitation would improve habitat for Covered Species in a manner that would reduce the potential for excessive erosion and siltation and would serve to restore and rehabilitate habitats. For example, creek restoration/rehabilitation at tributary sites could result in improved drainage patterns in streams compared to existing conditions. Restoration/rehabilitation activities would remove dams and channels to restore alluvial processes; create or maintain alluvial or well-drained upland deposits; ensure adequate in-stream flows and groundwater levels; and remove obstructions, such as levees and clear-out culverts, as needed to retain stream flow, allow river-channel meandering, and reduce sedimentation. Ultimately, creek restoration would rehabilitate and restore suitable habitat characteristics and improve drainage patterns within the Permit Area. Long-term monitoring and management activities would maintain or improve existing habitat conditions to improve habitat functions and values through the adaptive management process. These activities would promote the natural disturbance regime including sediment deposition and scour; reduce sediment input and downstream sediment transport/deposition; maintain and enhance hydrogeomorphic and ecological functions; and restore the quantity, quality, and function of vulnerable habitats for Covered Species.

Implementing the Proposed Project would also not result in increases in flooding events or result in flood events exceeding the capacity of the stream channel because none of the Proposed Project actions would restrict streamflow or increase the potential for flooding events.

During Proposed Project construction, the drainage pattern of proposed stream restoration/rehabilitation sites may be temporarily altered and could result in local (onsite) and temporary flooding, erosion, or siltation. However, implementation of a SWPPP for individual activities as required by AMM-31 would reduce this potential. The SWPPP erosion and sediment control measures, such as silt fences and straw wattles would be provided during construction to prevent sediment from entering storm drains and surface waters. Efforts would also be made to conduct the majority of land-disturbing work outside of the typical wet season and minimize the potential for large rain events to mobilize loose sediment during construction. Following construction and other ground-disturbing activities drainage patterns would be similar to existing conditions.

The overall effect of implementing the Proposed Project would be to improve hydrological function in some of the restored streams for Covered Species. Some of these drainages would be altered, but the Proposed Project would likely reduce erosion and siltation because of the proposed restoration and rehabilitation actions. Flooding or the capacity of channels to contain floods would not be appreciably changed compared to existing conditions because the Proposed Project would not

change watershed precipitation and hydrology conditions. The impact would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

#### ***Impact HYD-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?***

The Proposed Project is not located in a tsunami or seiche zone where the potential for release of pollutants from inundation exists. Proposed Project conservation measures are located in or near the Upper Santa Ana River and its tributary streams. For these areas some risk exists that pollutants could be released during flood flow events because of construction activities. Pollutants released would be those typically associated with ground-disturbing construction activities, including oil, gas, and other construction equipment fluids and materials. Because construction activities would be temporary, construction activities would typically not occur during flood flow events and standard construction safety standards would be incorporated into project designs, the potential for release of pollutants during a flood event is considered to be low. In addition, implementation of AMM-32, which contains specific practices to reduce and remediate spills, and AMM-33, which contains specific practices to control pollutants affecting water quality, will further reduce impacts.

Once the Proposed Project conservation elements, such as stream restoration/rehabilitation and Covered Species specific measures are implemented, those that would occur in or near streams would be designed to withstand and function in a variety of stream flows, including storm flood flows. No potential for substantial pollutant release would occur once conservation elements are completed because these elements would not contain pollutants that could create risks for the river system. Ongoing activities such as habitat management, research, and monitoring would have low potential for release of pollutants during flooding conditions because they would be temporary and would not include use of harmful pollutants. Therefore, the impact of the Proposed Project with respect to release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

#### ***Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

The Proposed Project would include the implementation of conservation measures to restore and rehabilitate habitats in the Permit Area that comply with water quality requirements of the Santa Ana Water Quality Control Plan. The Proposed Project would provide conservation measures that would minimize and mitigate incidental take of Covered Species by maintaining and improving existing habitat conditions and the function of natural communities. Enhancing and restoring the function of aquatic habitats would not conflict with or obstruct implementation of the water quality control plan or sustainable groundwater management plan because the Proposed Project would not implement actions that could adversely affect beneficial uses in the watershed.

Although implementing the conservation measures under the Proposed Project would not conflict with water quality control plans, issuing incidental take permits for the Covered Activities could

facilitate Covered Activities that collectively have the potential to affect water quality related to streamflow reductions. However, each Covered Activity would be subject to Federal, State, and local water quality protection requirements and specific water project-level water quality analyses to meet CEQA and other permit requirements.

Commonly practiced BMPs would be implemented to control construction site runoff and reduce the discharge of pollutants to storm drain systems from stormwater and other nonpoint-source runoff, for example, implementation of a SWPPP for individual activities as required by AMM-31. As part of compliance with permit requirements during ground-disturbing or construction activities, implementation of water quality control measures and BMPs would ensure that water quality standards would be achieved, including the water quality objectives that protect designated beneficial uses of surface and groundwater, as defined in the basin plan. The NPDES Construction General Permit also requires stormwater discharges not to contain pollutants that cause or contribute to an exceedance of any applicable water quality objectives or water quality standards, including designated beneficial uses. In addition, implementation of the appropriate general plan policies for the local agencies and/or Permittees would require the protection of groundwater recharge areas and groundwater resources, as required by a sustainable groundwater management plan. Therefore, the impact of the Proposed Project with respect to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

### **3.9.4 Summary of Potential Types of Impacts of Covered Activities**

The Proposed Project aims to restore quantity, quality, and function of vulnerable habitats; conserve land; and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species and prevent colonization by nonnative plants and animals in order to offset impacts from Permittee Covered Activities in the Permit Area.

Covered Activities that would occur within the Permit Area include all actions to be covered by Federal Endangered Species Act Section 10 and California Endangered Species Act 2081(b) permits. Covered Activities that would be implemented by water agencies include both specific projects and ongoing activities, such as operations and maintenance (O&M) actions. As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of hydrology and water quality impacts that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could result in hydrology and water quality impacts and potential best practices that could be incorporated into future projects to reduce hydrology and water quality impacts.

Covered Activities by type and their possible relationship with permit coverage could result in impacts related to hydrology and water quality. The activities and their possible relationships to impacts are shown in Table 3.9-4.

**Table 3.9-4. Construction and Operation of Covered Activities and Their Relevance to Hydrology and Water Quality Resources**

<b>Activity Type</b>	<b>Description</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and O&M of existing and new water treatment plants and associated facilities.	Reduction of stream flows in areas near projects from reduced stormwater and wastewater discharges. Excavation and grading would disturb soil, potentially exposing soil to erosive forces that could degrade water quality. Excavation could require potential groundwater dewatering, which could degrade water quality or reduce groundwater supplies. May involve new impervious surface area and increases associated with stormwater runoff.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, O&M of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and O&M of existing and new recharge basins.	Reduction of stream flows in areas near projects from reduced stormwater discharges. Excavation could require groundwater dewatering, which could degrade water quality or reduce groundwater supplies. Accidental spill or release of pollutants associated with maintenance activities could impair surface water quality.
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the O&M of this infrastructure and associated development.	Additional impervious surface areas could reduce groundwater recharge and potentially increase surface runoff flows. Operation of new groundwater wells could reduce groundwater supply.
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities.	Additional impervious surface areas could reduce groundwater recharge and potentially increase surface runoff flows.
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area (e.g., bank stabilization, storm-damage repair, maintenance of facilities) periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure.	Excavation and grading would remove cover, potentially exposing soil to erosive forces and degrading water quality.

Potential project-specific hydrology and water quality impacts that could result from implementing the types of Covered Activities identified in Table 3.9-4 would include impacts from reduced stormwater and wastewater discharge to Permit Area streams and from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.9-4, hydrology impacts associated with constructing, operating, and maintaining these types of Covered Activities could include short- and long-term grading, excavation and groundwater dewatering, and cover removal during construction of new or expanded facilities. Installation of impervious surface



areas would potentially reduce groundwater recharge, increase runoff flows, and increase the potential pollutants and soil erosion degrading water quality.

Recommended best practices installed during construction and O&M activities would reduce and mitigate any adverse effects caused by these activities. BMPs should include protection of existing vegetation, check dams/grade control, temporary and permanent seeding, outlet protection, rolled erosion control products, temporary diversions, dewatering operations, proper construction vehicle maintenance, material delivery and storage, and solid and liquid waste management.

Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity hydrology and water quality impacts and best practices that could be employed to reduce potential impacts.

## 3.10 Land Use

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *land use* is the human use of land and the management and modification of the natural and built environment within a prescribed jurisdictional boundary as governed by an agency with authority over that land. Land use is essentially the utilization of the physical land and its resources for use or conservation by humans for various purposes. Land can be used for institutional, residential, commercial, business, industrial, agricultural, recreational, and other relatively natural uses.

### 3.10.1 Environmental Setting

#### 3.10.1.1 Regional Setting

At the end of the nineteenth century, the Inland Empire, comprising San Bernardino and Riverside Counties, was a major center of agriculture, including citrus, dairy, and winemaking. Agriculture declined through the twentieth century, however, and since the 1970s a rapidly growing population, fed by families migrating in search of affordable housing, has led to more residential, industrial, and commercial development. The Inland Empire transformed from a rural to a suburban environment around the 1950s. The region now comprises several cities known as bedroom communities that are suburban cities to larger metropolitan areas such as Los Angeles, Orange County, and San Diego. Land that was previously used for agriculture is now being sold by owners for conversion to shopping centers, industrial warehouses, and more. Due to the lack of one central city in the Inland Empire and the smaller geographical footprint that suburban cities tend to have, this continuous development has become seemingly unplanned suburban sprawl, as local interest and zoning laws are generally pro-development and inconsistent in style and form from one city to another.

#### 3.10.1.2 Planning Area

Land uses throughout the Planning Area vary greatly, as the area encompasses several incorporated cities as well as unincorporated county areas. A portion of the Planning Area is composed of unincorporated lands in Riverside and San Bernardino Counties, which are largely rural areas with undeveloped lands. Cities within the Planning Area are listed alphabetically by county in Table 3.13-1 in Section 3.13, *Population and Housing*.

#### Existing Land Use

Existing land uses in the Planning Area are shown in Table 3.10-1. National forest and urban areas compose the greatest acreage in the Planning Area. See Figure 3.10-1 for a map of land use types within the Planning Area. **Figure 3.10-2** provides an overview of land ownership boundaries within the Planning Area.

**Table 3.10-1. Generalized Land Use in the Planning Area**

<b>Existing Land Use</b>	<b>Area (acres)</b>
Residential	163,920
Commercial/Office	21,085
Industrial	35,623
Mixed Uses	1,336
Rural Residential	13,312
Military Installations	7,528
Public Facilities	14,478
Transportation/Communications/Utilities	35,525
Under Construction	11,969
Agriculture	40,869
Water	3,973
Open Space and Recreation	19,612
<b>Vacant (Undeveloped) Total</b>	<b>369,230</b>
<b>Vacant Lands</b>	
U.S. Forest Service	233,514
Private	221,929
State Parks	9,011
Owned by Counties	8,686
Owned by Cities	6,911
U.S. Bureau of Land Management	5,073
Special District	4,384
Non-Governmental Organization	2,185
Other Federal	1,213
California Department of Fish and Wildlife	681
Other State	172
<b>Vacant Lands Total</b>	<b>493,759</b>
<b>Grand Total</b>	<b>862,989</b>

Source: Southern California Association of Governments 2005

### Existing Protected Areas

A variety of local, State, Federal, and private open space land exists in the Planning Area, including United States Department of Agriculture Forest Service land and county and city parks (Table 3.10-2 and Figure 3.10-3). Roughly 60.1% (approximately 289,154 acres) of the natural habitat in the Planning Area is currently in some form of public or private habitat protection or otherwise designated open space. The California Protected Areas Database is maintained by GreenInfo Network ([www.calands.org](http://www.calands.org)) to create a regional database mapping of the distribution of existing protected lands.



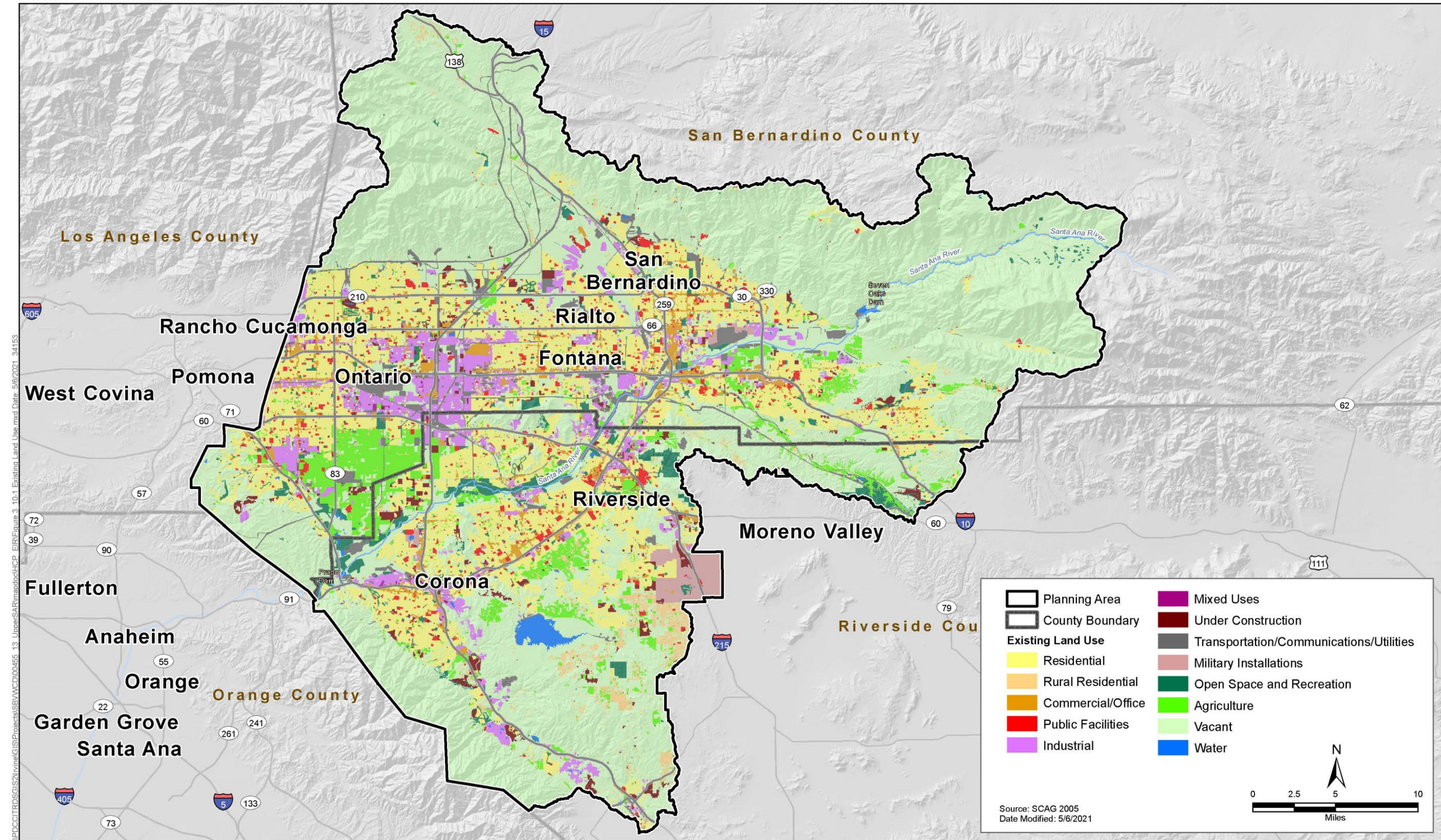


Figure 3.10-1. Existing Land Use in the Planning Area



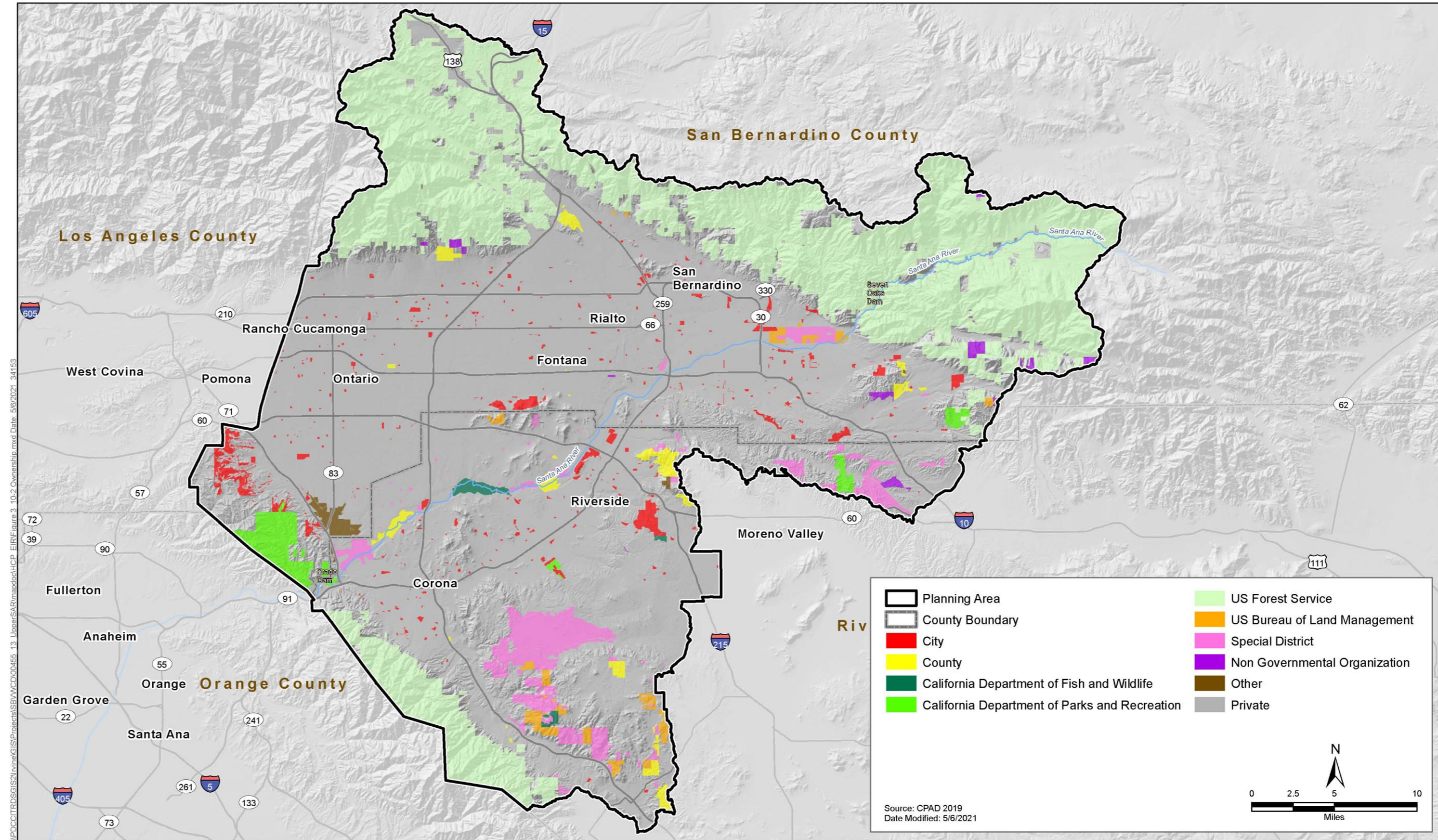


Figure 3.10-2. Generalized Land Ownership in the Planning Area







*This page intentionally left blank.*

**Table 3.10-2. Protected Lands in the Planning Area**

<b>Ownership</b>	<b>Acres</b>
California Department of Fish and Wildlife	1,779
California Department of Parks and Recreation	9,798
City	12,029
County	7,002
Non-Governmental Organization	2,355
Other Federal	2,213
Other State	179
Special District	25,168
U.S. Bureau of Land Management	5,290
U.S. Forest Service	236,504
<b>Total</b>	<b>302,319</b>

Source: Valley District 2019

## 3.10.2 Regulatory Framework

### 3.10.2.1 Federal Regulations

There are no Federal laws, regulations, or orders pertaining to land use that are relevant to the Proposed Project.

### 3.10.2.2 State Regulations

#### **California State Planning and Zoning Law (California Government Code Section 65000–66037)**

The California State Planning and Zoning Law delegates most of the State’s local land use and development decisions to cities and counties and describes laws pertaining to the regulation of land uses by local governments, including the general plan requirement, specific plans, subdivisions, and zoning.

### 3.10.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to land use. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, and policies are included to represent the Planning Area. Appendix B, *Regional and Local Regulations*, presents relevant local plans, policies, ordinances, and programs related to land use in detail.

#### **County of San Bernardino General Plan**

The General Plan Land Use Element serves as a guide for the County of San Bernardino’s future development. It designates the distribution and general location of land uses and addresses density and intensity of the various land use designations as reflected on the County’s General Plan Land Use



Diagram. It aims to promote mutually beneficial uses of land to address regional problems through coordination and cooperation among the County, incorporated cities, Southern California Association of Governments, San Bernardino County Transportation Authority (formerly San Bernardino Associated Governments), and other local, State, and Federal agencies.

### **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Land Use Element identifies 11 land use designations in San Bernardino County that fall within one or more land uses.

### **County of Riverside General Plan (2016)**

The County of Riverside General Plan (County of Riverside 2016) Land Use Element functions as a guide to planners, the general public, and decision-makers as to the ultimate pattern of development. It designates the general distribution, location, and extent of land uses and discusses the standards of residential density and non-residential intensity for the various land use designations.

The General Plan Land Use Map depicts the general pattern of future land use in unincorporated Riverside County and consists of five broad Foundation Component land uses: Agriculture, Rural, Rural Community, Open Space, and Community Development. Each of these is subdivided into more detailed land use designations at the area plan level.

## **3.10.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate land use impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on land use. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.10.3.1 Significance Criteria**

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would be considered to have a significant land use effect if it would result in any of the conditions listed below:

- Physically divide an established community? (Impact LU-1)

- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? (Impact LU-2)

### 3.10.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impact of the Proposed Project:

- Identify land uses in the Planning Area.
- Identify and evaluate the impacts on land use as a result of implementation of the HCP Conservation Strategy.
- Evaluate impact significance.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential land use impacts.

Impacts related to land use were assessed based on review of the HCP, consultation with the Permittees, and review of applicable local government authorities, such as general plans and ordinances for San Bernardino and Riverside Counties. Criteria from Appendix G of the State CEQA Guidelines and standard professional practice were used to determine whether the Proposed Project would have a significant impact on land use. Where applicable, potential benefits related to land use from implementing the Proposed Project are described.

### 3.10.3.3 Impact Analysis and Mitigation

#### *Impact LU-1: Physically divide an established community?*

The Proposed Project would involve conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP. Conservation activities include habitat improvement, management, and monitoring activities within dedicated Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. Open space would be preserved as part of the HCP Preserve System, which in some limited cases could enhance managed recreation opportunities for the public, such as improvements to areas of the Santa Ana River.

The Proposed Project would not physically divide an established community because the proposed improvements consist of the creation, re-establishment, restoration, and/or rehabilitation of degraded aquatic, riparian, or upland habitat within and adjacent to channels. While some areas of the Proposed Project are adjacent to or near established residential communities, no new urban development is proposed as part of the Proposed Project. The sites would remain as undeveloped, natural, open spaces with only minimal other construction that would support habitat improvement, management, and monitoring, as well as managed recreation and education functions.

The Proposed Project would not result in the physical separation of a community because the distribution of the Permit Area accommodates the physical integrity of the communities by

designing and locating improvements in areas to minimize potential impacts and would generally maintain the open space nature of the Proposed Project sites. **No impact** would occur.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact LU-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

The Proposed Project was developed to implement the Conservation Strategy proposed by the Upper SAR HCP in the Permit Area: to restore quantity, quality, and function of vulnerable habitats; conserve and manage land and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species.

Under the Proposed Project, disturbance to adjacent land uses could result from construction, maintenance, and management activities associated with Proposed Project activities, including habitat improvement, management, and monitoring in the Permit Area. The conservation program for the Proposed Project is designed to avoid, minimize, and mitigate environmental impacts from project activities to the maximum extent practicable. The Proposed Project was also designed to meet the regulatory requirements of the Federal Endangered Species Act and California State laws and to streamline compliance with other applicable environmental regulations.

Proposed Project activities include maintenance, monitoring, and management activities. These activities are proposed on natural resource sites to be included within the Preserve System. Existing open space within the Permit Area regulated by the local general and specific plans (e.g., open space lands dedicated for conservation and mitigation purposes) would likely continue to be similar under the Proposed Project in the future with commitments made by the Joint Powers Authority to be established by the Proposed Project, including commitments made through Memoranda of Understanding, easements, land acquisition, etc. The Proposed Project is consistent with the general and specific plans, and no conflicts with these plans are likely to result. Furthermore, the Conservation Strategy is also consistent with the plans, and it would not reduce or affect the ability of the local agencies to regulate land use through their general plans. Conservation actions would be consistent with the existing uses of land at the sites of those actions. The HCP explicitly ensures compliance with other existing applicable HCPs. Therefore, **no impact** due to a conflict with any land use plan, policy, or regulation would occur.

#### **Mitigation Measures**

No mitigation measures are required.

### **3.10.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of land use effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create land use impacts and potential best practices that could be incorporated into future projects to reduce land use impacts.

Covered Activities by type in the Permit Area could result in impacts related to land use. The Covered Activities and their possible relationship to impacts are shown in Table 3.10-3.

**Table 3.10-3. Construction and Operation of Covered Activities and Their Relevance to Land Use**

<b>Covered Activity</b>	<b>Description</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Impacts could occur if the sites for new facilities are not designated and zoned for those uses or if such new facilities resulted in a division of a community. However, it is likely that the sites have already been considered in planning documents.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	No effects

Potential land use impacts that could result from implementing the types of Covered Activities identified in Table 3.10-3 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.10-3, land use impacts associated with constructing, operating, and maintaining these types of Covered Activities could include potential land acquisition for development of new facilities, disturbance to adjacent uses, and periodic vehicle trips to sites. The incidental take permit could facilitate construction and operations of the Covered Activities described in Chapter 2, *Project Description*.

The Proposed Project would facilitate a streamlined permitting process for replacing aging infrastructure, the expansion or new construction of water quality or wastewater treatment facilities, and the operations and maintenance activities of the Covered Activities. The design of the Permit Area considered the general plan land use designations of the Permittees, and many of the

individual projects are included in the Permittees' capital improvement programs and are considered public infrastructure projects located in appropriate land uses.

Most Covered Activities seeking coverage under the HCP would require individual permits and approvals pursuant to the local agencies' general plans and land use regulations or the requirements of the implementing agency (such as water districts) and would undergo subsequent project-level CEQA review for construction and operation-related impacts. Other Covered Activities may be exempted from environmental review requirements due to project characteristics, including small projects or infill projects.

No best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize land use impacts. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity land use impacts.

## 3.11 Minerals

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, a mineral resource is a concentration or occurrence of solid material of economic or environmental interest in or on the Earth's crust that has reasonable prospects for eventual economic extraction depending on its form, grade, or quality and quantity.

### 3.11.1 Environmental Setting

#### 3.11.1.1 Regional Setting

The main focus of this discussion is on aggregate resources, which are the primary mineral resource of economic importance. Aggregate resources are important because they are necessary for most construction, cannot be replaced with other products, and are most economical when used close to the area where they are mined because of the high cost of transportation (California Geological Survey 2018). Potential or actual presence of aggregate mineral resources is mapped according to mineral resource zone (MRZ), as described under *California Surface Mining and Reclamation Act of 1975* in Section 3.11.2.2, *State Regulations*. Definitions for each zone are provided below.

California provides opportunities for the exploration, development, and production of mineral resources, a non-renewable natural resource. San Bernardino and Riverside Counties have extensive deposits of clay, limestone, iron, sand, and other aggregates. San Bernardino County also has decorative rock, gravel, talc, saline compounds, gold, and other materials.

#### 3.11.1.2 Planning Area

Table 3.11-1 shows the presence of MRZs in San Bernardino and Riverside Counties' jurisdictions in the Planning Area, with MRZs in San Bernardino County shown on Figure 3.11-1 (similar data were not available for Riverside County). The types of zones present in the Planning Area show that there is ongoing aggregate mining within the Planning Area, with potential for more mining.

**Table 3.11-1. Mineral Resource Classifications by County in the Planning Area**

County	Mineral Resource Zones Present
County of San Bernardino	MRZ-1, MRZ-2, MRZ-3, MRZ-4
County of Riverside	MRZ-2, MRZ-3, MRZ-4

Source: California Department of Conservation 1996

MRZ-1—areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2—areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3—areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-4—areas where available information is inadequate for assignment into any other MRZ.

Figure 3.11-1 shows the locations for existing mines within Riverside and San Bernardino Counties. In the San Bernardino County section of the Planning Area these include: Blue Diamond Mine

(tungsten), California Hercules Mine (zinc), Flying W Ranch Manganese (manganese), Devil's Canyon (limestone), Bluebird-Pink Land and Corky Deposit (tin and manganese), San Bernardino Plant (limestone), Colton Cement Plant (limestone and cement), Keystone and Lucky Jim (feldspar and mica), and Redfox (mercury). In the Riverside County these include the Big Chief Deposit (gypsum), Temescal Canyon Silica Sand (silica), Tecumseh Group (gypsum anhydrite), Moore Deposit (tin), Jumbo Mine (gold and silver), Molybdenite Occurrence (molybdenum), and an unnamed stone deposit (feldspar) (The Diggings 2019).

## **3.11.2 Regulatory Framework**

### **3.11.2.1 Federal Regulations**

#### **Mining and Mineral Policy Act of 1970**

The Mining and Mineral Policy Act of 1970 is intended to promote and expand the development of the domestic mineral industry. This statute established a Federal policy regarding mineral resources across the United States, covered hard rock mining and oil and gas production, and established modern Federal policy in regard to mineral resources nationally. The act applies to all minerals, including aggregate (sand and gravel), coal, geothermal, and oil and gas, that are subject to Federal jurisdiction, including the Bureau of Land Management and United States Forest Service.

### **3.11.2.2 State Regulations**

#### **California Surface Mining and Reclamation Act of 1975**

The principal legislation addressing mineral resources in California is the Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code Sections 2710–2719), which was enacted in response to land use conflicts between urban growth and essential mineral production. The stated purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized; that mined lands are reclaimed and residual hazards to public health and safety are eliminated; and that consideration is given to recreation, watershed, wildlife, aesthetic, and other related values. SMARA governs the use and conservation of a wide variety of mineral resources, although some resources and activities are exempt from its provisions, including excavation and grading conducted for farming, construction, or recovery from flooding or other natural disasters.







*This page intentionally left blank.*

SMARA provides for the evaluation of an area's mineral resources using a system of MRZ classifications that reflect the known or inferred presence and significance of a given mineral resource. The MRZ classifications are based on available geologic information, including geologic mapping and other information on surface exposures, drilling records, and mine data, and on socioeconomic factors such as market conditions and urban development patterns. The MRZ classifications are defined as follows.

- **MRZ-1**—areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence
- **MRZ-2**—areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists
- **MRZ-3**—areas containing mineral deposits, the significance of which cannot be evaluated from available data
- **MRZ-4**—areas where available information is inadequate for assignment into any other MRZ

Although the State of California is responsible for identifying areas containing mineral resources, the county or city is responsible for SMARA implementation and enforcement by providing annual mining inspection reports and coordinating with the California Geological Survey.

Mining activities that disturb more than 1 acre or 1,000 cubic yards of material require a SMARA permit from the lead agency, which is the county, city, or board that is responsible for ensuring that adverse environmental effects of mining are prevented or minimized. The lead agency establishes its own local regulations and requires a mining applicant to obtain a surface mining permit, submit a reclamation plan, and provide financial assurances, pursuant to SMARA.

Certain mining activities do not require a permit, such as excavation related to farming, grading related to restoring the site of a natural disaster, and grading related to construction.

### **California Health and Safety Code 115700(a)**

California Health and Safety Code 115700(a) requires that owners of land with abandoned excavations such as abandoned mine shafts or pits who fail to “cover, fill, or fence securely that dangerous abandoned excavation” are guilty of a misdemeanor.

### **3.11.2.3 Local Regulations**

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to mineral resources. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties' general plans and other local plans, policies, ordinances, and programs related to mineral resources. Appendix B, *Regional and Local Regulations*, provides relevant local plans, policies, ordinances, and programs related to mineral resources in full.

## **County of San Bernardino General Plan**

The County of San Bernardino General Plan (County of San Bernardino 2007) provides goals, policies, and programs designed to protect the current and future extraction of mineral resources while minimizing impacts of this use on the public and the environment. The policies presented in the Land Use and Conservation Elements ensure that land use developments within the State-delineated MRZs are in accordance with adopted mineral resources management policies of the County, significant adverse environmental effects in areas of valuable mineral resources are minimized, existing mining access is protected, and monitoring of mining operations is provided.

## **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

MRZs are established in the Countywide Plan to allow extraction industries to continue supporting the regional and national economy while minimizing negative impacts on the public and natural environment.

## **County of San Bernardino Code of Ordinances**

### **Chapter 82.17 Mineral Resources**

The Mineral Resources (MR) Overlay established by §§ 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is established to protect mineral resources for present and future extractions and for reclamation after mining activity has ceased.

## **County of Riverside General Plan**

The County of Riverside General Plan Multipurpose Open Space Element (2015) and Land Use Element (2019) contain various policies relevant to mineral resources, including permitting mineral extraction sites, protection of lands designated for mineral resources, requirements for surface mining activities, protection of road access to mining activities, reuse and reclamation of mineral extraction sites, operation of mining activities, and land use compatibility related to mineral reclamation and mining uses.

## **County of Riverside Code of Ordinances**

### **5.46.170 – Mineral Resource Protection**

Mine development is encouraged in compatible areas before encroachment of conflicting uses. Mineral resource areas that have been classified by the State Department of Conservation's Division of Mines and Geology or designated by the State Mining and Geology Board, as well as existing

surface mining operations that remain in compliance with the provisions of this chapter, shall be protected from intrusion by incompatible land uses that may impede or preclude mineral extraction.

### **Chapter 19.490 – Mining and Mineral Extraction**

#### **19.490.010 – Purpose**

The purpose of regulating mining/mineral extraction uses is to ensure compatibility of such uses with surrounding uses and properties and compliance with the provisions of the State Surface Mining and Reclamation Act of 1975. (Ord. 7331 §77, 2016; Ord. 6966 §1, 2007)

#### **19.490.020 – Applicability and Permit Requirements**

Mining/mineral extraction uses are permitted as forth in Article V, Base Zones and Related Use and Development Provisions subject to the provisions contained in the State Surface Mining and Reclamation Act of 1975 and the Public Resources Code (Ord. 7331 §77, 2016; Ord. 6966 §1, 2007).

## **3.11.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate mineral resource impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on mineral resources. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.11.3.1 Significance Criteria**

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would be considered to have a significant effect if it would result in either of the conditions listed below.

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (Impact MR-1)
- 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 MR-2)

### **3.11.3.2 Methodology**

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts in MRZs in the Planning Area.
- Identify and evaluate impacts on mineral resources as a result of implementation of the Upper SAR HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.

- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce impacts.

Impacts related to mineral resources were assessed based on review of the HCP, consultation with the Permittees, and review of applicable general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts related to mineral resources. Construction and operational mineral impacts were assessed based on generally accepted analysis techniques that estimate the mineral impacts in areas where physical land disturbance is needed to implement the Proposed Project. Because only general locations and durations of habitat improvement activities and other conservation actions are currently known, a qualitative approach to mineral impact analysis is provided that relies on a determination regarding if the loss of availability of known or local mineral resources or recovery sites would occur and assumptions about the types of activities that would be required to implement the Proposed Project. Where applicable, potential benefits to minerals conditions from implementing the Proposed Project are described.

### 3.11.3.3 Impact Analysis and Mitigation

#### ***Impact MR-1: Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?***

Under the Proposed Project, construction and habitat improvement actions needed to implement the Conservation Strategy would not have direct or indirect impacts on mineral resources. Implementation of the Proposed Project is not expected to result in the loss of availability of a known mineral resource that would be of value to the region or residents of the state. The HCP Preserve System could result in new areas of preservation with the potential for the protection of known mineral resources from future development as a secondary benefit. However, establishing the Preserve System could also preclude mining activities from occurring in the Permit Area in the future. It may also affect access to any known sites, to be determined at the time of the establishment of the HCP Preserve System. If land were to be acquired for conservation, that acquisition could result in the loss of a known mineral resource if the land use was then incompatible with mining. Compliance with County of San Bernardino General Plan Policies CO 7.3 (Mining operators/owners will provide buffers between mineral resources) and CO 7.5 (Protect existing mining access routes) and County of Riverside General Plan Policies LU 9.7 (Protect lands designated by the State Mining and Geology Board as being of regional or statewide significance) and LU 27.3 (Protect road access to mining activities) would provide buffers to protect reserves from adjacent development, protect access to mining activities, and reduce other environmental effects on mineral resources to ensure that no land use conflicts or loss of mineral resources would occur. County of San Bernardino Code of Ordinances Chapter 82.17 (Mineral resources) also provides for protection of mineral resources to minimize all adverse environmental effects. Similarly, County of Riverside Code of Ordinances 5.46.170 (Mineral resource protection) provides for the protection of mineral resources and encourages land use compatibility with adjacent uses.

The Proposed Project would not result in acquisition of land that could create a conflicting land use with mining operations on other lands due to Proposed Project requirements. In addition, the acquisition of land designated as an MRZ-2 or MRZ-3 is unlikely because of the higher cost of land with mineral resources, and because such land is likely to have the mineral rights held separately,

which makes the land ineligible as mitigation for Covered Species impacts. As implementation of the Proposed Project would not result in the disturbance of any known mineral resource that would be of value to the region and the residents of the state, the loss of availability of a known mineral resource is not likely to occur. Impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact MR-2: Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?***

Refer to *Impact MR-1* for analysis involving the loss of availability of mineral resources and a summary of local land use jurisdictions for the protection and minimization of impacts on mineral resources.

The Proposed Project would not result in the loss of availability of any locally important mineral resource that would be of value to the region. The project sites would remain as undeveloped, natural, open spaces with only minimal other development that would support the habitat improvement activities of the Proposed Project. The Proposed Project would not result in the loss of availability of a locally important mineral resource recovery site as identified in the County of Riverside General Plan and the County of San Bernardino General Plan. As project sites would remain as undeveloped, natural, open spaces with only minimal other development, the loss of availability of a locally important mining recovery site as designated by a local land use plan would not occur. Impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

### **3.11.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of mineral resource effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create mineral resource impacts and potential best practices that could be incorporated into future projects to reduce impacts on mineral resources.

Covered Activities by type and their possible relationship to mineral resources impacts if implemented with permit coverage are shown in Table 3.11-2 and discussed below.

**Table 3.11-2. Construction and Operation of Covered Activities and Their Relevance to Mineral Resources**

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Excavation and grading would remove vegetation cover, potentially exposing mineral resources. Siting new facilities, both structures and infrastructure, could affect mineral resources. Grading and excavation could unearth and damage mineral resources.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar projects	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area (e.g., bank stabilization, storm-damage repair, maintenance of facilities)	Excavation and grading would remove cover, potentially exposing mineral resources to erosive forces.

Potential mineral resource impacts that could result from implementing the types of Covered Activities identified in Table 3.11-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.11-2, several Covered Activities, depending on where they are sited, would involve ground-disturbing activities that could uncover or affect mineral resources during construction. MRZs known to contain significant mineral resources and unevaluated zones may be located within the Permit Area. Covered Activities could result in a loss of availability by limiting access to or preventing future development of mineral resources or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

With respect to operation, potential impacts on mineral resources during the operations and maintenance (O&M) phase would come from ground-disturbing activities. O&M of Covered Activities with the potential to affect mineral resources include routine O&M activities that would require excavation and grading such as bank stabilization, which could remove cover and potentially

expose mineral resources to erosive forces if present at those sites. In addition, facilities and access roads maintenance could further limit the availability of, and access to, valuable minerals. In other circumstances, Covered Activities could improve access with improved maintenance of access roads and vegetation management.

If Covered Activities are sited in areas of known or unevaluated mineral resources and result in the loss of availability of a mineral resource, they may require project-specific mitigation to reduce impacts. Implementation of recommended best practices would reduce impacts of construction associated with Covered Activities by determining the MRZ of the project sites and evaluating whether the construction would impair future mineral resource extraction by introducing an inherently incompatible use, or by restricting access to other mineral resource areas. In addition, the Permittees would be required, during siting of new infrastructure projects, to avoid impacts on mineral resources by following the goals, policies, and actions outlined in the applicable general plans and ordinances relevant to the site.



## 3.12 Noise

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *noise* is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of the Proposed Project.

*Sound* is mechanical energy transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale—a logarithmic scale—is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called *A-weighting*, referred to as A-weighted decibels (dBA). Table 3.12-1 provides definitions of sound measurements and other terminology used in this section, and Table 3.12-2 summarizes typical A-weighted sound levels for different noise sources.

**Table 3.12-1. Definition of Sound Measurements**

Sound Measurement	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals.
A-weighted decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
Maximum sound level (L <sub>max</sub> )	The maximum sound level measured during the measurement period.
Minimum sound level (L <sub>min</sub> )	The minimum sound level measured during the measurement period.
Equivalent sound level (L <sub>eq</sub> )	The equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-exceeded sound level (L <sub>xx</sub> )	The sound level exceeded “x” percent of a specific time period. L <sub>10</sub> is the sound level exceeded 10% of the time.
Day-night level (L <sub>dn</sub> )	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10 p.m. to 7 a.m.
Community noise equivalent level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7 p.m. to 10 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10 p.m. to 7 a.m.

Sound Measurement	Definition
Peak particle velocity (peak velocity, or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

**Table 3.12-2. Typical A-Weighted Sound Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock band
Jet flyover at 1,000 feet		
	—100—	
Gas lawnmower at 3 feet		
	—90—	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	—80—	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	—70—	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	—60—	
		Large business office
Quiet urban daytime	—50—	Dishwasher in next room
Quiet urban nighttime	—40—	Theater, large conference room (background)
Quiet suburban nighttime	—30—	Library
		Bedroom at night, concert hall (background)
Quiet rural nighttime	—20—	
		Broadcast/recording studio
	—10—	
	—0—	

Source: Caltrans 2013a

mph = miles per hour

In general, human sound perception is such that a change in sound level of 1 dB typically cannot be perceived by the human ear, a change of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level ( $L_{eq}$ ), the minimum and maximum sound levels ( $L_{min}$  and  $L_{max}$ ), the day-night average sound level ( $L_{dn}$ ), and the community noise equivalent level

(CNEL).  $L_{dn}$  and CNEL values differ by less than 1 dB. As a matter of practice,  $L_{dn}$  and CNEL values are considered to be equivalent and are treated as such in this assessment.

For a point source, such as a stationary compressor or a piece of construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance (Caltrans 2013a). Atmospheric conditions, including wind, temperature gradients, and humidity, can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1–2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.

Operation of heavy construction equipment, particularly pile drivers and other impulsive devices (such as pavement breakers), creates seismic waves that radiate along the surface of the earth and downward into the earth. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance.

As seismic waves travel outward from a vibration source, they excite the particles of rock and soil through which they pass and cause them to oscillate. The actual distance that these particles move is usually only a few ten-thousandths to a few thousandths of an inch. The rate or velocity (in inches/second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as peak particle velocity (PPV). Table 3.12-3 summarizes typical vibration levels generated by construction equipment (FTA 2018). Note that pile driving would not be expected to be used for any Proposed Project activities, and this equipment is not included in Table 3.12-3.

**Table 3.12-3. Vibration Source Levels for Construction Equipment**

<b>Equipment</b>	<b>Peak Particle Velocity at 25 Feet</b>
Vibratory roller	0.210
Hoe ram	0.089
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer <sup>a</sup>	0.003

Source: FTA 2018

<sup>a</sup> A small bulldozer is used to represent other small- to medium-sized earth-moving equipment, such as a grader.

Note that other relatively small earth-moving equipment, such as a grader or bulldozer, typically generates similar vibration levels to and, for the purposes of this analysis, is represented by the small bulldozer shown in Table 3.12-3.

Vibration amplitude attenuates (diminishes) over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation can be used to estimate the vibration level at a given distance for typical soil conditions.  $PPV_{ref}$  is the reference PPV at 25 feet (from Table 3.12-3), and 1.5 represents a constant that can change based on soil conditions:

$$PPV = PPV_{ref} (25/Distance)^{1.5}$$

Table 3.12-4 summarizes guideline criteria for vibration annoyance potential suggested by the California Department of Transportation (Caltrans) (Caltrans 2013b).

**Table 3.12-4. Guideline Criteria for Vibration Annoyance Potential**

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

Source: Caltrans 2013b

in = inch; PPV = peak particle velocity; sec = seconds

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 3.12-5 summarizes guideline criteria for vibration damage potential suggested by Caltrans (Caltrans 2013b).

**Table 3.12-5. Guideline Criteria for Vibration Damage Potential**

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013b

in = inch; PPV = peak particle velocity; sec = seconds

Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

## 3.12.1 Environmental Setting

### 3.12.1.1 Regional Setting

The environmental setting for noise impacts is the Planning Area.

### 3.12.1.2 Planning Area

Because the land uses throughout the Planning Area vary greatly, ambient noise levels vary as well. Table 3.12-6 provides approximate average  $L_{dn}$  noise levels for the types of locations within the Planning Area.

**Table 3.12-6. Approximate Average  $L_{dn}$  Noise Levels for Various Locations**

Qualitative Description of Location	Average dBA $L_{dn}$
Rural	40–50
Small town or quiet suburban residential	50
Normal suburban residential	55
Urban residential	60
Noisy urban residential	65
Very noisy urban residential	70
Downtown, major metropolis	75–80
Adjoining freeway or near major airport	80–90

Source: Hoover and Keith 2000

Some land uses, or receptors, are more sensitive to noise than others. Residential uses, schools, hospitals, places of worship, and parks are among the most common noise-sensitive receptors. Many of these types of receptors are located in urban areas, which tend to have relatively high ambient noise levels, and suburban areas, which tend to be less noisy than urban areas but still more noisy than rural areas. However, noise-sensitive receptors can be located anywhere. The noise levels that are considered to be acceptable for various types of noise-sensitive receptors vary by jurisdiction because each city and county has its own noise standards (generally contained in the local noise ordinance and general plan).

Land uses throughout the Planning Area vary greatly, as the area encompasses several incorporated cities as well as unincorporated county areas. For this reason, ambient noise levels in the Planning Area also vary. Overall, urban areas typically have higher sound levels than rural and less developed areas. Areas near highways, rail lines (and switching yards), and airports experience some of the highest sound levels. Conversely, parks, national forests, natural preserves, and undeveloped lands have some of the lowest sound levels. For example, portions of the Planning Area are located within undeveloped or natural areas adjacent to the Santa Ana River. Because fewer people may travel to these areas, there are generally fewer vehicle trips associated with them than there are with urban land uses. For this reason, ambient noise levels in rural areas are often much lower than ambient noise levels in urban city centers. Noise in rural, agricultural, and natural areas of the Planning Area would generally be consistent with the noise levels of a *rural area*, as described in Table 3.12-6, likely in the range of 40 to 50 dBA  $L_{dn}$ .

In major metropolitan or urban areas, aircraft, public transportation, railroads, vehicles traveling on major freeways, and other urban noise sources can generate high noise levels, resulting in higher

ambient noise levels than may occur in rural areas. Residential heating and cooling equipment can also affect ambient noise levels in urban environments. In addition, metropolitan areas may have industrial districts with stationary source noise from mechanical equipment used for manufacturing or other industrial processes. City center areas in the Planning Area would generally have ambient noise levels consistent with either *urban residential*, *noisy urban residential*, or *very noisy urban residential* areas (Table 3.12-6), with ambient noise levels in the range of 60 to 70 dBA  $L_{dn}$ . Smaller suburban communities in the Planning Area would be expected to have ambient noise levels consistent with a *small town or quiet suburban residential* area or a *normal suburban residential* area, in the range of 50 to 55 dBA  $L_{dn}$ .

All the proposed Conservation Areas in the Planning Area would be located within 1,000 feet of sensitive receptors, except for Covered Activity Conserv. 8. The majority of the proposed Conservation Areas would be located within 1,000 feet of residential receptors, while two sites (Covered Activities Conserv. 2 and Conserv. 3) are located in the vicinity of sensitive receptors at parks.

## 3.12.2 Regulatory Framework

### 3.12.2.1 Federal Regulations

There are no Federal laws or regulations relevant to potential noise impacts of the Proposed Project.

### 3.12.2.2 State Regulations

#### California Code of Regulations, Title 24, Part 2

Title 24 of the California Code of Regulations, Part 2, California Noise Insulation Standards, establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels that are attributable to exterior noise sources cannot exceed 45 dB  $L_{dn}$ <sup>1</sup> in any habitable room. The noise metric is either the  $L_{dn}$  or the CNEL, consistent with the noise element of the local general plan.

### 3.12.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to noise and vibration. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. Appendix B, *Regional and Local Regulations*, includes relevant local plans, policies, ordinances, and programs related to noise and vibration.

---

<sup>1</sup> The average equivalent A-weighted sound level during a 24-hour day is obtained by adding 10 dB to the hourly noise levels measured during the night (from 10 p.m. to 7 a.m.). In this way,  $L_{dn}$  takes into account the lower tolerance of people for noise during nighttime periods.

## County of San Bernardino General Plan

The County of San Bernardino General Plan includes goals and policies within the Noise Element to limit the exposure of the community to excessive noise levels. A number of these policies (and related programs) pertain to the siting of noise-sensitive receptors, which would not be directly applicable to the Proposed Project. Relevant policies from the Noise Element specify noise levels generated by proposed uses will not exceed the performance standards of Table N-2 within outdoor activity areas.

Programs require an acoustical analysis prior to approval of proposed development of new residential or other noise-sensitive land uses.

Policies limit truck traffic in residential and commercial areas, prevent incompatible land uses, and require appropriate and feasible on-site noise-attenuating measures to limit noise.

## San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan of the San Bernardino Countywide Plan addresses land-use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by county government and includes the seven required elements of a general plan in California. The Business Plan of the San Bernardino Countywide Plan directs the integration of the plan's goals, policies, and actions into the way the County of San Bernardino operates and develops its budget. Lastly, the Community Action Guidelines of the San Bernardino Countywide Plan communicate the unique values and priorities of each unincorporated community.

The relevant goals, policies, and programs presented in the Hazards Element seek to protect people and the natural environment from exposure to hazardous materials, excessive noise, and other human-generated hazards through coordination with transportation authorities to minimize noise impacts and provide appropriate mitigation measures.

## County of San Bernardino Code of Ordinances

The County of San Bernardino's Code of Ordinances (Title 8, Development Code; Division 3, Countywide Development Standards; Chapter 83.01, General Performance Standards, Section 83.01.080, Noise) establishes interior and exterior noise standards for specific land uses by type of noise source. Noise standards for stationary noise sources are summarized in Table 3.12-7.

**Table 3.12-7. Noise Standards for Stationary Noise Sources**

Affected Land Uses (Receiving Noise)	$L_{eq}$ 7 a.m. to 10 p.m.	$L_{eq}$ 10 p.m. to 7 a.m.
Residential	55 dBA	45 dBA
Professional Services	55 dBA	55 dBA
Other Commercial	60 dBA	60 dBA
Industrial	70 dBA	70 dBA

Source: County of San Bernardino Code of Ordinances, Section 83.01.080

With regard to vibration, Section 83.01.090 of the County of San Bernardino's Code of Ordinances prohibits the operation of any device that creates vibration that can be felt without the aid of

instruments at or beyond the lot line, or that produces a PPV greater than or equal to 0.2 inch per second (in/sec) measured at or beyond the lot line.

### County of Riverside General Plan

The Noise Element of the County of Riverside General Plan provides a systematic approach to identifying and appraising noise problems in the community and addressing excessive noise exposure. The County of Riverside's primary goal with regard to community noise is to ensure that noise-producing land uses would be compatible with adjacent land uses. For this reason, the Noise Element establishes noise/land use compatibility guidelines based on cumulative noise criteria for outdoor noise. The County of Riverside's noise/land use compatibility guidelines are shown in Table 3.12-8, and its land use compatibility noise standards are shown in Table 3.12-9.

**Table 3.12-8. County of Riverside Land Use Compatibility For Community Noise Exposure Level ( $L_{dn}$  or CNEL, dBA)**

Land Use	Normally Acceptable <sup>a</sup>	Conditionally Acceptable <sup>b</sup>	Normally Unacceptable <sup>c</sup>	Clearly Unacceptable <sup>d</sup>
Single-family, Duplex, Mobile Homes	50-60	55-70	70-75	above 75
Multifamily Homes	50-65	60-70	70-75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-70	60-70	70-80	above 80
Transient Lodging – Motels, Hotels	50-65	60-70	70-80	above 80
Auditoriums, Concert Halls, Amphitheaters	---	50-70	above 65	---
Sports Arena, Outdoor Spectator Sports	---	50-75	above 70	---
Playgrounds, Neighborhood Parks	50-70	---	68-75	above 74
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	---	70-80	above 80
Office Buildings, Business, Commercial, and Professional	50-70	68-77	---	above 75
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	---	above 75

Source: County of Riverside 2015

<sup>a</sup> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

<sup>b</sup> Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice. Outdoor environment will seem noisy.

<sup>c</sup> Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

<sup>d</sup> Clearly Unacceptable: New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive, and the outdoor environment would not be usable.



**Table 3.12-9. County of Riverside Stationary Source Land Use Noise Standards**

<b>Residential</b>	<b>Interior Standards</b>	<b>Exterior Standards</b>
10 p.m. to 7 a.m.	40 $L_{eq}$	45 $L_{eq}$
7 a.m. to 10 p.m.	55 $L_{eq}$	65 $L_{eq}$

Source: County of Riverside 2015

These are only preferred standards; final decision will be made by the Riverside County Planning Department and Office of Public Health.

The Noise Element also requires that detailed and independent acoustical studies be conducted for any new or renovated land uses or structures determined to be potential major stationary noise sources and to minimize impacts.

### **County of Riverside Code of Ordinances**

The ordinance includes general sound level standards and exemptions for noise from private construction projects. Although the ordinance does not establish California Environmental Quality Act (CEQA) thresholds, it defines noise conditions that the County of Riverside considers to be acceptable, including the exemption of construction noise from numerical thresholds during daytime hours.

## **3.12.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate noise and vibration impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures, where required to reduce significant noise and vibration impacts. A discussion of potential types of noise and vibration impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce noise and vibration impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.12.3.1 Significance Criteria**

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- 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? (Impact NOI-1)
- Generation of excessive groundborne vibration or groundborne noise levels? (Impact NOI-2)
- 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 NOI-3)

### **3.12.3.2 Methodology**

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's

Conservation Strategy and conservation measures. The following steps were taken to analyze the potential noise and vibration impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in the generation of noise and vibration.
- Identify and evaluate potential impacts related to noise and vibration resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

Impacts related to noise were assessed based on review of the HCP, consultation with the Permittees, and review of applicable local government authorities, such as general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts related to noise. Impacts related to construction and operational noise and vibration were assessed based on generally accepted analysis techniques that estimate the noise and vibration impacts in areas where physical land disturbance is needed to implement the Proposed Project. Because only general locations and durations of conservation actions are currently known, a qualitative approach to noise impact analysis is provided that relies on typical noise levels for construction equipment and assumptions about the types of equipment that would be used to implement the Proposed Project. Where applicable, potential benefits to noise conditions from implementing the Proposed Project are described.

### **3.12.3.3 Impact Analysis and Mitigation**

#### ***Impact NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?***

Under the Proposed Project, short-term increases in ambient noise could result from conservation actions needed to implement the Conservation Strategy. Noise could be generated when construction equipment is needed for habitat improvements, enhancement, maintenance, and management in the Permit Area. As summarized in Table 3-1, some activities would involve the use of more or larger construction equipment, and other activities would require less-intensive land disturbance activities. Activities involving more or larger equipment (such as habitat restoration) or requiring a longer duration of construction would have the potential to generate greater temporary noise levels than some of the smaller-scale activities. Operations and maintenance (O&M) that could generate noise would occur intermittently and infrequently for habitat management and maintenance for habitat improvement, and in-stream structures may occur more regularly or require the use of more equipment. Typical noise levels generated by construction equipment that may be used for conservation actions for the Proposed Project are published in various reference documents. Table 3.12-10 shows noise levels from the Federal Highway Administration's *Roadway Construction Noise Model User's Guide* (FHWA 2006) for typical construction equipment.

**Table 3.12-10. Typical Construction Equipment Noise Levels**

<b>Equipment Description</b>	<b>Specified L<sub>max</sub> at 50 feet (dBA)</b>	<b>Acoustical Usage Factor (Percent)</b>	<b>Calculated Leq at 50 feet (dBA)</b>	<b>Calculated Leq at 100 feet (dBA)</b>	<b>Calculated Leq at 250 feet (dBA)</b>	<b>Calculated Leq at 500 feet (dBA)</b>	<b>Calculated Leq at 750 feet (dBA)</b>	<b>Calculated Leq at 1,000 feet (dBA)</b>	<b>Calculated Leq at 2,000 feet (dBA)</b>
Air Compressor	78	40%	74	68	60	54	50	48	42
Auger Drill Rig	84	20%	77	71	63	57	53	51	45
Backhoe	78	40%	74	68	60	54	50	48	42
Crane	81	16%	73	67	59	53	50	47	41
Dozer	82	40%	78	72	64	58	54	52	46
Dump Truck	76	40%	72	66	58	52	48	46	40
Excavator	81	40%	77	71	63	57	53	51	45
Grader	85	40%	81	75	67	61	57	55	49
Jackhammer	89	20%	82	76	68	62	58	56	50
Loader	79	40%	75	69	61	55	51	49	43
Paver	77	50%	74	68	60	54	50	48	42
Water Truck <sup>a</sup>	76	40%	72	66	58	52	48	46	40
Tractor	84	40%	80	74	66	60	56	54	48

Noise reference levels from the Federal Highway Administration's *Roadway Construction Noise Model User's Guide* were used to assess noise from equipment (FHWA 2006).

These calculations do not include the effects, if any, of local shielding from walls, topography, or other barriers that may reduce sound levels further, nor do they include ground-effect attenuation from noise traveling over absorptive (e.g., grass, dirt) ground. Actual noise levels would likely be lower based on reductions from shielding and ground-effect attenuation.

<sup>a</sup> Water truck is represented by dump truck from the *Roadway Construction Noise Model User's Guide*.

Note that some of the equipment shown in Table 3.12-10 may not be required to implement the Proposed Project. Potential noise effects from the Proposed Project are discussed qualitatively and individually below based on other similar projects (including the Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program Draft EIR).

### Conservation Activities

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Conservation activities include habitat improvement, management, and monitoring activities as well as routine O&M activities within dedicated Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may be conducted related to hydrologic manipulation and substrate management. Many of these activities could involve the use of construction equipment. For example, habitat improvement projects such as enhancing existing stream channels or recreating the channels and constructing wood and rock structures within stream channels (along with other activities not listed here) could involve soil disturbance with loaders or excavators, which could generate noise.

In addition, hydrologic manipulation and substrate management activities could require the use of construction equipment. Actions to improve stream habitat could include creating microhabitat with natural instream structures, managing and enhancing river gravel and cobble, manipulating river flow and path, and pumping groundwater from wells into streams to improve water flow and temperatures. For example, the HCP proposes to install a series of structures made out of natural materials within the stream flow of the Santa Ana River to manipulate water movement and create suitable microhabitat areas. These activities could involve the use of loaders or excavators to move material and build structures and pumps to pump water. Flow enhancement could also involve the use of construction equipment to move materials.

Grading, which may be required for habitat restoration, would likely be the loudest construction activity to occur but would likely occur infrequently and would require the use of a grader and a water truck. As shown in Table 3.12-10, a grader could generate an  $L_{eq}$  noise level of 81 dBA  $L_{eq}$  at a distance of 50 feet. Noise from the simultaneous operation of a grader and a water truck (which could generate a noise level of about 72 dBA  $L_{eq}$  at 50 feet, also shown in Table 3.12-10) would be approximately 82 dBA  $L_{eq}$  (noting that combined construction noise is typically governed by the loudest equipment). Other activities may require the use of slightly quieter equipment, such as an excavator or a loader. As shown in Table 3.12-10, an excavator could generate a noise level of 77 dBA  $L_{eq}$  at 50 feet and a loader could generate a noise level of 75 dBA  $L_{eq}$  at 50 feet.

Because the conservation activities would occur mainly in open space or relatively rural areas, the potential for noise from construction equipment to affect sensitive receptors is relatively low. However, it is possible that a sensitive receptor (e.g., home, park, school) could be located near a specific relatively short-term noise-generating conservation activity, such as grading, and could be exposed to excessive temporary noise.

To provide a conservative assessment, construction noise levels of a grader and a water truck (shown in Table 3.12-10) are compared to the approximate ambient noise levels for rural or agricultural environments (40–50 dBA  $L_{eq}$  for rural areas, as shown in Table 3.12-6). Based on the combined noise level of a grader and water truck cited above (82 dBA  $L_{eq}$  at 50 feet) it is possible

that noise generated under the Proposed Project could result in relatively substantial short-term noise increases at sensitive receptors depending on the proximity of the receptor to the activity.

Although habitat improvement activities may generate noise, much of the habitat restoration and/or rehabilitation would occur in areas that are not directly adjacent to noise-sensitive land uses, except for recreational uses like trails. However, the Proposed Project would be compatible with those recreational uses after construction has been completed, and no conflicts are anticipated. In addition, equipment noise from these activities would generally be relatively short term and intermittent at any given location. Also, in some of the more rural or agricultural areas, equipment used for conservation may generate noise similar to the types of noise that already occur in these areas (e.g., noise from the use of agricultural equipment, such as mowers, may already be common in a given area). In addition, it is important to note that although construction noise may be audible (depending on the type of equipment used and the distances between activities and noise-sensitive land uses), many jurisdictions, including San Bernardino and Riverside Counties, have exemptions for construction activities that occur during daytime hours. In jurisdictions with exemptions, there is often no numerical threshold that construction activities must comply with, as long as the activities are limited to the exempt daytime hours. Therefore, should construction activities related to conservation actions occur during daytime hours in a jurisdiction that provides a daytime construction noise exemption, noise impacts would be less than significant. Should the activities occur during non-exempt hours and result in noise levels in excess of applicable thresholds, however, a significant impact may occur.

Because there is uncertainty about the duration and intensity of noise levels that could be generated at specific sites, the potential exists for temporary noise levels to be generated that could affect sensitive land uses in portions of the Permit Area. Although these noise effects would likely be temporary and infrequent, when they occur, they could result in significant noise impacts that could exceed ambient noise levels and applicable local noise standards. Mitigation measures would be required to reduce these impacts.

### **HCP Preserve System Monitoring, Management, and Maintenance Activities**

Routine monitoring, management, and maintenance activities under the Proposed Project that could generate noise include control of nonnative invasive plant species through mowing and hand clearing, installation and maintenance of access control features (e.g., gates, barriers, and fences), and vegetation management using sheep grazing, manual labor, herbicide application, or prescribed burning. Other activities, such as species surveys and research, seed collection, and preserve patrols, would generate only low levels of noticeable noise.

Construction equipment, potentially including backhoes, applicators and compressors, mowers, and tractors, and maintenance vehicle use are anticipated. Although the use of this equipment would generate noise, it is likely that many of these activities could occur in more natural areas that are far enough from occupied noise-sensitive land uses to not result in significant noise effects. For example, a backhoe, which may be used for future maintenance activities in the preserve areas, would generate a noise level of 68 dBA at a distance of 100 feet (Table 3.12-10). Depending on the location of the proposed activity and what the specific applicable noise thresholds are in the jurisdiction where the work occurs, this noise level may exceed allowable levels or be substantially louder than the existing ambient noise levels. However, if a backhoe was operating 500 feet from the nearest noise-sensitive land use, the noise from this equipment would be approximately 54 dBA  $L_{eq}$ , without accounting for potential shielding from intervening structures or topographical features, or

from ground absorption, which may occur as sound travels over soft ground, such as grass or dirt. In general, intermittent management and maintenance activities that generate noise levels of 60 dB  $L_{eq}$  or less during daytime hours would not typically be considered disruptive. Other equipment that could be used for maintenance (noting that pile drivers would not be expected to be used for maintenance) shown in Table 3.12-10 typically have similar, or even lower, noise levels at a distance of 500 feet. Therefore, in general, if maintenance activities occur more than 500 feet from a noise-sensitive land use, noise impacts would generally be minor and under local noise thresholds.

However, in cases that would require Proposed Project management and maintenance activities to occur within the vicinity of noise-sensitive land uses (within 500 feet), noise levels could be substantially greater than the existing ambient levels or in excess of applicable local standards and would be conservatively considered significant. Mitigation measures would be required.

Implementation of Mitigation Measure NOI-1 would reduce noise from heavy and/or construction equipment for the Proposed Project. Although the specific details of all future conservation actions are not currently known (including distances from sensitive receptors and the proposed hours of construction), mitigation measure NOI-1 would be expected to reduce noise impacts to less-than-significant levels. Therefore, noise impacts for the Proposed Project would be **less than significant with implementation of Mitigation Measure NOI-1**.

## Mitigation Measures

### **NOI-1: Practices to Reduce Proposed Project Noise from Heavy Equipment**

The Proposed Project shall utilize best practices for noise abatement, where feasible and appropriate, to reduce noise levels from habitat improvement construction equipment used within 500 feet of a noise-sensitive land use. These measures may also apply to management and maintenance activities if these activities could generate substantial noise in the vicinity of noise-sensitive receptors. Measures to reduce noise at the nearest noise-sensitive land use could include, but are not limited to:

- Locating construction equipment as far as feasible from adjacent or nearby noise-sensitive receptors and orienting or shielding equipment to protect sensitive uses to the greatest extent feasible
- Requiring that all construction equipment powered by gasoline or diesel engines have sound control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation
- Prohibiting the idling of inactive construction equipment for prolonged periods (i.e., more than 2 minutes)
- Prohibiting or limiting gasoline or diesel engines from having unmuffled exhaust systems, as feasible
- Ensuring that equipment and trucks used for project habitat improvement incorporate the best available noise control techniques (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds), wherever feasible

- Locating stationary noise sources, such as temporary generators or pumps, as far from nearby receptors as possible, and potentially muffling and enclosing them within temporary enclosures and shielding by barriers (which can reduce construction noise by as much as 5 dB)
- Completing the noisiest construction activities during times of least disturbance to surrounding residents and occupants, as feasible
- Using smaller and quieter mechanical equipment for vegetation management during maintenance activities
- Limiting noise-generating maintenance activities to daytime hours, when noise is typically considered less disruptive
- Staging equipment necessary for maintenance activities as far as possible from nearby noise-sensitive land uses

### ***Impact NOI-2: Generation of excessive groundborne vibration or groundborne noise levels?***

As described previously, the Proposed Project would include the implementation of conservation measures to restore and enhance habitats in the Permit Area. Conservation activities include habitat improvement, management, and monitoring activities as well as routine O&M activities within the Conservation Areas. Activities may include tributary stream restoration/rehabilitation, riparian floodplain habitat restoration/rehabilitation, and alluvial fan scrub restoration/rehabilitation, along with specific activities related to hydrologic manipulation and substrate management. Many of these actions could involve the use of construction equipment such as loaders, excavators, and graders that could generate groundborne vibration and noise. Some groundborne vibration effects could also occur from equipment used for maintenance activities but to a lesser extent than for habitat improvement and stream modification activities.

As discussed previously, details on the types, precise locations, and durations of activities are not known. For this reason, a quantitative vibration impact analysis was not prepared. Potential annoyance- and damage-related vibration effects resulting from the use of heavy equipment for the Proposed Project are described below based on similar project conditions and results.

#### **Annoyance-Related Vibration Impacts**

A variety of equipment may be used for the Proposed Project, including some of the equipment listed in Table 3.12-3. Should vibration levels for these temporary and intermittent activities exceed the Caltrans strongly perceptible criteria outlined in Table 3.12-4, vibration impacts related to annoyance could be considered substantial. However, for the Proposed Project, annoyance-related vibration impacts would most likely be less noticeable because activities would occur during the daytime hours, and more severe vibration effects would occur during nighttime hours when people normally sleep. For analysis purposes, groundborne vibration impacts are assessed at a distance of 25 feet to conservatively estimate the potential for impacts from the Proposed Project. Because of the location of Proposed Project activities in open space and rural areas, it is expected that most sensitive land uses would be located more than 25 feet from Proposed Project activities.

As shown in Table 3.12-3, a small bulldozer, which would generate similar vibration levels as a small excavator or grader, would generate vibration levels of 0.003 PPV in/sec at 25 feet; this level is below the barely perceptible (0.01 PPV in/sec for continuous or frequent intermittent sources) criterion outlined in Table 3.12-4 and is therefore also below the strongly perceptible criteria. This

vibration level would therefore not result in a significant vibration impact related to annoyance. A large bulldozer would generate a vibration level of approximately 0.089 PPV in/sec at 25 feet, which would also be below the strongly perceptible criteria. Although the exact equipment that would be used for the Proposed Project is not known at this time, it is expected that the most vibration-intensive equipment would be equipment such as a grader, excavator, or backhoe. Vibration levels for these types of equipment would be similar to, or less than, that of a large or small bulldozer (depending on the size of the equipment in question). Vibration levels from this equipment would not be expected to exceed the strongly perceptible criteria from Table 3.12-4 of 0.1 PPV in/sec at a distance of 25 feet. In addition, and as mentioned previously, most work would occur much farther than 25 feet from nearby occupied buildings. Therefore, vibration would be expected to be even lower than this level at nearby receptors in most cases, and vibration-related annoyance impacts would be **less than significant**.

### **Damage-Related Vibration Impacts**

Table 3.12-5 outlines Caltrans criteria for assessing the potential for damage-related vibration impacts. As discussed previously, a large bulldozer (which could generate similar vibration levels to a large excavator or a grader) would generate a vibration level of approximately 0.089 PPV in/sec at 25 feet, and a small bulldozer (similar to a smaller excavator or backhoe) would generate vibration levels of 0.003 PPV in/sec at 25 feet. These levels would be reduced to even lower levels if equipment was being used farther than 25 feet from structures. Both of these vibration levels at a 25-foot distance are below the damage criteria for new residential structures, older residential structures, historic and some old buildings, and fragile buildings. Therefore, construction equipment used for the conservation activities in the preserve would not be expected to result in damage-related impacts, and damage-related vibration impacts would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

***Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

The Proposed Project would not result in the siting of any new homes and therefore would not result in the exposure of persons residing in the Permit Area to excessive noise from aircraft activity at either private airstrips or public airports.

With regard to the potential for private airstrips to expose workers to excessive noise, individuals working on habitat improvement, management, monitoring, or maintenance associated with the Proposed Project, including but not limited to the establishment of the HCP Preserve Area, would not be expected to be exposed to excessive noise from airstrip activity because, although there are some private airstrips in the vicinity of the Permit Area, the HCP Preserve System would not be established within or directly adjacent to an airport such that airport operations would negatively affect individuals working in the preserve (either during construction or for maintenance and management of sites during operation). The Proposed Project does not include development that would generally result in people living or working on site, such as residential, commercial, or institutional development. Although construction, management, and monitoring activities for the Proposed Project could occur relatively close to airports or private airstrips (for example, Flabob



Airport and Riverside Municipal Airport north of the Santa Ana River in Riverside County, and Redlands Municipal Airport in San Bernardino County), it is likely that most activities would occur outside of the 60 CNEL contour for any existing airport or airstrip. In addition, private airstrips do not generate substantial noise outside of the immediate vicinity of the facility or runways; therefore, even if construction or maintenance workers were near a preserve area, they would be likely to primarily experience noise from the actual construction or maintenance work, rather than noise from public and private airstrip activities. Therefore, impacts of the Proposed Project related to the exposure of people living or working in or near the Permit Area to excessive airport-related noise from public and private airstrips or airports would be **less than significant**.

#### Mitigation Measures

No mitigation is required.

### 3.12.4 Summary of Potential Types of Impacts of Covered Activities

A brief summary of the types of noise and vibration effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create noise and vibration impacts and potential best practices that could be incorporated into future projects.

- Covered Activities by type and their possible relationship to noise impacts if implemented with permit coverage are shown in Table 3.12-11 and discussed below.

**Table 3.12-11. Construction and Operation of Covered Activities and Their Relevance to Noise**

Covered Activity	Activities	Relevance
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Construction of facilities would require use of vehicles and equipment, which would generate noise and vibration (depending on the equipment used). Depending on the proximity of these future facilities to noise-sensitive land uses, noise generated during construction or, in some cases, operation of these facilities could result in excessive noise at noise-sensitive land uses.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance (O&M)	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	O&M activities for new and existing facilities could generate relatively minor noise. This type of noise would be intermittent and short term and would likely be similar to the types of noises that already occur in existing project areas.

Potential noise impacts that could result from implementing the types of Covered Activities identified in Table 3.12-11 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.12-11, noise impacts associated with constructing, operating, and maintaining these types of Covered Activities could include short-term and longer term construction noise and noise generated during O&M of new or expanded facilities. In some cases, these Covered Activities would result in generation of noise levels that would exceed ambient noise levels and local standards for noise. For projects that are in the vicinity of sensitive receptors, the potential exists for substantial noise impacts that could result in disturbance of residences and other adverse nuisance effects. Construction activities would result in temporary noise impacts, while O&M noise would be longer term. Similarly, creation of groundborne vibration impacts at Covered Activity construction sites could result in vibration impacts from pile driving and use of heavy construction equipment that could cause shaking and other vibration effects on residences or other structures in the vicinity of the construction site. Covered Activities are expected to not expose substantial numbers of construction site workers to noise effects related to nearby private airstrips or public airports, because construction site noise would generally be greater than noise generated by airports.

Recommended best practices to reduce noise and groundborne vibration impacts of future Covered Activities include conducting project-specific construction site noise and vibration analyses and incorporating noise and vibration reduction measures according to noise reduction plans for construction and O&M activities. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity noise impacts and best practices that could be employed to reduce potential impacts.

## 3.13 Population and Housing

For purposes of this analysis and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, population and housing are considered closely related, with the size of a population determining the demand for and type of housing availability. *Population* is the total number of people inhabiting a county, city, or any district or area as defined by the U.S. Census. *Housing* is defined as buildings or structures that individuals and their families may live in that meet certain Federal regulations as shelters.

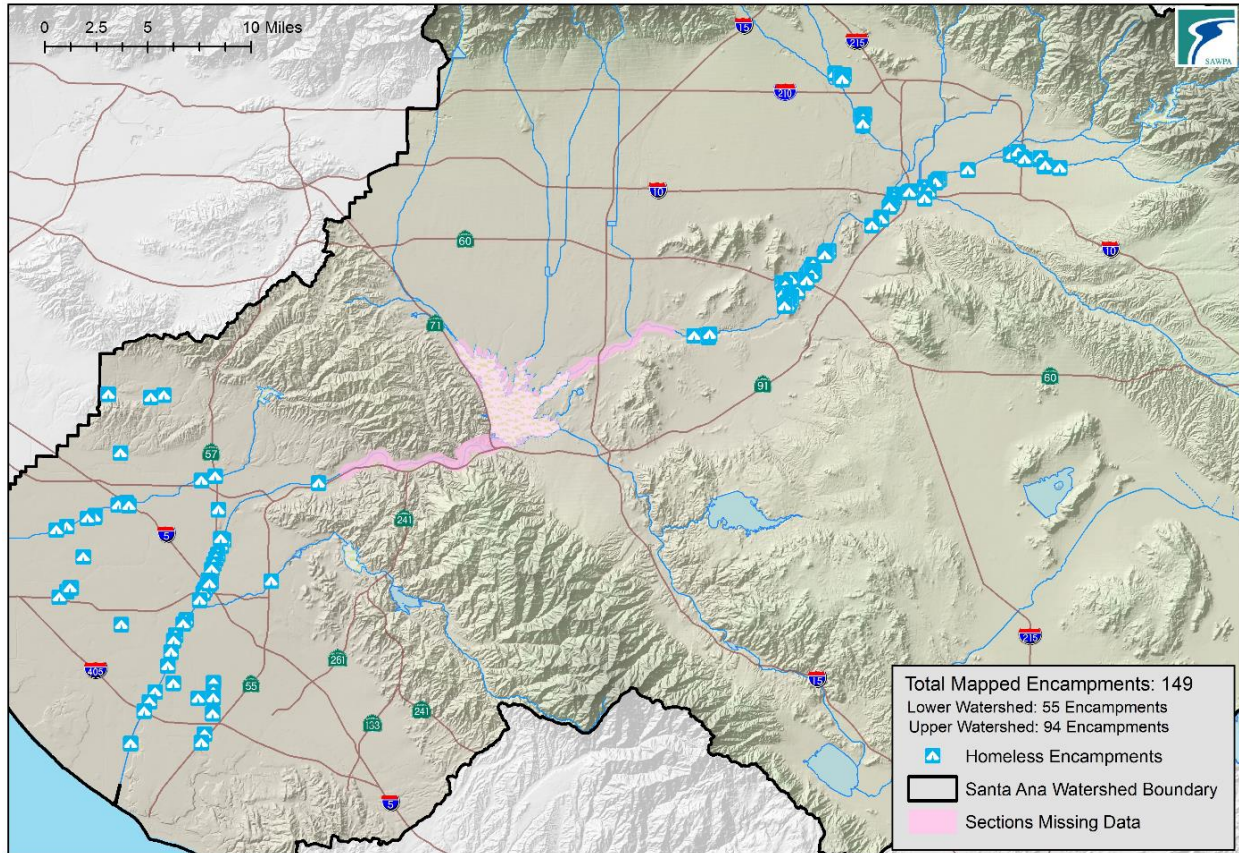
### 3.13.1 Environmental Setting

#### 3.13.1.1 Regional Setting

The Inland Empire, comprising San Bernardino and Riverside Counties, transformed from a rural to a suburban environment around the time of the 1950s. The region now consists of several cities thought of as bedroom communities that are suburban cities to larger metropolitan areas such as Los Angeles, Orange County, and San Diego. Affordable home ownership is the primary motivation behind the growth in the Inland Empire as homes in the region are generally less expensive than comparable homes in Los Angeles and Orange Counties. Over time, there has been a steady rise in population with a commensurate rise in construction to meet the increased housing demand.

#### 3.13.1.2 Planning Area

Within the Planning Area, a number of homeless encampments are located along the Santa Ana River and tributaries. Homeless encampments in these areas contribute to water quality impairments and place homeless individuals in flood risk areas. Figure 3.13-1 shows the total mapped encampments within the Santa Ana River watershed (94 are mapped in the Planning Area). This number is variable, given that the encampments tend to change with the movement of the homeless populations. Major cleanup efforts can also reduce the number of homeless encampments in specific locations, which may prevent new encampments from reestablishing. In August 2019, a multi-jurisdictional effort to clean up encampment sites and provide services to the homeless occurred within the Riverside County portion of the Santa Ana River.



Note: Encampment data provided by the Orange County Department of Public Works, the Riverside County Sheriff's Department, and the San Bernardino County Sheriff's Department. Data for the Santa Ana River tributaries is incomplete or absent.

Source: Santa Ana Watershed Project Authority 2019

**Figure 3.13-1. Homeless Encampments Along the Santa Ana River and Tributaries**

Difficulties associated with policing homelessness activities have led to documented instances of dangerous public health and safety conditions and events within the Planning Area. For example, on December 21, 2017, wildfire erupted under the Mission Inn Avenue bridge, adjacent to Mount Rubidoux. Numerous properties were threatened by the 50-acre blaze, which forced the evacuation of dozens of nearby homes before it was contained hours later. A homeless cooking fire was believed to be the source of this fire (mynewsLA.com 2018). In the Riverside Narrows area, a small fire at an encampment site between the Santa Ana River and a bike trail just east of the Van Buren Bridge occurred on May 9, 2017, prompting the evacuation of 20 homeless people before the fire was contained (Press Enterprise 2017). This fire was caused by an open barbecue. In addition to fire risks, homeless encampments pose ongoing environmental impacts. In addition to the discharge of human waste into the river and tributaries, for example, many encampments include structures such as trailers. They may also include vehicles, solar panels, electronic devices (e.g., televisions), fencing materials, and other items that could result in the discharge of pollutants into the Santa Ana River.

## Population

Twenty-four cities and unincorporated county areas are located within the Planning Area and are listed in alphabetical order by county in Table 3.13-1.

**Table 3.13-1. Population and Area within Cities in the Planning Area**

<b>Jurisdiction</b>	<b>Population<sup>d</sup></b>	<b>Area (acres)<sup>c</sup></b>
<b>San Bernardino County</b>		<b>560,440</b>
Chino <sup>a</sup>	85,595	19,042
Chino Hills <sup>a</sup>	78,309	28,676
Colton <sup>a</sup>	52,154	10,318
Fontana <sup>a</sup>	207,460	27,587
Grand Terrace <sup>a</sup>	12,040	2,245
Highland <sup>a</sup>	54,854	11,959
Loma Linda <sup>a</sup>	23,261	4,805
Montclair <sup>a</sup>	38,690	3,537
Ontario <sup>a</sup>	171,214	31,968
Rancho Cucamonga <sup>a</sup>	175,236	25,672
Redlands <sup>a</sup>	71,035	23,151
Rialto <sup>a</sup>	103,132	14,270
San Bernardino <sup>a</sup>	216,108	39,961
Upland <sup>a</sup>	76,443	10,025
Yucaipa <sup>a</sup>	53,328	18,037
Unincorporated San Bernardino County <sup>e</sup>	309,759	289,187
<b>Riverside County</b>		<b>302,498</b>
Beaumont <sup>a</sup>	36,877	1,536
Calimesa <sup>a</sup>	7,879	9,501
Corona <sup>a</sup>	164,226	25,135
Eastvale <sup>b</sup>	63,211	8,403
Jurupa Valley <sup>b</sup>	106,028	27,939
Lake Elsinore <sup>a</sup>	51,821	12,306
Moreno Valley <sup>a</sup>	193,365	2,069
Norco <sup>a</sup>	27,063	8,948
Riverside <sup>a</sup>	322,424	52,190
Unincorporated Riverside County <sup>e</sup>	364,413	154,471

<sup>a</sup> U.S. Census Bureau 2010

<sup>b</sup> U.S. Census Bureau 2017

<sup>c</sup> California State Board of Equalization 2016

<sup>d</sup> Population numbers are for the entire city or jurisdiction and not just the portion that occurs in the Planning Area.

<sup>e</sup> Valley District 2020

Table 3.13-2 shows the Southern California Association of Governments' projections of population growth of the cities within the Planning Area. As shown in Table 3.13-2, population is expected to grow through 2035 throughout all areas of the Planning Area. Population growth forecasts<sup>1</sup> range from a 2.6% increase in the city of Rancho Cucamonga to a 235% increase in the city of Calimesa.

<sup>1</sup> Population growth was measured from 2008 population levels to 2035 population levels.

**Table 3.13-2. Population and Growth Estimates for 2008–2035 for Jurisdictions in the Planning Area**

<b>Jurisdiction</b>	<b>2008</b>	<b>2020</b>	<b>2035</b>	<b>Total Increase (2008–2035)</b>	<b>Percentage Increase (2008–2035)</b>
<b>San Bernardino County</b>	2,016,000	2,268,000	2,750,000	715,000	36.5
<b>San Bernardino County Planning Area Totals</b>	1,636,300	1,807,100	2,136,200	499,900	30.6
Chino	75,600	88,800	107,200	31,600	41.8
Chino Hills	74,600	76,600	78,400	3,800	5.1
Colton	52,100	60,700	71,700	19,600	37.6
Fontana	193,900	222,700	259,100	65,200	33.6
Grand Terrace	11,800	11,600	13,000	1,200	10.2
Highland	53,000	58,600	67,300	14,300	27.0
Loma Linda	23,000	26,700	31,700	8,700	37.8
Montclair	36,000	39,700	43,900	7,900	21.9
Ontario	162,900	203,800	307,600	144,700	88.8
Rancho Cucamonga	162,800	167,100	167,100	4,300	2.6
Redlands	68,600	75,500	87,900	19,300	28.1
Rialto	98,900	110,000	125,200	26,300	26.6
San Bernardino	209,900	231,200	261,400	51,500	24.5
Upland	72,600	76,700	80,200	7,600	10.4
Yucaipa	51,200	55,800	61,900	10,700	20.9
Unincorporated San Bernardino County	289,400	301,600	372,600	83,200	28.7
<b>Riverside County</b>	2,128,000	2,592,000	3,324,000	1,055,000	49.5
<b>Riverside County Planning Area Totals</b>	1,245,600	1,517,300	1,939,100	693,500	55.8
Beaumont	33,600	56,500	79,400	45,800	136
Calimesa	7,700	14,800	25,800	18,100	235
Corona	148,000	155,800	164,600	16,600	11.2
Eastvale	53,200	61,500	68,300	15,100	28.4
Jurupa Valley	94,400	103,700	126,000	31,600	33.5
Lake Elsinore	50,200	70,500	93,800	43,600	86.8
Moreno Valley	187,400	213,700	255,200	67,800	36.1
Norco	26,500	30,300	32,700	6,200	23.4
Riverside	295,500	339,000	382,700	87,200	29.5
Unincorporated Riverside County	349,100	471,500	710,600	361,500	103

Source: SCAG 2012

Table 3.13-3 shows the ethnicity composition of population by county within the Planning Area compared to the state as a whole.

**Table 3.13-3. Ethnicity by County**

<b>Jurisdiction</b>	<b>Black or African American</b>	<b>American Indian and Alaska Native</b>	<b>Asian</b>	<b>Native Hawaiian and Other Pacific Islander</b>	<b>Other Race</b>	<b>Two or More Races</b>	<b>Hispanic or Latino</b>	<b>White</b>
Riverside County	6.1	0.4	6.2	0.2	0.2	2.5	48.4	35.9
San Bernardino County	7.9	0.3	6.8	0.3	0.2	2.4	52.8	29.2
California	5.5	0.4	14.1	0.4	0.2	3.0	38.9	37.5

Source: U.S. Census Bureau 2020

## Housing

As of 2018, the total number of housing units in all of the cities within the Planning Area was estimated to be 723,039. Table 3.13-5 provides a summary of the total number of housing units, the total number of homes that are occupied and that are vacant, the homeowner vacancy rate, the rental vacancy rate, and the average household size. The homeowner vacancy rate in the Planning Area ranges from 0 to 3.9%, the rental vacancy rate in the inventory area ranges from 0 to 9.7%, and the average household size in the inventory area ranges from 1 to 4.9 persons.

Table 3.13-6 shows the projections of housing growth in the cities within the Planning Area. As shown in Table 3.13-6, the number of housing units is expected to grow throughout all areas of the inventory area. Housing growth ranges from a 1.38% increase in the city of Beaumont to a 96.5% increase in the city of Lake Elsinore.

Table 3.13-4 shows the age composition by sex of population by county within the Planning Area compared to the state as a whole.

## **Housing**

As of 2018, the total number of housing units in all of the cities within the Planning Area was estimated to be 723,039. Table 3.13-5 provides a summary of the total number of housing units, the total number of homes that are occupied and that are vacant, the homeowner vacancy rate, the rental vacancy rate, and the average household size. The homeowner vacancy rate in the Planning Area ranges from 0 to 3.9%, the rental vacancy rate in the inventory area ranges from 0 to 9.7%, and the average household size in the inventory area ranges from 1 to 4.9 persons.

Table 3.13-6 shows the projections of housing growth in the cities within the Planning Area. As shown in Table 3.13-6, the number of housing units is expected to grow throughout all areas of the inventory area. Housing growth<sup>2</sup> ranges from a 1.38% increase in the city of Beaumont to a 96.5% increase in the city of Lake Elsinore.

---

<sup>2</sup> Housing growth was measured from 2008 population levels to 2035 population levels.



**Table 3.13-4. Population by Age and Sex by County**

Jurisdiction	Under 18 Years Old		18 to 64 Years Old		65 and over years old		Total Population		Median Age
	Male	Female	Male	Female	Male	Female	Male	Female	
Riverside County	301,141	309,666	873,318	896,160	149,744	178,865	1,186,188	1,197,098	35.3
San Bernardino County	238,562	289,290	769,743	792,818	104,671	128,672	1,062,472	1,072,941	36.3
California	4,482,386	4,591,269	14,817,745	15,237,360	2,357,611	2,957,846	19,453,769	19,694,991	36.3

**Table 3.13-5. Housing Data for Jurisdictions in the Planning Area 2018 American Community Survey 5-Year Data**

City	Number of Housing Units (2018)			Homeowner Vacancy Rate	Rental Vacancy Rate
	Occupied	Vacant	Total		
<b>San Bernardino County</b>	630,633	85,538	716,171	1.8	4.3
Chino	20,536	1,359	21,895	2.0	4.8
Chino Hills	24,015	1,136	25,151	3.2	0.4
Colton	16,549	2,315	18,864	1.7	9.1
Fontana	54,788	1,612	56,400	1.0	1.7
Grand Terrace	4,392	243	4,635	0.9	6.5
Highland	15,932	959	16,891	0.4	4.8
Loma Linda	8,788	633	9,421	3.3	4.0
Montclair	10,429	264	10,693	0.0	0.9
Ontario	49,624	2,439	52,063	1.0	3.0
Rancho Cucamonga	55,950	2,699	58,649	14.0	4.7
Redlands	25,917	2,383	28,300	1.0	6.4
Rialto	25,922	1,178	27,100	1.8	1.9
San Bernardino	58,972	3,722	62,694	1.2	3.1
Upland	26,244	967	27,211	0.5	1.4
Yucaipa	18,445	1,238	19,683	1.6	3.5
Unincorporated San Bernardino County	95,445	42,342	137,787	3.2	5.0
<b>Riverside County</b>	718,349	115,253	833,602	1.9	5.3
Beaumont	13,592	802	14,394	1.9	3.1

City	Number of Housing Units (2018)			Homeowner Vacancy Rate	Rental Vacancy Rate
	Occupied	Vacant	Total		
Calimesa	3,325	399	3,724	3.9	4.6
Corona	49,658	1,846	51,504	0.9	2.7
Eastvale	14,705	605	15,310	1.4	6.9
Jurupa Valley	24,859	1,224	26,083	0.4	2.9
Lake Elsinore	16,956	1,103	18,059	1.0	4.5
Moreno Valley	50,620	3,265	53,885	1.3	5.0
Norco	7,152	286	7,438	1.8	0.0
Riverside	87,341	5,651	92,992	1.5	4.4
Unincorporated Riverside County	114,053	22,242	136,295	2.3	6.4
<b>Total</b>	<b>684,711</b>	<b>36,970</b>	<b>723,039</b>	<b>2%</b>	<b>3.8%</b>

Source: U.S. Census Bureau 2020

Note: The numbers in this table represent the housing data for the entire city.

Totals are an aggregate of identified cities and county totals.

**Table 3.13-6. Housing Growth Estimates for 2008–2035 Number of Households for Jurisdictions in the Planning Area**

City	2008	2020	2035	Total Increase (2008–2035)	Percentage Increase (2008–2035)
<b>San Bernardino County</b>	606,000	698,000	847,000	241,000	39.7
Chino	20,100	24,600	29,200	9,100	45.3
Chino Hills	22,900	24,000	25,600	2,700	11.8
Colton	15,000	17,800	21,100	6,100	40.7
Fontana	48,600	57,500	66,700	18,100	37.2
Grand Terrace	4,300	4,600	5,400	1,100	25.6
Highland	15,400	17,700	20,300	4,900	31.8
Loma Linda	8,700	10,500	12,600	3,900	44.8
Montclair	9,300	10,400	11,600	2,300	24.7
Ontario	44,600	57,700	87,300	42,700	95.7
Rancho Cucamonga	53,600	56,300	57,600	4,000	7.4
Redlands	24,700	28,300	32,500	7,800	31.6
Rialto	25,100	29,400	34,700	9,600	38.2

<b>City</b>	<b>2008</b>	<b>2020</b>	<b>2035</b>	<b>Total Increase (2008-2035)</b>	<b>Percentage Increase (2008-2035)</b>
San Bernardino	59,300	66,900	76,800	17,500	29.5
Upland	25,400	28,300	31,300	5,900	23.2
Yucaipa	18,200	20,700	23,600	5,400	29.7
Unincorporated San Bernardino County	93,000	97,700	117,500	24,500	26.3
<b>Riverside County</b>	<b>679,000</b>	<b>834,000</b>	<b>1,092,000</b>	<b>413,000</b>	<b>60.1</b>
Beaumont	11,000	18,800	26,200	15,200	1.38
Calimesa	3,300	6,300	11,000	7,700	2.33
Corona	44,600	46,100	48,800	4,200	9.4
Eastvale	13,500	15,700	17,700	4,200	31.1
Jurupa Valley	24,500	27,100	33,300	8,800	36.0
Lake Elsinore	14,600	21,000	28,700	14,100	96.5
Moreno Valley	51,100	60,000	72,800	21,700	42.5
Norco	7,000	8,000	8,700	1,700	24.3
Riverside	91,400	104,000	117,800	26,400	28.9
Unincorporated Riverside County	109,600	150,800	240,000	130,400	119
<b>Total</b>	<b>1,465,479</b>	<b>2,542,200</b>	<b>3,197,800</b>	<b>1,054,000</b>	<b>36.9</b>

Source: SCAG 2012

### 3.13.1.3 Homeless Populations

Homelessness and homeless people living in public rights-of-way or in natural open space or recreational areas are a concern throughout the state of California, and San Bernardino and Riverside Counties, specifically near the Santa Ana River in the Planning Area. Major factors that can contribute to homelessness include lack of employment opportunities and affordable housing, a decline in available public assistance, lack of affordable health care, and other circumstantial issues such as domestic violence, mental illness, and drug or alcohol addiction.

#### County of San Bernardino

The San Bernardino County Continuum of Care Point-In-Time Count is a Federally mandated census of persons experiencing homelessness in the county. The Point-In-Time Count provides local communities and policymakers with information on the characteristics and magnitude of the homeless population to make informed decisions in addressing homelessness in their region. There were 2,607 persons who were homeless on January 24, 2019. The previous count totaled 2,118 persons who were homeless on January 25, 2018, and in 2017 the homeless count included 1,866 persons (County of San Bernardino 2018). A comparison of the last three counts reveals that 252 more persons were counted in 2018, which represents an increase of 13.5%. From 2018 to 2019, 489 more persons were counted, which represents an increase of 18.7% between 2018 and 2019. Table 3.13-7 provides the total number of sheltered and unsheltered adults and children in the Planning Area in San Bernardino County in 2019.

**Table 3.13-7. Total Number of Sheltered and Unsheltered in the Planning Area in San Bernardino County in 2019**

<b>Jurisdiction</b>	<b>Sheltered/Unsheltered</b>	<b>Total</b>
<b>San Bernardino County</b>	687/1,920	2,607
Chino	0/23	23
Chino Hills	0/4	4
Colton	0/58	58
Fontana	0/94	94
Grand Terrace	0/1	1
Highland	0/72	72
Loma Linda	17/8	25
Montclair	0/24	24
Ontario	34/94	128
Rancho Cucamonga	10/48	58
Redlands	42/141	183
Rialto	0/133	133
San Bernardino	251/639	890
Upland	15/43	58
Yucaipa	0/16	16
Unincorporated San Bernardino County	85/30	115

Source: County of San Bernardino 2019b

## County of Riverside

According to the County of Riverside General Plan Housing Element (2017–2021), the homeless population in Riverside County is concentrated around urbanized cities where homeless services and transportation are readily available. The large numbers of homeless persons, the high cost of housing, and the number of people living in poverty create a complex, serious situation. The County acknowledges the need for emergency or transitional shelters in unincorporated areas of the county, as none currently exist. However, the County does provide services to homeless persons in both the incorporated and unincorporated areas of the county, through the Department of Public Health and Department of Public Social Services. The County has committed to working with area nonprofit agencies and addressing homeless problems from all sides, which includes providing prevention, outreach, and shelter services. Riverside County’s Point-In-Time count totaled 2,811 adults and children in 2019. Table 3.13-8 provides the total number of sheltered and unsheltered adults and children in the Planning Area in Riverside County.

**Table 3.13-8. Total Number of Sheltered and Unsheltered in the Planning Area in Riverside County in 2019**

<b>Jurisdiction</b>	<b>Sheltered/Unsheltered</b>
Riverside County	2,811
Beaumont	15
Calimesa	16
Corona	164
Eastvale	0
Jurupa Valley	139
Lake Elsinore	66
Moreno Valley	38
Norco	11
Riverside	238
Unincorporated Riverside County	98

Sources: County of Riverside Department of Public Social Services 2019

## 3.13.2 Regulatory Framework

### 3.13.2.1 Federal Regulations

#### **Uniform Relocation Assistance and Real Property Acquisition Policies Act**

The Uniform Relocation Assistance and Real Property Program ensures that persons displaced as a result of a Federal action or by an undertaking involving Federal funds are treated fairly, consistently, and equitably. This helps to ensure persons will not suffer disproportionate injuries as a result of projects designed for public benefits. The Proposed Project would not result in the displacement of people in permanent residence. As such, this act would not apply to the Proposed Project.

### 3.13.2.2 State Regulations

#### California Housing Element Law

California's housing element law (California Department of Housing and Community Development 2019) acknowledges that, in order for the private market to adequately address the housing needs and demand of Californians, local governments must adopt plans and regulatory systems that provide opportunities for (and do not unduly constrain) housing development. As a result, housing policy in California rests largely upon the effective implementation of local general plans and, in particular, local housing elements. The County of San Bernardino and County of Riverside have adopted Housing Elements that are utilized as part of this analysis. Section 3.13.2.3, *Local Regulations*, provides relevant descriptions for each local jurisdiction.

#### California Relocation Act

Similar to the Federal law, the California Relocation Act requires State and local governments to provide relocation assistance and benefits to displaced persons as a result of projects undertaken by State or local governments that do not involve Federal funds. The Proposed Project would not result in the displacement of people in permanent residence. As such, this act would not apply to the Proposed Project.

### 3.13.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to population and housing. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the General Plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties' general plans and other local plans, policies, ordinances, and programs related to population and housing. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances and programs related to population and housing in full.

#### County of San Bernardino General Plan

The Housing Element of the County of San Bernardino General Plan (County of San Bernardino 2014) establishes goals and policies to enhance the quality of existing neighborhoods and housing, including affordable housing, and to increase the supply of a diversity of housing types, including special needs housing.

#### Housing Programs

**Program #14: Homeless Services** – San Bernardino County Homeless Partnership (SBCHP) was formed to provide a focused, coordinated, and cohesive approach to addressing homelessness in the county in coordination with community and faith-based organizations, educational institutions, non-profit organizations, private industry, and Federal, State, and local governments including implementation of the County's 10-year Strategy to End Chronic Homelessness.

**Program #15: Senate Bill 2 Compliance** – Senate Bill 2 mandates that each community play an active role in providing for the housing and supportive needs of the homeless, for which the County

updated its development code to define emergency shelters, transitional housing, and permanent supportive housing consistent with the definitions and parameters in State law (Government Code Section 65583).

### **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land-use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by the County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Policy Plan is designed to accommodate responsible population growth in a manner that is fiscally sustainable and context-sensitive and to promote the development of housing appropriate for rural and suburban areas.

### **County of San Bernardino Code of Ordinances**

The County Code of Ordinances, Title 3, Health And Sanitation And Animal Regulations, Division 3, Environmental Health, Chapter 10, Housing and Institutions states that the purpose and intent of Article 1, Regulations of Buildings Used for Human Habitation, is to provide regulation for the maintenance, sanitation, ventilation, use, occupancy, and safety of rental dwelling units, hotels, and motels within this jurisdiction for the public health, safety, and general welfare.

### **County of San Bernardino Homeless Programs**

- Homeless Provider Network – advocate for the homeless and those at risk of becoming homeless through a forum and environment where collaborative public and private programs can improve the current delivery of services.
- San Bernardino County Office of Homeless Services – a clearinghouse of homeless issues for all County departments and plays a vital role in the County’s homeless programs.
- Homeless Management Information System – a coordinated system of computers that enables service, shelter, and housing providers in different locations across the county to collect and share information.

### **County of Riverside General Plan**

The County of Riverside General Plan Housing Element (County of Riverside 2017) discusses the County’s actions to provide housing for the homeless population and the mentally disabled; to assist in the development of additional emergency, transitional, and permanent supportive housing; to support self-help housing programs; and to support legislation for funding of programs.

## County of Riverside Code of Ordinances

Riverside County does not have any ordinances relevant to potential population and housing impacts of the Proposed Project.

## County of Riverside Homeless Programs

- Veterans Administration Supportive Housing Initiative – provides targeted housing choice vouchers to homeless veterans throughout the County of Riverside.
- Riverside Emergency Shelter – a 64-bed facility that provides a 30-day shelter program coupled with case management services for homeless men and women.
- Shelter Plus Care Program with Operation Safe House Harrison House – a shelter plus care permanent housing project for transitional-age youth program called Harrison House providing six units of permanent supportive housing to serve chronically homeless transitional-age youth (18–23) in the Coachella Valley.
- Transitional Housing Dual Diagnosis – serves homeless individuals affected by co-occurring mental illness and substance abuse and provides a total of 30 beds, 24-hour supervision and security, and supportive services to address mental illness and substance abuse treatment and recovery.
- “The Place” Safe Haven Supportive Housing and Drop-In Center – provides 25 permanent supportive housing beds and a 24-hour drop-in center for chronically homeless individuals with severe mental illness.
- “The Path” Safe Haven Supportive Housing and Drop-In Center – provides 25 permanent supportive housing beds and a 24-hour drop-in center for chronically homeless individuals with severe mental illness.
- Path of Life – a rapid rehousing project that targets homeless families with children, with or without disabilities, in all of Riverside County for up to 18 months. Supportive services include mainstream benefits, employment placement, and healthcare.
- Health To Hope Clinics – provides health care services to the extremely low- to low-income population within the county, including family planning, immunizations, well child visits, and mental health services in collaboration with hospitals and social service agencies.

### 3.13.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate impacts on population and housing, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on population and housing. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.



### 3.13.3.1 Significance Criteria

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? (Impact POP-1)
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (Impact POP-2)

### 3.13.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper Santa Ana River (SAR) Habitat Conservation Plan's (HCP's) Conservation Strategy and conservation measures. The following steps were taken to analyze the potential population and housing impacts.

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on population and housing.
- Identify and evaluate potential impacts related to population and housing resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

Impacts related to population and housing were assessed based on review of the HCP, consultation with the Permittees, and review of applicable relevant local government authorities, including, but not limited to, general plans, ordinances, and annual reports. Public agency websites were also reviewed for publicly available information regarding census population statistics, homeless encampments, homeless task force policies, and measures relevant to the Proposed Project. Impacts related to population and housing were assessed based on generally accepted analysis techniques that estimate the population and housing impacts in areas where physical land disturbance is needed to implement the Proposed Project. Impacts would result when the Proposed Project directly or indirectly conflicts with the policies of the plans, directly or indirectly induces unplanned population growth, or displaces a substantial number of existing people or housing. Where applicable, potential benefits related to population and housing from implementing the Proposed Project are described.

### 3.13.3.3 Impact Analysis and Mitigation

***Impact POP-1: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?***

The Proposed Project would include construction activities from conservation actions, including the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Conservation activities include habitat improvement, management, and monitoring activities within Proposed Project's Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may also be conducted related to hydrologic manipulation and substrate management.

The areas within the Permit Area on which conservation activities, such as habitat restoration and/or rehabilitation, could occur are mostly open space or relatively rural areas. The Proposed Project would not include any projects such as residential development or roadways that would directly increase population growth by providing new housing and access in the Permit Area. As such, these activities are not intended to increase the population growth in the area. In addition, although some of the projects may need full-time workers on site, such as park rangers to oversee the Preserve System, these activities would not represent a substantial unplanned increase in jobs and thus would not result in a significant indirect increase in unplanned population in the Permit Area. Therefore, the Proposed Project would not induce substantial unplanned population growth either directly or indirectly, and this impact would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

***Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

The areas within the Permit Area on which conservation activities, such as habitat restoration and/or rehabilitation, could occur are mostly open space or relatively rural areas. However, the Permit Area does include public open space areas that are populated with homeless individuals living in temporary encampments, also known as transient camps, as shown on Figure 3.13-1. It is estimated that there are currently as many as 94 individual encampment sites near the Santa Ana River and its tributaries; however, the exact homeless population number within the Permit Area is unknown and likely fluctuates depending upon weather conditions, how recent a previous cleanup effort occurred in the area, and other factors. These encampments have resulted in trash and human waste placed in proposed Conservation Areas and damage to the existing natural vegetation.

The complex issue of homeless encampments in these Conservation Areas requires the involvement and coordination of multiple local agencies, including the Counties of San Bernardino and Riverside as well as the affected cities. The counties and cities currently implement existing programs involving transient populations being relocated to safer, more sanitary shelters or more permanent residences, including solutions for people who choose not to stay in homeless shelters for varying reasons (e.g., because of drug dependency or pets not being allowed in some shelters). The removal of unpermitted structures, debris, or materials associated with homeless encampments would be environmentally beneficial for the Santa Ana River Basin area, both reducing human hazards and

eliminating trash and other sources of waste in and around the area. Relocation of transient individuals, removal of homeless encampments, and cleanup of remaining refuse would be coordinated and conducted among the counties and/or cities prior to implementation of habitat improvement activities and during long-term management of the Conservation Areas, should encampments become re-established. For example, the Counties of San Bernardino and Riverside provide outreach, programs, and resources with the overall goal of reducing homelessness by providing an array of housing options and programs based on community needs, as described in Section 3.13.2.3, *Local Regulations*.

If the Proposed Project were to displace a substantial number of existing people or housing, the impacts would be significant, and mitigation measures would be required to reduce the impact. However, there is no permanent housing within the Permit Area, and, thus, no people or housing would be displaced. The Proposed Project would work to relocate any homeless within the Permit Area with local jurisdictions, and encampments would be removed prior to habitat improvement activities and during long-term management of the Conservation Areas, should encampments become re-established. As the Proposed Project is not anticipated to displace a substantial number of existing people or housing, the impact would be **less than significant**.

#### Mitigation Measures

No mitigation measures are required.

### 3.13.4 Summary of Potential Types of Impacts of Covered Activities

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of population and housing effects that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create population and housing impacts.

Covered Activities by type and their possible relationship to population and housing impacts if implemented with permit coverage are shown in Table 3.13-9 and discussed below.

**Table 3.13-9. Construction and Operation of Covered Activities and Their Relevance to Population and Housing**

Covered Activity	Description	Relevance
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Potential land acquisition for new development; however, this is not anticipated to result in housing removal or population relocation. Potential increase in employment during construction.

<b>Covered Activity</b>	<b>Description</b>	<b>Relevance</b>
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance (O&M)	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	O&M activities would occur at the sites of existing infrastructure and facilities and would not result in removal of existing housing

Potential impacts on population and housing that could result from implementing the types of Covered Activities identified in Table 3.13-9 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.13-9, impacts associated with constructing, operating, and maintaining these types of Covered Activities could include potential land acquisition for new development; however, this is not anticipated to result in housing removal or population relocation. The Covered Activities include both specific projects, such as water quality treatment facilities or groundwater recharge basins, and ongoing operation and maintenance activities. The Proposed Project would not include any projects such as residential development or roadways that would directly increase population growth by providing new housing and access in the Permit Area. The Proposed Project would not result in indirect population growth because the Covered Activities would not include projects that would extend the service area of utility providers. While the Proposed Project does include Covered Activities to implement projects to increase available water supplies regionally, these increases are intended to serve existing projected population growth and not support new unplanned populations. As such, these projects are not intended to increase the population growth in the area. In addition, although some of the projects are facilities that may need full-time workers on site, these projects would not represent a substantial unplanned increase in jobs and thus would not result in a significant indirect increase in unplanned population in the Permit Area.

The Proposed Project would not result in the removal of housing because the distribution of the Covered Activities in the Permit Area accommodates the physical integrity of the communities by designing and locating facilities in areas to minimize potential impacts on population and housing from existing and planned projects. Covered Activities, including general property and facility maintenance and routine operation and maintenance, are proposed on developed sites currently being utilized for public infrastructure projects.

The Covered Activities projects are not expected to substantially displace any existing permanent housing, as these projects would not include removal or construction of any permanent residences.

However, some of the Covered Activities include homeless encampment removal associated with Conservation Areas. It is expected that the Covered Activities resulting in homeless encampment removals would affect the intensity and distribution of encampments throughout the Permit Area. These encampments would be removed from Conservation Areas in coordination with local jurisdictional authorities, subject to applicable local and State law, prior to the start of habitat improvement activities, consistent with existing homeless encampment removals.

No best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts on population and housing. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity impacts on population and housing.

## 3.14 Public Services

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *public services* like fire, police, schools, and parks are services intended to serve members of a community generally for residents living within its jurisdictions. Parks are addressed in Section 3.15, *Recreation*. These services are usually provided by the government either directly through the public sector or by financing provision of these services.

### 3.14.1 Environmental Setting

#### 3.14.1.1 Regional Setting

##### Fire

###### San Bernardino County Fire Department

Fire protection services in the County of San Bernardino are provided by the San Bernardino County Fire Department, which has 54 stations throughout the county. The San Bernardino County Fire Department has a service area of 20,160 square miles across San Bernardino County, including 60 communities/cities and all the unincorporated areas of the county. The San Bernardino County Fire Department provides fire response, emergency medical response, and wildland fire suppression services (San Bernardino County Fire 2019). Communities served in the Planning Area include the cities of Fontana, Grand Terrace, San Bernardino, and Upland, and unincorporated county areas.

###### Other Local Agency Fire Departments in the San Bernardino Planning Area

The Chino Valley Independent Fire District is headquartered in Chino Hills and serves the Chino Valley, which includes the cities of Chino Hills and Chino and surrounding unincorporated areas of San Bernardino County. The district is not a city department but is a separate agency with its own elected Board of Directors. The Chino Valley Independent Fire District began in 1895 as Chino Fire Company No. 1 and has grown to include six fire stations housing over 80 professional firefighters, providing fire and emergency medical services throughout the community.

The City of Colton maintains four fire stations that include three Type-1 paramedic engines, one paramedic truck, one Type-3 engine, and one California Office of Emergency Services Type-1 engine. The fire operations division is responsible for training, manpower and personnel, apparatus, fire station maintenance, firefighters' personal protective equipment, and day-to-day response to emergency calls.

The California Department of Forestry and Fire Protection (CAL FIRE) provides fire protection and emergency medical services to the city of Highland through a cooperative agreement that provides for CAL FIRE employees to staff City-owned facilities and apparatus. The city has three fire stations in addition to available fire protection services from other area agencies through automatic aid agreements with the Cities of Redlands and Yucaipa, CAL FIRE, and the U.S. Forest Service. The U.S. Forest Service provides fire protection in national forest lands within the city of Highland (City of

Highland 2006). The City also participates in the California Master Mutual Aid Agreement, which provides additional assistance from San Bernardino city and county fire departments, the San Manuel Fire Department, and fire departments throughout California.

The Fire and Rescue Division of the City of Loma Linda Department of Public Safety provides fire protection. Fire Station 251, at 11325 Loma Linda Drive, services the city of Loma Linda. To ensure adequate fire protection services in an emergency, the City of Loma Linda maintains a joint response/automatic aid agreement with the fire departments in neighboring cities including Colton, Redlands, and San Bernardino. The department also participates in the California Master Mutual Aid Agreement (City of Loma Linda 2009).

The Montclair Fire Department employs firefighters and paramedics in two different fire stations in the city. The department is dispatched to a variety of incidents including structure fires, hazardous materials mitigation, medical calls, traffic accidents, and confined space rescue, among other incidents (City of Montclair 2019a).

The Ontario Fire Department currently has nine stations, which are composed of nine 4-person Paramedic engine companies, two 4-person truck companies, and an 8-person aircraft rescue and firefighting station (City of Ontario n.d.1).

The Rancho Cucamonga Fire Protection District serves the combined 50-square-mile Rancho Cucamonga City and Sphere of Influence area. The Rancho Cucamonga Fire Protection District is responsible for providing community protection by managing numerous programs for the efficient delivery of fire protection and emergency medical services, as well as other diverse emergency management and response programs. Firefighters specialize in mitigating fires in the Wildland Urban Interface areas (City of Rancho Cucamonga 2010).

The city of Redlands is served by the Redlands Fire Department, and unincorporated portions of the Planning Area are served by the San Bernardino County Fire Department and CAL FIRE. Adjacent national forest lands are served by the U.S. Forest Service. The city of Redlands has four stations, and most of Redlands can be reached by the fire department within a 4-minute response time. The majority of Redlands is well served by the four Redlands fire stations, while the outer edges of the Planning Area may receive faster response times from surrounding jurisdictions (City of Redlands 2017).

Rialto Fire Department is an all-risk fire agency providing fire suppression, emergency medical, technical rescue, hazardous material, and other related emergency services. The fire department also conducts public education programs and investigates and mitigates hazardous situations. The department actively practices hazards mitigation and fire prevention. Firefighting resources in Rialto include four fire stations, emergency response personnel, firefighters/paramedics, and a Hazardous Materials Response Team (City of Rialto 2010).

The Yucaipa Fire Department, through a contract with CAL FIRE, prepares a fire services plan to provide fire protection and emergency medical services to the city. CAL FIRE provides fire suppression and paramedic services for Yucaipa in accordance with its unit plan and service contract. CAL FIRE provides services from three permanent local stations and one reserve station in Oak Glen (City of Yucaipa 2016).

### **Riverside County Fire Department**

The Riverside County Fire Department, in cooperation with CAL FIRE, provides firefighting services to unincorporated Riverside County and the cities of Beaumont, Eastvale, Jurupa Valley, Lake Elsinore, Norco, and Moreno Valley. The Riverside County Fire Department also responds to the cities of Calimesa, Corona, and Riverside through mutual and automatic aid agreements. Riverside County Fire Department provides the full range of fire protection services including fire prevention, suppression, and emergency medical response (Riverside County Fire Department n.d.).

### **Other Local Agency Fire Departments in the Riverside Planning Area**

The city of Calimesa is served by the Calimesa Fire Department. Calimesa has a one-engine company staffed with four persons at all times. Calimesa owns the current fire station at 906 Park Avenue in Calimesa, as well as a variety of equipment, furnishings, and vehicles. A second fire station is planned for future service needs as development occurs in the western portion of the city. Calimesa owns two Type-1 Fire engines, one squad vehicle, and two command vehicles (City of Calimesa n.d.).

The City of Corona Fire Department provides fire response, emergency medical response, search and rescue, and protection from hazardous materials to the city of Corona. The fire department operates seven fire stations (City of Corona n.d.1).

The City of Riverside Fire Department provides fire protection, fire safety inspections, community education, and emergency preparedness planning and training for Riverside County. The City of Riverside Fire Department employs 211 full-time trained and sworn fire fighters and operates 14 fire stations across an 81-square-mile service area. The City of Riverside Fire Department provides services to neighboring communities through mutual aid agreements (City of Riverside n.d.). The portion of the Permit Area in the city of Riverside is served by fire responder Areas 1, 5, and 7 (City of Riverside Fire Department 2017).

## **Police**

### **San Bernardino County Sheriff's Department**

The San Bernardino County Sheriff's Department is the law enforcement agency for the entirety of the County of San Bernardino, serving over 2.1 million residents. The San Bernardino County Sheriff's Department has 3,800 employees and 1,800 volunteers and operates 15 patrol stations (San Bernardino County Sheriff's Department 2019). In 2017, the San Bernardino County Sheriff's Department had 624 Patrol Deputies for the entire service area (San Bernardino County Sheriff's Department 2017).

The Cities of Chino Hills, Grand Terrace, Highland, Loma Linda, Rancho Cucamonga, and Yucaipa contract with the San Bernardino County Sheriff's Department for law enforcement and emergency services.

### **Other Local Agency Police Departments in the San Bernardino Planning Area**

The Chino Police Department serves the approximately 85,000 residents within the 30-square-mile city. The Chino Police Department employs 150 sworn and civilian personnel and has 50 volunteers (City of Chino 2018).

The City of Colton's Police Department provides police protections services and is staffed with 51 sworn officers and 32 non-sworn employees (City of Colton Police n.d.).



The Fontana Police Department provides police protection services and has 188 sworn officers and operates out of the central police station downtown (City of Fontana 2018).

The Montclair Police Department is the municipal law enforcement agency that serves 5.5 square miles and approximately 37,000 citizens. The Montclair Police Department employs 60 sworn officers, 50 civilian personnel, and 18 volunteers (City of Montclair 2019b).

The Ontario Police Department provides police protection services and has 281 sworn officers and 128 civilian positions (City of Ontario n.d.2).

The Rialto Police Department employs 103 sworn officers and approximately 40 non-sworn employees, and services the 28.5-square-mile city of Rialto, which has over 100,000 residents (City of Rialto Police Department 2019).

The Redlands Police Department provides law enforcement services for the city of Redlands. The Redlands Police Department employs 76 sworn officers and 40 civilian personnel (City of Redlands 2019).

The City of San Bernardino Police Department provides police services and crime prevention to the city of San Bernardino. Approximately 225 sworn officers and 150 civilian support staff members make up the department. The city is separated into four patrol districts, which are under the command of four different lieutenants (City of San Bernardino 2019).

The City of Upland Police Department provides police protection services and 46 sworn officers. Most of the officers are assigned to patrol in the Operations Division. They are responsible for responding to calls for police service within the city of Upland (City of Upland n.d.).

### **Riverside County Sheriff's Department**

The Riverside County Sheriff's Department serves more than 7,200 square miles and provides policing services to 17 of the 28 cities in Riverside County (Riverside County Sheriff's Department n.d.). There are 10 Sheriff's stations across the county. The Cities of Calimesa, Eastvale, Jurupa Valley, Lake Elsinore, Moreno Valley, and Norco contract with the Riverside County Sheriff's Department for law enforcement and emergency services.

### **Other Local Agency Police Departments in the Riverside Planning Area**

The Beaumont Police Department, located in the city of Beaumont's downtown at 660 Orange Avenue, provides comprehensive law enforcement services for the city. The department is staffed with 25 sworn officers and 7 non-sworn personnel (City of Beaumont 2007).

The Corona Police Department employs 220 staff members, including both sworn officers and civilians, to provide public safety for the 165,000 residents of Corona (City of Corona n.d.2).

The City of Riverside Police Department provides police protection services for the city's people. The Field Operations Division oversees approximately 130 sworn officers, 24 Sergeants, 6 Lieutenant Watch Commanders, 1 Executive Lieutenant, 1 Traffic Lieutenant, and numerous civilian support staff (City of Riverside 2015).

## Schools

School districts in the Counties of San Bernardino and Riverside are listed in Table 3.14-1 in alphabetical order by county. The San Bernardino Superintendent of Schools oversees the school districts, works with the students and communities, and advocates for policies to better serve the families in San Bernardino County. The Riverside County Office of Education provides oversight to teachers and students in the school districts in Riverside County. There are numerous school facilities within each school district across the Planning Area. The Proposed Project would not be located on school facilities.

**Table 3.14-1. School Districts in the Planning Area by County**

County of San Bernardino	County of Riverside
Alta Loma School District	Alvord Unified School District
Bear Valley Unified School District	Beaumont Unified School District
Central School District	Corona-Norco Unified School District
Chaffey Joint Union High School District	Jurupa Unified School District
Chino Valley Unified School District	Lake Elsinore Unified School District
Colton Joint Unified School District	Moreno Valley Unified School District
Cucamonga School District	Perris Elementary School District
Etiwanda School District	Perris Union High School District
Fontana Unified School District	Riverside Unified School District
Hesperia Unified School District	Val Verde Unified School District
Mountain View School District	--
Mt Baldy School District	
Ontario-Montclair School District	
Redlands Unified School District	
Rialto Unified School District	
Rim of the World Unified School District	
San Bernardino City Unified School District	
Snowline Joint Unified School District	
Upland Unified School District	
Yucaipa-Calimesa Joint Unified School District	

Source: San Bernardino Superintendent of Schools n.d.; Riverside County Office of Education 2019.

### 3.14.1.2 Planning Area

#### Local School Sites

As stated in Section 3.8, *Hazards and Hazardous Materials*, individual schools may be within 0.25 mile of a Conservation Area that is part of the Proposed Project; these include the following:

- Bryant Elementary School (4324 3rd Street, Riverside), Riverside Unified School District, is within 0.25 mile of the Evans Lake Conservation Area (Conserv.6).
- Peralta Elementary School (6450 Peralta Place, Jurupa Valley), Jurupa Unified School District, is also within 0.25 mile of the Louis Rubidoux Nature Center and Sunnyslope Creek Conservation Area (Conserv.7).

## 3.14.2 Regulatory Framework

### 3.14.2.1 Federal Regulations

There are no Federal regulations for public services, which are provided at the local level.

### 3.14.2.2 State Regulations

There are no State regulations for public services, which are provided at the local level.

### 3.14.2.3 Regional and Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to public services. Most (65 percent) of the Planning Area is within San Bernardino County, with the majority of the remaining portion (35 percent) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to public services in full.

#### County of San Bernardino General Plan

The County of San Bernardino 2007 General Plan (County of San Bernardino 2007) contains goals and policies concerning public service providers in the Circulation and Infrastructure Element.

The Circulation and Infrastructure Element seeks to ensure maintenance and development of public facilities to meet the needs of current and future county residents, to protect its residents and visitors from injury and loss of life and protect property from fires; and prioritize efforts to deter crime.

#### San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Personal & Property Protection Element aims for effective crime prevention and law enforcement that leads to a real and perceived sense of public safety for residents, visitors, and businesses; an equitable justice system for violations of law in the county, adequate care, and effective rehabilitation for inmates in the County's custody; and monitoring and improving justice functions.

Goal PP-3 seeks to reduce risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

The Health & Wellness Element goals include creating a common culture that values education and lifelong learning and a populace with the education to participate and compete in the global economy and prioritizing the safety and security of public schools in unincorporated areas.

The Infrastructure and Utilities Element goals include a regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.

### **County of San Bernardino Code of Ordinances**

San Bernardino County does not have any ordinances relevant to potential aesthetics impacts of the Proposed Project.

### **County of Riverside General Plan**

The County of Riverside General Plan Land Use Element (County of Riverside 2019) and Circulation Element (County of Riverside 2017) contain goals and policies associated with public services that are applicable to the Proposed Project. The Land Use Element seeks to ensure that development does not exceed the ability to adequately provide supporting infrastructure and services with acceptable levels of service, such as libraries, recreational facilities, educational and day care centers, transportation systems, and fire/police/medical services. The Circulation Element utilizes existing infrastructure and utilities to the maximum extent practicable and provides for the logical, timely, and economically efficient extension of infrastructure and services.

### **County of Riverside Code of Ordinances**

Riverside County does not have any ordinances relevant to potential public services impacts of the Proposed Project.

## **3.14.3 Impacts and Mitigation**

This section lists the significance criteria, describes the methods used to evaluate public services impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on public services. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### **3.14.3.1 Significance Criteria**

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental

impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire protection?
- Police protection?
- Schools?
- Parks?
- Other public facilities? (Impact PS-1)

Note that parks are addressed in Section 3.15, *Recreation*.

### 3.14.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project. The following steps were taken to analyze the potential public services impact of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on public services in the Planning Area.
- Identify and evaluate the impacts on public services resulting from implementation of the Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential public services impacts.

Impacts related to public services were assessed based on review of the Upper SAR HCP, consultation with the Permittee Agencies and Southern California Edison, and review of applicable local government authorities, such as general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would have significant impacts on public services. Impacts would result when the Proposed Project directly or indirectly conflicts with the policies of the plans, introduces a new demand to existing service, or creates new infrastructure that would result in adverse effects on existing public services.

### 3.14.3.3 Impact Analysis and Mitigation

***Impact PS-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, other public facilities?<sup>1</sup>***

Demand for public services is not anticipated to result from conservation actions needed to implement the Conservation Strategy. The Proposed Project would not include any development of residential, commercial, or other such projects or uses that would directly result in an increase in population. Population increase is a primary driver for increased demand for police and fire

---

<sup>1</sup> As noted above, parks are addressed in Section 3.15, *Recreation*.

protection, schools, and other public services. Because there would be no direct increase in population, there would be no increase in service ratios or response times, and no new or expanded facilities related to the provision of public services would be required.

The Proposed Project may result in construction, maintenance, management, and monitoring of conservation actions needed to implement the Conservation Strategy. The Proposed Project would not induce population growth or require new or physically altered police or fire protection facilities; however, improvements necessary to meet the Conservation Strategy could have an incremental effect on fire or police response times or performance standards during construction with expensive construction equipment to be secured on site, unauthorized personnel in construction zones, or any temporary change in access used by emergency service personnel. However, these incremental effects would be spread throughout the Planning Area and would not be anticipated to substantially affect any one police or fire facility.

As stated in Section 3.8, *Hazards and Hazardous Materials*, the Proposed Project sites are heavily used by the homeless population currently in the area. In addition, wildland fires are common in the Santa Ana River watershed due to natural causes, arson, and unintended incidents that burden the police and fire service systems. The Proposed Project conservation activities could potentially reduce the incidences of crime and arson through removal of homeless encampments from the Proposed Project sites. Post-construction and management and monitoring would also be conducted through park ranger patrol of the Conservation Areas and other areas along the Santa Ana River to deter unauthorized human disturbances, including garbage disposal and homeless encampments, from disturbing and destroying Conservation Areas or adjacent areas. Additionally, there would be no substantial increase in naturally caused fires due to maintaining similar natural, open spaces as currently exist at the sites and through the provision of additional water to the sites to ensure success of newly installed vegetation. If there is no exposure to significant risk of loss, injury, or death involving wildland fires, the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, and no permanent placement of people or structures in the Planning Area is proposed.

Overall, the Proposed Project would not require the physical construction of new public facilities that would result in impacts on the environment. Some benefits would result with the reduction of incidences of crime and arson through reduction in use of the Conservation Areas as homeless encampments as described in more detail in Section 3.13, *Population and Housing*. Accordingly, impacts of the Proposed Project on public services would result be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

### **3.14.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of public service effects that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could affect public services and potential best practices that could be incorporated into future projects to reduce those impacts.

Covered Activities by type and their possible relationship to public services if implemented with permit coverage are shown in Table 3.14-2 and discussed below.

**Table 3.14-2. Construction and Operation of Covered Activities and Their Relevance to Public Services**

<b>Covered Activity</b>	<b>Description</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	New construction could result in demand for police and fire during construction.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Similar to Water Reuse Projects

Potential public service impacts that could result from implementing the types of Covered Activities identified in Table 3.14-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.14-2, new construction could result in demand for police and fire services during construction. The Covered Activities would likely result in no increase in demand for other public services.

The Covered Activities in the Permit Area would include water infrastructure projects that could increase the demand for public services. Because of rapid growth in some portions of the Planning Area, there have already been impacts on public services. The Proposed Project would facilitate a streamlined permitting process for the replacement of aging infrastructure, the expansion or new construction of treatment facilities, and the improvement of flood control and other water infrastructure facilities. The Covered Activities would not induce population growth or require new or physically altered police or fire protection facilities; however the potential for some increase in police or fire protection may occur with operation of new infrastructure facilities via the potential for incidences of criminal activity or fire. These improvements would not substantially increase demand on existing public services and no population increases are proposed. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity public service impacts.

## 3.15 Recreation

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *parks* are defined as publicly owned properties set aside for recreational use by the public and maintained in a natural or landscaped state. Parks can be large areas of land with grass and trees or include sports fields or courts, or play equipment, with associated amenities like parking, water fountains, and restroom facilities, which are generally maintained for public use. For purposes of this analysis, *recreation* is considered as a pastime, diversion, exercise, or other activity affording relaxation and enjoyment. Areas used for recreation generally include parks and open spaces, greenbelts, pedestrian and bicycle trails, playfields, and school district play areas available for public use during non-school hours. *Open space* is considered any open piece of land that is vacant, undeveloped, and accessible to the public. Open spaces are generally covered with grass, trees, shrubs, or other natural vegetation and are not developed with buildings or other built structures.

### 3.15.1 Environmental Setting

#### 3.15.1.1 Regional Setting

San Bernardino County provides a wide variety of recreational activities, including hiking, camping, off-highway vehicle traveling, fishing, horseback riding, star-gazing, winter sports, youth athletics, performing arts, and other entertainment. The Regional Parks Department manages and maintains nine regional parks throughout San Bernardino County, totaling approximately 9,200 acres. The county is considered an outdoor recreational haven with such popular destinations as Mount Baldy, Big Bear, and Lake Arrowhead, which are outside the Planning Area.

Riverside County offers a variety of natural features, including mountain ranges, desert areas, riparian areas and rivers, vernal pools, and oak woodlands and forests over an area of roughly 7,400 square miles. Riverside County maintains 35 regional parks, encompassing roughly 23,317 acres, most of which are outside of the Planning Area. The county also includes popular destinations such as Sycamore Canyon Wilderness Park within the Planning Area, and Lake Perris outside the Planning Area.

#### 3.15.1.2 Planning Area

Figure 3.15-1 shows designated forest, park, public management, and conservation lands and national, State, and local recreational resources within the Planning Area.

National Forests that provide park-like amenities within the Planning Area include the following.

- **San Bernardino National Forest** is a 154,000-acre national monument composed of 71,000 acres in the San Bernardino National Forest and 83,000 acres of Bureau of Land Management lands. Featuring 30 miles of the Pacific Crest National Scenic Trail, 10 miles of the Juan Bautista de Anza National Historic Trail, and 10 miles of the Old Spanish National Historic Trail, the San Bernardino National Forest is a popular destination for camping, hiking, hunting, horseback riding, photography, wildlife viewing, and skiing (U.S. Forest Service 2019a).



- **Angeles National Forest** covers about 700,000 acres and is diverse in appearance and terrain, providing many opportunities for recreation and enjoyment. The Angeles National Forest offers natural environments, spectacular scenery, developed campgrounds and picnic areas, swimming, fishing, skiing, and the solitude of quiet wilderness areas. Trails winding throughout the forest accommodate hikers, equestrians, mountain bikers, and off-highway vehicle enthusiasts (U.S. Forest Service 2021).
- **Cleveland National Forest** is the southernmost national forest in California. Consisting of 460,000 acres, the forest offers a wide variety of terrains and recreational opportunities, including wilderness areas, recreation areas, peaks, and popular travel corridors. Popular activities include picnic areas, hiking through the mountains, exploring on horseback, trail mountain biking, camping overnight, or driving on the Sunrise Scenic Highway (U.S. Forest Service 2019b).

The following State parks are located within the Planning Area.

- **Chino Hills State Park** encompasses approximately 14,173 acres within the hills of Santa Ana Canyon in the city of Chino Hills at 4721 Sapphire Road. This State park spans San Bernardino, Riverside, and Orange counties and offers trails for hikers, bicyclists, and equestrians, picnic areas, equestrian staging areas, corrals, a historic barn and water spigots, and other amenities.
- **Wildwood Canyon Park Property** in the eastern foothills of the San Bernardino Mountains features broad grasslands, canopies of centuries-old interior live oak, and threatened chaparral and sage scrub habitats in San Bernardino County. The property's box canyon is home to hundreds of species of wildlife and native plants. The park also preserves the human history of the area in the form of past ranches and homesteads. Wildwood Canyon is open only for day use from sunrise to sunset. The primary activities are horseback riding, hiking, and biking (California Department of Parks and Recreation 2017).
- **California Citrus State Historic Park** covers approximately 12,452 acres at 9400 Dufferin Avenue within the city of Riverside. The park includes a visitor center, museum and gift shop, activity center, interpretive structure, amphitheater, and picnic area.
- **San Timoteo Canyon Park Property** is new facility in Riverside County and may not be available for public use, pending necessary planning, facility development, and staffing (California Department of Parks and Recreation 2019).



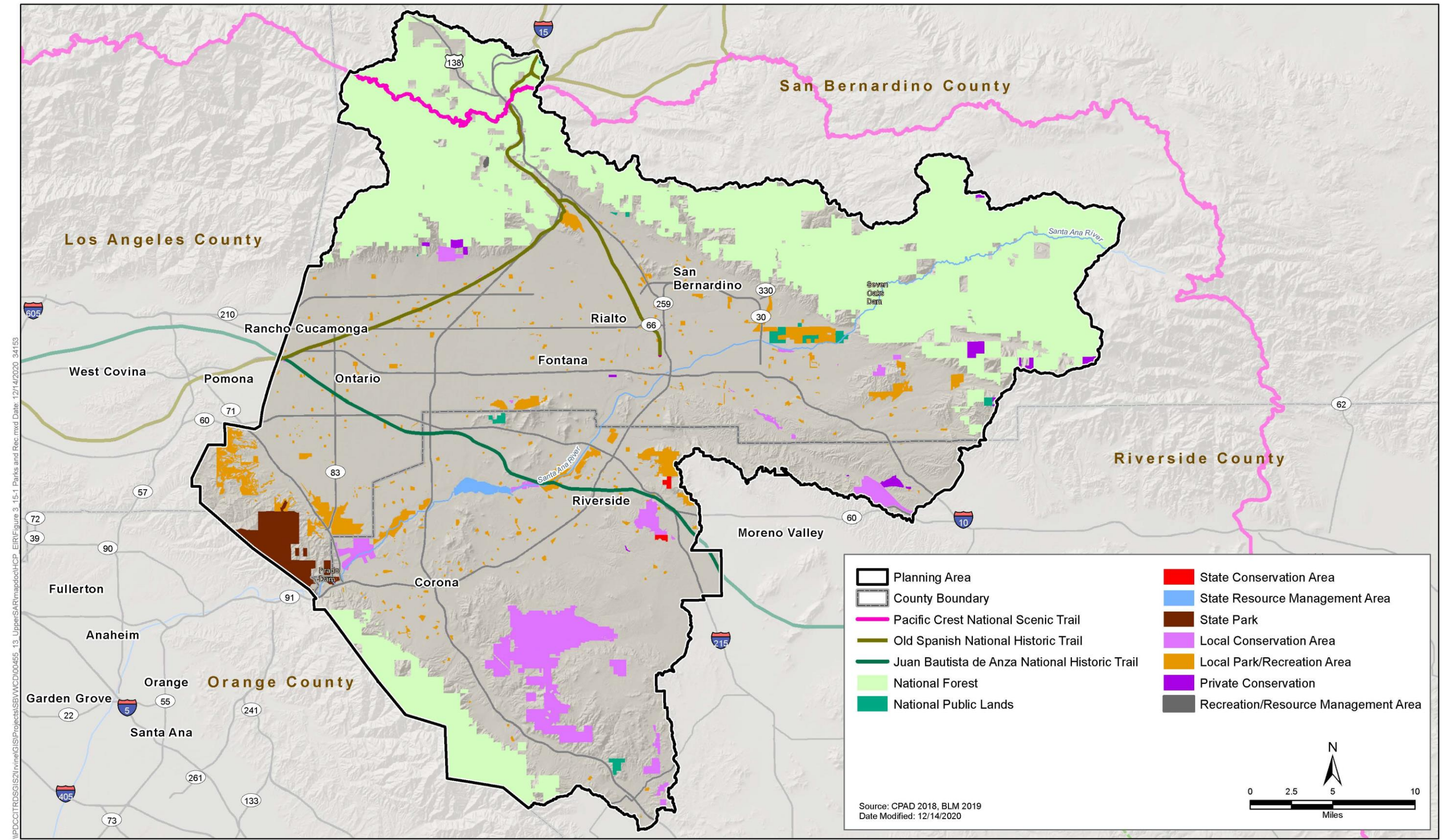


Figure 3.15-1. Recreational Resources

*This page intentionally left blank.*



Table 3.15-1 shows designated national and State resources, including State historic or cultural areas, State parks, resource management areas, conservation areas, national forests, and public lands, within the Planning Area.

**Table 3.15-1. Designated National and State Resources within the Planning Area**

<b>Location</b>	<b>Type of Resource</b>	<b>Resource Name</b>
County of San Bernardino	National Forest	Angeles National Forest
County of San Bernardino	National Forest	Day Canyon Preserve
County of San Bernardino	National Forest	San Bernardino National Forest
County of San Bernardino	State Park	Wildwood Canyon Park Property
County of San Bernardino, County of Riverside, County of Orange	State Park	Chino Hills State Park
County of Riverside	National Forest	Eagle Canyon
County of Riverside, County of Orang	National Forest	Cleveland National Forest
County of Riverside	State Historic or Cultural Area	California Citrus State Historic Park
County of Riverside	State Park	San Timoteo Canyon
County of Riverside	State Resource Management Area	Hidden Valley
County of Riverside	State Conservation Area	Box Springs Reserve
County of Riverside	State Conservation Area	Sycamore Canyon Ecological Reserve

The Santa Ana River provides opportunities for recreation uses in both developed and undeveloped locations. In the immediate vicinity of the Proposed Project Conservation Areas, developed locations and features in San Bernardino County include Prado Regional Park, Israel Beal Park, Veterans Park, Redlands Shooting Park, Redlands Sports Complex, and portions of the Santa Ana River Trail. Developed locations and features Riverside County include Bogart Regional Park, Rancho Jurupa Regional Park, Santa Ana River Regional Park, Hidden Valley Wildlife Area, Louis Robidoux Nature Center, Rutland Park, Martha McLean-Anza Narrows Park, Mount Rubidoux Park, Ryan Bonaminio Park, Carlson Park, Loring Park, Fairmont Park, Fairmont Park Golf Course, Paradise Knolls Golf Course, Van Buren Golf Center, Riverside Lawn Bowling Club, and portions of the Santa Ana River Trail. Undeveloped areas are found throughout much of the river area and may be accessed from existing parks and trails.

The Santa Ana River Trail is a 12-foot-wide, 50.3-mile-long path following the Santa Ana River, a waterway that is cement-lined through much of Orange County but predominantly free flowing in San Bernardino and Riverside Counties (TrailLink n.d.). A gap exists in the trail at the Hidden Valley Wildlife Area east of Norco. From Hidden Valley, the trail continues east through industrial and residential sections of Riverside, with scenic views of the Santa Ana River. Many of the Conservation Areas within the Permit Area are bordered by the Santa Ana River Trail Bike Path. Future plans for the trail may involve it running for 110 uninterrupted miles from Big Bear Lake in the San Bernardino Mountains to the Pacific Coast in Huntington Beach, with the gap in the trail to be filled from Corona to Norco.

## 3.15.2 Regulatory Framework

### 3.15.2.1 Federal Regulations

#### National Forest Land and Resource Management Plans

Portions of the Planning Area are located within the Angeles, Cleveland, and San Bernardino National Forests, which are managed by the U.S. Forest Service in accordance with the Land and Resource Management Plans prepared for each national forest. The purpose of these plans is to guide the integrated protection and use of forest resources. The Resource Management Plans establish goals for maintaining and enhancing the visual quality of the views within the national forests. Table 3.15-1 identifies national resource lands within the Planning Area by county.

#### National Trails

The Pacific Crest National Scenic Trail and the Juan Bautista de Anza and Old Spanish National Historic Trails all pass through the Planning Area and are protected under the National Trails System Act of 1968 and through comprehensive management plans for each trail (National Park Service 2018). The National Trails System Act was established to promote the “enjoyment and appreciation of trails while encouraging greater public access” and establishes four classes of trails: national scenic trails, national historic trails, national recreation trails, and side and connecting trails (National Park Service 2018). Each trail has a management plan with an objective to protect the trails, including protecting natural, cultural, and scenic resources along the trails.

### 3.15.2.2 State Regulations

#### California Public Park Preservation Act

The California Public Park Preservation Act (Public Resources Code Sections 5400–5409) provides that a public agency that acquires public parkland for nonpark use must either pay compensation that is sufficient to acquire substantially equivalent substitute parkland or provide substitute parkland of comparable characteristics. There are several State parks in the Planning Area. Table 3.15-1 lists the State parks by county.

### 3.15.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances and programs related to recreational resources. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, ordinances, and policies are included to represent the Planning Area. The following discussion briefly summarizes the provisions of San Bernardino and Riverside Counties’ general plans and other local plans, policies, ordinances, and programs related to recreational resources. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to recreational resources in full.

## **County of San Bernardino General Plan**

The County of San Bernardino General Plan provides a reference to guide the protection and preservation of open space, recreation, and scenic areas (County of San Bernardino 2007). The Conservation Element seeks to maintain and enhance the natural resources that contribute to the quality of life within the County and provide a balanced approach to resource protection and recreational use of the natural environment.

The Open Space Element seeks to provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents, including expansion of its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, State, regional, and Federal trail systems; develop multi-purpose regional open spaces and advocate multi-use access to public lands; preserve and protect cultural resources; preserve the management of land uses to assist the County's efforts to provide adequate water supply; and achieve air quality improvement, provide habitat wildlife and vegetation, and preserve open space corridors throughout the County.

## **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Natural Resources Element of the San Bernardino Countywide Plan seeks to provide a system of well-planned and maintained parks, trails, and open space that furnishes recreation opportunities for residents, attracts visitors from across the region and around the country, and preserves the natural environment.

## **County of San Bernardino Code of Ordinances**

San Bernardino County does not have any ordinances relevant to potential recreation impacts of the Proposed Project.

## **County of Riverside General Plan**

The County of Riverside General Plan contains the Multipurpose Open Space Element (County of Riverside 2015a) and Healthy Communities Element (County of Riverside 2015b) relevant to recreation. Policies contained in the Multipurpose Open Space Element relate to the preservation, use, and development of a comprehensive open space system consisting of passive open space areas and areas that have recreational, ecological, and scenic value.

Policies contained in the Healthy Communities Element relate to Riverside County's commitment to providing a sustainable multi-use open space network that is accessible, safe, and enjoyable for all residents.

## County of Riverside Code of Ordinances

Riverside County does not have any ordinances relevant to potential recreation impacts of the Proposed Project.

### 3.15.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate recreational resource impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce impacts on recreational resources. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce recreation impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.15.3.1 Significance Criteria

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (Impact REC-1)
- 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 REC-2)

#### 3.15.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project. The following steps were taken to analyze the potential impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on recreational resources.
- Identify and evaluate the impacts on recreational resources resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential recreation impacts.

Impacts related to recreational resources were assessed based on review of the Upper SAR HCP, consultation with the Permittee Agencies and Southern California Edison, and review of applicable local government authorities, such as general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would have significant impacts on recreational resources. Impacts

related to construction and operational impacts on parks and other recreational facilities were assessed based on generally accepted analysis techniques that estimate what types of project activities would impact adjacent recreational resources.

Pollutant emissions and associated health impacts that may affect use of outdoor recreational resources are detailed in Section 3.3, *Air Quality*. The generation of noise and vibration for sensitive uses including recreational uses is detailed in Section 3.12, *Noise*. Impacts related to visual quality and access are provided in Sections 3.1, *Aesthetics*, and Section 3.16, *Transportation*, respectively.

### 3.15.3.3 Impact Analysis and Mitigation

***Impact REC-1: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

Under the Proposed Project, short-term construction impacts from habitat improvement activities could result from Conservation Area actions needed to implement the Conservation Strategy. The Conservation Strategy and conservation measures would not increase the use of existing parks or other recreational facilities and would not result in physical deterioration. Open space would be preserved as part of the HCP Preserve System, which, in some limited cases, could enhance recreation opportunities for the public, such as improvements to areas of the Santa Ana River, which could potentially provide additional amenities to existing recreational facilities already in use. An example of a Proposed Project conservation project that would benefit an existing recreational resource is the Evans Lake project (Conserv. 6) proposed during Phase 1, which covers approximately 115 acres in the city of Riverside's Fairmount Park. Community and recreational facilities would also be part of the Conserv. 6 project, including, but not limited to, a nature trail, amphitheater, archery/BB gun range, community garden, and camping and day use area. These facilities would be constructed outside of the most sensitive habitat improvement areas, and many recreational facilities would incorporate community outreach and education signage and/or programs to inform the public about the natural resources of the site. Another restoration and/or rehabilitation project, the Louis Robidoux Nature Center and Sunnyslope Creek project (Conserv. 7), would re-invigorate key historical elements on the site, including the Nature Center, the pecan grove, the children's garden, interpretive signage, and the trails to and along Sunnyslope Creek. Other improvements that would benefit existing recreational uses include the Hidden Valley Creek project (Conserv. 1) and Hidden Valley Ponds project (Conserv. 2), both within the Hidden Valley Wildlife Area.

Maintenance activities in the Conservation Areas are limited to trash removal and management of nonnative plant species. Other management and monitoring activities (e.g., fence/gate repair, species and habitat surveys) would result in short-term activities and minimal amounts of vehicle trips to Conservation Areas, which would not result in the physical deterioration of any existing recreational facility within or near the Permit Area.

The HCP's Conservation Strategy and conservation measures, including construction of habitat improvement projects, would not increase population in the Permit Area resulting in no increased use of existing neighborhood and regional parks or other recreational facilities, and no significant impact on recreational resources would occur. The Proposed Project is not expected to create additional increases in the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Instead



the Proposed Project would improve existing recreational facilities. Therefore, the Proposed Project would not increase the use of existing neighborhood and regional parks, and impacts would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact REC-2: 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 recreational facility impacts of the Proposed Project from construction, management, and maintenance activities would be the same as those described under *Impact REC-1*. The Proposed Project is not anticipated to increase the need for new or expanded recreational facilities because implementing the Conservation Strategy would not create greater demand for recreational facilities. Therefore, the Proposed Project would not result in adverse impacts on the environment associated with recreation facility expansion and is expected to result in net improvements to recreational resources because improvements to areas of the Santa Ana River and its tributaries would provide additional amenities to existing recreational facilities. Consequently, potential impacts from the Proposed Project on recreational resources and parks would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

### **3.15.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of effects on recreational resources that could occur when other Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create impacts on recreation and potential best practices that could be incorporated into future projects to reduce impacts on recreational resources.

Covered Activities by type and their possible relationship to impacts are shown in Table 3.15-2.

**Table 3.15-2. Construction and Operation of Covered Activities and Their Relevance to Recreational Resources**

Activity Type	Description	Relevance
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Potential land acquisition and construction of new development; temporary construction impacts could affect adjacent existing recreational uses.

Activity Type	Description	Relevance
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Minor disturbance on land that is likely already developed for infrastructure and periodic vehicle trips to sites for operations and maintenance could affect adjacent existing recreational resources.

Potential recreational resource impacts that could result from implementing the types of Covered Activities identified in Table 3.15-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.15-2, impacts associated with constructing, operating, and maintaining these types of Covered Activities would involve temporary construction impacts that could affect adjacent existing recreational uses and operation and maintenance of new or expanded facilities. For construction activities expected to be adjacent to recreational resources and neighborhood parks, Covered Activities would not increase the use of parks and other recreational facilities by increasing demand through inducing population growth. Impacts from construction of the Covered Activities in the Permit Area may result in traffic delays or detours and may temporarily affect access to the recreational resources. Construction activities associated with the Permittees' implementation of the Covered Activities would not result in the increased use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Periodic and intermittent operation and maintenance activities are not expected to affect recreational resources. The Covered Activities are not expected to increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated.

The Covered Activities could result in net improvements to recreational resources because improvements to areas of the Santa Ana River would provide additional amenities to existing recreational facilities. An example of a Covered Activity that would benefit a park is the Santa Ana River Sustainable Parks and Tributaries Water Reuse Project (RPU.10) proposed during Phase 1, and a new pipeline would provide recycled water irrigation to several of Riverside's high-priority parks (Martha McLean-Anza Narrows Park, Rancho Jurupa Regional Park, Fairmont Park, etc.). These infrastructure improvements to existing recreational resources (i.e., recreational project

improvements and the addition of new pipeline to deliver water to parks) would not result in an increase in park use.

No best practice measures are recommended for inclusion in the environmental review for the Permittees' Covered Activities to avoid or minimize impacts on recreational resources. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity recreational resource impacts.

## 3.16 Transportation

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *transportation* involves transit, roadway, bicycle, and pedestrian facilities to facilitate the safe movement and efficiency of a person or good's travel throughout the circulation system.

*Transportation facilities* are publicly owned modes and means of transporting people and goods, including the physical facilities such as any road, bridge, highway, right-of-way, tunnel, overpass, ferry, airport, public transportation facility, vehicle parking facility, port facility, or similar commercial facility.

### 3.16.1 Environmental Setting

#### 3.16.1.1 Regional Setting

##### **San Bernardino County**

San Bernardino County is on the eastern edge of the Los Angeles metropolitan region, is bordered by Inyo County to the north, Kern and Los Angeles Counties to the west, Orange and Riverside Counties to the south, and the states of Arizona and Nevada to the east. The county acts as the gateway between Southern California and the continental United States. It is also the largest county within the continental United States by area, containing three very distinct regions—valley, mountain, and desert. The vast majority of travel trips in the county are made by automobile, using the existing network of freeways and arterial highways. The county has approximately 10,000 miles of roadways, including six Federal interstate highways, two Federal U.S. highways, and 18 State highways (County of San Bernardino Economic Development Agency 2019).

The highway system also includes two of the nation's most important interstate highways, Interstate (I-) 10 and I-15, which link Southern California to the western United States.

##### **Riverside County**

Riverside County covers 7,208 square miles, extends from the greater Los Angeles area, and is generally bordered by San Bernardino County to the north, Orange County to the west, San Diego County to the south, and the Arizona border to the east. Riverside County's transportation system is composed of numerous State highways (both freeways and arterial highways), as well as numerous county and city routes.

#### 3.16.1.2 Planning Area

Major freeways and roadways within the Planning Area are shown on Figure 3.16-1.

##### **Trails**

The Santa Ana River Trail is a 12-foot-wide, 50.3-mile-long multipurpose path following the Santa Ana River, a waterway that is cement-lined through much of Orange County but predominantly free

flowing in San Bernardino and Riverside Counties (TrailLink n.d.). A gap exists in the trail at the Hidden Valley Wildlife Area east of Norco. From Hidden Valley, the trail continues east through both industrial and residential sections of Riverside, with scenic views of the Santa Ana River. Many of the Conservation Areas within the Permit Area are bordered by the Santa Ana River Trail multipurpose path. Future plans for the trail may involve eventually running for 110 uninterrupted miles from Big Bear Lake in the San Bernardino Mountains to the Pacific Coast in Huntington Beach, with the gap in the trail to be filled from Corona to Norco.

## Regional and Local Roadways

Other facilities that run through the Planning Area include I-210, I-215, State Route (SR-) 60, and SR-71. Transit (bus and commuter rail) service is also an increasingly important mode of transportation in the more urbanized parts of the county. A small fraction of the trips is made utilizing other modes of transportation, such as air, intercity rail, bicycling, and walking (County of San Bernardino 2007). San Bernardino County has experienced significant growth over the past few decades. Growth is expected to continue at a steady pace, placing added demands on the transportation system (SANBAG 2015).

Major transportation facilities that run through Riverside County within the Planning Area include I-10, I-15, I-215, SR-91, SR-60, SR-210, and SR-71, as shown in Figure 3.16-1.

Many of the Conservation Areas are in more rural areas within the Permit Area. However, a few major arterials are adjacent to these sites, for example Van Buren Boulevard is one of the main crossings of the Santa Ana River in the vicinity of Conservation Areas. The following large roadways occur in the Planning Area.

- Van Buren Boulevard in the city of Riverside is a 120-foot arterial with six lanes south of Jurupa Avenue. North of Jurupa Avenue, Van Buren Boulevard is a 100-foot arterial with four lanes. Van Buren Boulevard in the city of Jurupa Valley is a 220-foot expressway north of the Santa Ana River with eight lanes.
- Jurupa Avenue in the city of Riverside is an 88-foot transitioning to 110-foot arterial with four to six lanes.
- Grand Avenue in the city of Riverside is a 66-foot collector with six lanes.
- Mission Inn Avenue in the city of Riverside is a 110-foot arterial with six lanes west of the Santa Ana River Trail and is a 110-foot arterial with six lanes east of the Santa Ana River Trail.
- Mission Boulevard in the city of Jurupa Valley is a 153-foot arterial with four lanes.
- Limonite Avenue in the city of Jurupa Valley is a 153-foot urban arterial with five lanes.
- River Road in the city of Corona is an 88-foot secondary arterial with four lanes. River Road turns into Archibald Street in the city of Eastvale and is a 118-foot major collector with two lanes near the Santa Ana River; farther north it becomes a 152-foot urban arterial with four lanes.
- Auto Center Drive in the city of Corona is an 88-foot secondary arterial with four lanes.
- Butterfield Drive in the city of Corona is a 68-foot collector with two lanes.
- Mount Vernon Avenue in the city of Colton is a 96-foot major arterial with four lanes.
- M Street in the city of Colton is a 64-foot collector street with two lanes.







*This page intentionally left blank.*

- East San Bernardino Avenue in the city of Redlands is minor arterial with two lanes.
- East Pioneer Avenue in the city of Redlands is a 73-foot collector street with two lanes. Greenspot Road in the city of Highland is an 80-foot major highway with four lanes.
- Cone Camp Road in the city of Highland is a 44-foot collector street with two lanes.

The transit system includes public transit systems, common bus carriers, AMTRAK (intercity rail service), Metrolink (commuter rail service), and other local agency transit and paratransit services (San Bernardino County Transportation Authority, Omnitrans, Riverside County Transportation Commission, Riverside County Transportation Department, Riverside Transit Agency, etc.). The local transportation system includes general aviation facilities, passenger air service, freight rail service, bicycle facilities, and multipurpose trails.

## 3.16.2 Regulatory Framework

### 3.16.2.1 Federal Regulations

There are no Federal laws or regulations pertaining to transportation and traffic that are relevant to the Proposed Project.

### 3.16.2.2 State Regulations

#### California Department of Transportation

The California Department of Transportation (Caltrans) and the California Transportation Commission are responsible for producing a long-range transportation plan for the planning of statewide facilities. Designated State Route and Interstate highway facilities are operated and maintained under the jurisdiction of Caltrans, except where management of the facility has been delegated to the county transportation authority. Caltrans is responsible for permitting and regulation of the use of State roadways. Caltrans has jurisdiction over State highways and sets maximum load limits for trucks and safety requirements for oversized vehicles that operate on highways. Caltrans guidance indicates that an EIR should include possible effects on transportation, including effects on passengers and freight transportations; effects on all modes of transport (including bicycle and pedestrian transport); effects from relevant perspectives (including local, regional, and State perspectives); and effects on roadway traffic congestion.

### 3.16.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan and other local plans, policies, ordinances, and programs related to transportation. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, and policies, and county ordinances are included to represent the Planning Area. The following discussion briefly summarizes the provisions of the general plans and other local plans, policies, ordinances, and programs related to transportation. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to transportation in full. The Planning Area is also located



within the Southern California Association of Governments' (SCAG's) regional boundary, as discussed below.

### **Southern California Association of Governments**

SCAG is the nation's largest metropolitan planning organization, representing six counties, including San Bernardino and Riverside Counties, 191 cities, and more than 19 million residents. SCAG is mandated by the Federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality (SCAG 2016).

SCAG prepares a multi-modal, long-range planning document, the Regional Transportation Plan (RTP), in coordination with Federal, State, and other regional, subregional, and local agencies in Southern California. The RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances. The RTP is prepared every 3 years and reflects the current future horizon based on a 20-year projection of needs. The RTP's primary use is as a regional long-range plan for Federally funded transportation projects. It also serves as a comprehensive, coordinated transportation plan for all governmental jurisdictions within the region. Each agency responsible for transportation, such as local cities, the County of Riverside, and Caltrans, has different transportation implementation responsibilities under the RTP. The RTP relies on the plans and policies governing circulation and transportation in each county to identify the region's future multi-modal transportation system (County of Riverside 2017).

The SCAG RTP/Sustainable Communities Strategy (SCS) plan is a long-range transportation plan that is developed and updated by SCAG every 4 years. The RTP/SCS provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project over a 20- to 25-year period, the RTP/SCS considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. Goals include developing long-range regional plans and strategies that provide for efficient movement of people, goods, and information; enhance economic growth and international trade; and improve the environment and quality of life (SCAG 2016).

### **County of San Bernardino General Plan**

The County of San Bernardino General Plan (County of San Bernardino 2007), Circulation and Infrastructure Element provides for a comprehensive transportation system to be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multi-modal transportation system to accommodate the County's mobility needs and objectives through coordination and cooperation between the County and the local municipalities, adjacent counties and cities, Caltrans, and the San Bernardino Association of Governments.

Goals include a comprehensive transportation system that safely and effectively operates at regional, countywide, community, and neighborhood scales to provide connectors between communities and mobility between jobs, residences, and recreational opportunities; and tries to promote greater use of non-motorized transportation through a system of trails for bicycles, pedestrians, and equestrians.

## San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical general plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Countywide Plan's Transportation and Mobility Element goals include ensuring adequate roadway capacity and emergency access with the minimum level of service standards during peak commute periods. The element supports efficient development of road, rail, and an air transportation system that supports efficient movement of goods and people. Policies seek to promote a context-sensitive approach to mobility and encourage a pattern of development and a transportation system that minimizes vehicle miles traveled (VMT).

## County of San Bernardino Code of Ordinances

San Bernardino County does not have any ordinances relevant to potential transportation impacts of the Proposed Project.

## County of Riverside General Plan

The Riverside County General Plan, Circulation Element, includes goals, policies, and implementation measures that address the transportation system in the county. Transportation system improvements should be implemented to minimize disturbance of the natural environment and other sensitive environmental features covered under the California Environmental Quality Act (CEQA) and National Environmental Policy Act guidelines (County of Riverside 2017).

## County of Riverside Code of Ordinances

Riverside County does not have any ordinances relevant to potential transportation impacts of the Proposed Project.

### 3.16.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate transportation impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on transportation. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### 3.16.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Impact TRAN-1)
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)? (Impact TRAN-2)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (Impact TRAN-3)
- Result in inadequate emergency access? (Impact TRAN-1)

Section 15064.3 of the State CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Generally, VMT is the most appropriate measure of transportation impacts. For the purposes of this analysis, VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided below, a project's effect on automobile delay does not constitute a significant environmental impact. Section 15064.3 of the State CEQA Guidelines provides the following criteria for analyzing transportation impacts.

- **Land Use Projects.** VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less-than-significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less-than-significant transportation impact.
- **Transportation Projects.** Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less-than-significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152 of the State CEQA Guidelines.
- **Qualitative Analysis.** If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT 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.
- **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms per capita, per household, or in any other measure. A lead agency may use models to estimate a project's VMT, and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate VMT and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 of the State CEQA Guidelines shall apply to the analysis described in this section.

The provisions of this section apply prospectively as described in Section 15007 of the State CEQA Guidelines. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

Per Section 15064.3(b)(3) of the State CEQA Guidelines, a qualitative analysis of construction and other traffic impacts was undertaken for the Proposed Project.

### 3.16.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential transportation impacts of the Proposed Project.

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in any conflicts with any programs and policies that address the circulation system or result in transportation impacts.
- Identify and evaluate potential impacts related to transportation resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

Impacts related to transportation were assessed based review of the HCP, consultation with the Permittees, and review of applicable documents such as general plans for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines and standard professional practice were used to determine whether the Proposed Project would have a significant impact on transportation. Impacts related to construction and operational transportation and traffic impacts were assessed based on generally accepted analysis techniques that estimate the transportation impacts in areas where physical land disturbance is needed to implement a project. Because only general locations and durations of habitat improvement activities and other conservation actions are currently known, a qualitative approach to transportation impact analysis is provided. This approach relies on typical VMT and assumptions about the types of vehicle trips that would be used to implement the Proposed Project. Where applicable, potential benefits to transportation and access from implementing the Proposed Project are described.

Construction activities would temporarily increase vehicle trips and VMT, and occasional trips would be necessary for Conservation Area management, monitoring, and maintenance. Activities that require physical changes to the environment, such as habitat improvement actions, would primarily generate traffic through the use of mobile and stationary construction equipment, and vehicle movement. The resulting traffic would be short term and cease once construction activities are complete.

Because the Proposed Project includes issuance of incidental take permits for Covered Activities, a summary of the types of transportation impacts that could result from implementing future Covered Activities is provided for informational purposes and potential future use by Permittees when Covered Activities are implemented (see Chapter 2, Section 2.2.5, *Covered Activities*, and Section 3.16.4, *Summary of Potential Types of Impacts of Covered Activities*, below).

### 3.16.3.3 Impact Analysis and Mitigation

#### ***Impact TRAN-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?***

The Proposed Project would not involve alterations to the existing traffic or circulation system in the Planning Area or nearby communities. Construction associated with habitat improvement activities may temporarily interfere with the nearby bike paths or trails, such as the Santa Ana River Trail Bike Path, adjacent to many of the Conservation Areas. Generally, construction vehicles/equipment interfering with traffic along any bike path or trail would likely be guided by personnel using signs and flags to direct traffic to ensure that access is maintained. Due to the temporary nature of the construction phase of the habitat improvement projects, long-term impacts on the flow of bicycle and pedestrian traffic that utilize existing facilities would be minimal. Short-term traffic associated with habitat improvement construction activities is not anticipated to significantly affect the traffic levels of the surrounding areas, as construction vehicles/equipment would be mainly contained on site. Offsite traffic volumes would largely be limited to the transport of construction debris from Conservation Areas to county landfills in San Bernardino and Riverside counties. As such, short-term impacts would be less than significant.

Following completion of construction associated with habitat improvement activities, any potential increases to the traffic volume in the surrounding areas would be limited to trips taken by vehicles to remove trash and nonnative plant material, and to conduct monitoring and management activities. In the long term, after the completion of proposed habitat improvements, the Proposed Project is not anticipated to generate any additional vehicular traffic except for monitoring, management, and maintenance activities, which would be intermittent and as needed, similar to current conditions, or park ranger patrol monitoring. Habitat management activities would be performed periodically at Conservation Areas and include actions such as minor earth-moving or vegetation management activities, which, because of their temporary nature, are not expected to result in long-term impacts on traffic and or the circulation system. No impact related to management, monitoring, and maintenance vehicle traffic would result with implementation of the Proposed Project. As such, impacts on traffic in the surrounding circulation system would be minimal.

As there would be no additional population growth or traffic generation due to a change or expansion in land uses at Conservation Areas, no conflicts in the circulation system would occur and a less-than-significant impact is anticipated. Some temporary access roads could be built to access the sites. However, these roads would not interfere with transportation plans, programs, or ordinances addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Construction equipment would be used during initial habitat improvement activities, which would generate minimal amounts of traffic temporarily. Many of the maintenance, monitoring, and management activities would occur in natural areas, and would generally be located away from high-density residential and commercial areas. Long-term habitat management activities would typically be of short duration, temporary, and intermittent, and may result in temporary transportation impacts due to worker commutes to Conservation Areas. As these additional vehicle trips would not be substantial during construction associated with habitat improvement activities, or during short and long-term management, monitoring, and maintenance activities of the Conservation Areas, these short term and intermittent vehicle trips would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the Proposed Project would have a **less-than-**

**significant** impact during construction and during short- and long-term management of the conservation sites, and no conflicts would occur.

#### **Mitigation Measures**

No mitigation is required.

#### ***Impact TRAN-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?***

Under the Proposed Project, short-term increases in VMT could result from conservation actions needed to implement the Conservation Strategy. These activities would occur intermittently and periodically, and conservation activities associated with the Proposed Project could result in temporary transportation impacts. Also, vehicle trips associated with habitat improvement construction and management and monitoring of the Proposed Project would be staggered and would not all occur in the same phase or in the same location.

Construction associated with the habitat improvement actions is not expected to result in a noticeable increase in traffic volumes. The Proposed Project may result in temporary increases in VMT during habitat improvement construction activities, and construction equipment would be delivered to and removed from each site as needed. Construction activities associated with habitat restoration actions that involve heavy equipment to be used for longer periods of time at conservation sites could result in a temporary increase in vehicle trips. However, the majority of activities under the Proposed Project would be located away from high-density residential and commercial areas, and the short-term duration of habitat improvement construction activities would not typically generate a substantial amount of traffic. As such, these activities are not expected to have an impact on VMT (as defined under State CEQA Guidelines §15064.3(b)(3)), and a qualitative analysis of construction traffic is not required, as VMT are not expected to increase substantially in the vicinity of the Conservation Areas and habitat improvement construction activities would be temporary and would not substantially affect the regional roadway network. Overall, VMT is not expected to increase as a result of implementation of the Proposed Project due to the nature of those types of activities.

Temporary transportation impacts may result from maintenance, monitoring, and management activities associated with the long-term monitoring and management of the Conservation Areas. Temporary impacts may occur due to occasional trips to and from sites. The Proposed Project could result in an increase in VMT from employee trips to and from conservation sites associated with long-term management. These impacts would be intermittent and short term in nature. After the completion of initial habitat improvement activities, the Proposed Project is not anticipated to generate any additional vehicular traffic, and the amount of VMT would not noticeably change from existing conditions during operations.

State CEQA Guidelines §15064.3(b) generally requires CEQA documents for land use and transportation projects to evaluate impacts of such projects on VMT. As a project that involves habitat improvement (restoration and/or rehabilitation) and long-term management and monitoring of conservation sites, this Proposed Project would not generate additional operational vehicular traffic and thus would not generate additional VMT. Overall, construction associated with habitat improvement actions and long-term maintenance, management, and monitoring activities under the Proposed Project are not expected to result in substantial increases in VMT, and a less-than-significant impact would result. The Proposed Project would not generate additional operational vehicular traffic and thus would not generate additional VMT. Short-term traffic

associated with habitat improvement project construction is not anticipated to significantly affect the traffic levels of the surrounding areas or cause congestion, as construction vehicles would be mainly contained on site and used temporarily. Therefore, impacts related to traffic during construction associated with habitat improvement actions and long-term management and monitoring would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

#### ***Impact TRAN-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

Construction associated with the Proposed Project would require the temporary use of heavy construction equipment in staging areas, on access roads, and where traffic enters and exits the conservation site. However, most of these activities would generally be located in relatively remote areas away from more intensely used residential and commercial areas. In addition, the Proposed Project would result in minor, temporary effects on traffic as a result of conservation activities, and only minor changes related to design features of the roadways. As such, impacts regarding safety hazards within the Permit Area would not be anticipated.

Temporary transportation impacts are expected as a result of long-term management and monitoring of the Conservation Areas. Temporary impacts may result due to occasional trips to and from sites. The Proposed Project would have minor, temporary effects on traffic from long-term management activities, and minor changes related to design features of the roadways could occur. However, the Proposed Project would not involve alterations to the existing traffic or circulation system in the Project Area or nearby communities. As such, impacts regarding safety hazards would not be anticipated.

The Proposed Project would not include design features or introduce incompatible uses that would affect roadways and is, therefore, not expected to result in substantially increased hazards. Additionally, the Proposed Project would not permanently alter the alignment of the existing roadway network serving the area. No safety concerns relative to construction associated with habitat improvement activities would be expected due to typical construction signage, flagging, and health and safety construction plans and procedures associated with construction contracts and permit conditions. Active construction activities would maintain access to pedestrians using the Santa Ana River Trail multipurpose path and other nearby trails in the Permit Area and would be planned to minimize impacts. There would be no short- or long-term effects on the use of the bike path by pedestrians or cyclists or to the existing roadway network. Therefore, initial and long-term impacts from the Proposed Project related to hazards or incompatible uses would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

#### ***Impact TRAN-4: Result in inadequate emergency access?***

Construction associated with habitat improvement activities would require the temporary use of heavy construction equipment in staging areas, on access roads, and where traffic enters and exits conservation sites. However, these activities would occur during different phases of the Project in

various locations throughout the Permit Area. Therefore, vehicle trips associated with construction of the restoration projects would be staggered and would not all occur in the same place or time period. This would also minimize constraints on emergency access and the transportation system in the Permit Area.

Construction associated with restoration activities would be minor and short term and would generally occur in areas that are not densely populated. Construction activities are not expected to result in inadequate emergency access. Once construction activities are completed, all roadways would be restored to their previous condition, and subsequent activities associated with conservation activities (e.g., maintenance, management, and monitoring) would result in little additional traffic on roadways within the Permit Area. As minor, short-term transportation impacts during long-term management are expected intermittently, very few vehicle trips would occur. These activities are not expected to result in inadequate emergency access, and no changes to local roadways would occur. As such, it is not anticipated that there would be conflicts with emergency access providers, and inadequate emergency access would not result.

The Proposed Project would not impair emergency access within the Permit Area. As discussed above, traffic in the areas surrounding Conservation Areas is anticipated to be minimal and limited to onsite construction-related equipment entering and exiting the Project Areas. As such, the Proposed Project would not result in inadequate access for any emergency response entities. Because no habitable structures or buildings are proposed, and the Proposed Project would only improve the existing onsite natural habitat, emergency access would be adequate, similar to existing conditions. Therefore, impacts related to emergency access during construction associated with habitat improvement actions and long-term management would be **less than significant**.

#### **Mitigation Measures**

No mitigation is required.

### **3.16.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of transportation effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create transportation impacts and potential best practices that could be incorporated into future projects to reduce transportation and traffic impacts.

Covered Activities by type and their possible relationship to transportation impacts if implemented with permit coverage are shown in Table 3.16-1 and discussed below.



**Table 3.16-1. Construction and Operation of Covered Activities and Their Relevance to Transportation**

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	May require use of construction equipment on roadways, construction activities would result in disturbance to adjacent uses as a result of construction traffic and potential detours, periodic vehicle trips to sites, and additional VMT during operation.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance (O&M)	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Periodic vehicle trips to sites for maintenance and operations.

Potential transportation impacts that could result from implementing the types of Covered Activities identified in Table 3.16-1 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.16-1, vehicle trips associated with construction and operation of the Covered Activities may require use of construction equipment on roadways and periodic vehicle trips to sites. The Covered Activities may also result in temporary increases in VMT during construction activities. Construction activities that involve heavy equipment to be used for longer periods of time could result in a temporary increase of vehicle trips and additional worker trips, and may require a VMT analysis prior to project implementation. Construction activities could also disturb adjacent uses from construction traffic and potential detours.

Covered Activities could result in an increase in VMT from employee trips to and from water infrastructure project sites during operations. The Covered Activities would also carry out routine operations and maintenance (O&M) activities in the Permit Area. These would be short term,

relatively temporary, and intermittent, and may result in temporary transportation impacts due to the small increases in VMT. As population would not increase because of implementation of the Covered Activities, there would be no additional growth or land uses that result in high levels of traffic generation, and no conflicts would occur. Implementation of the Covered Activities is not expected to result in substantial increases in VMT, and no conflicts with State CEQA Guidelines §15064.3, subdivision (b) or with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, are anticipated.

Covered Activities are not expected to result in inadequate emergency access. Covered Activities would result in minor changes related to design features of the roadways, and impacts regarding safety hazards within the Permit Area are not anticipated. Once construction activities are completed, all roadways would be restored to their previous condition, and subsequent activities associated with the implementation of Covered Activities (e.g., O&M activities) would result in little additional traffic on roadways within the Permit Area. Construction activities would be minor and short term and would generally occur in areas that are not densely populated. As such, it is not anticipated that there would be conflicts with emergency access providers, and inadequate emergency access or safety hazards would not result.

Recommended best practices to reduce traffic impacts of future Covered Activities that involve long-term construction activities scheduled for more than 6 months include preparing a traffic control plan and a notification plan, and coordination with local jurisdictions to reduce traffic impacts on any affected residents and businesses. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity transportation impacts and best practices that could be employed to reduce potential impacts.

## 3.17 Tribal Cultural Resources

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *tribal cultural resources* (TCRs), as defined by Public Resources Code (PRC) Section 21074, can be sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the National Register of Historical Places (NRHP) or California Register of Historical Resources (CRHR), or listed in local register of historic resources. Additionally, a TCR can be a resource that the lead agency determines, in its discretion, to be a TCR.

### 3.17.1 Environmental Setting

#### 3.17.1.1 Regional Setting

##### Cultural Resources

Prehistoric and historic period background information is provided in Section 3.5, *Cultural Resources*. Section 3.5 also includes a detailed list of NRHP sites and California Historical Landmarks, some of which may be TCRs.

##### Ethnography

Ethnographic studies show that portions of the Project Area were occupied by the Gabrielino/Tongva, Cahuilla, Luiseño, Juaneño/Acjachemen, and the Serrano Native American groups. Further ethnographic background is provided in Section 3.5, *Cultural Resources*.

#### 3.17.1.2 Planning Area Setting

The Planning Area is primarily located in San Bernardino and Riverside Counties, California (Figures 1-1 and 1-4) and encompasses approximately 862,966 acres. A detailed description of the Planning Area setting is provided in Section 3.5, *Cultural Resources*.

### 3.17.2 Regulatory Framework

#### 3.17.2.1 Federal Regulations

TCRs are specifically required by the California Environmental Quality Act (CEQA) to be addressed in CEQA documents. No Federal regulations apply to this California-specific requirement.

#### 3.17.2.2 State Regulations

##### Assembly Bill 52

On September 25, 2014, California Governor Jerry Brown signed into law Assembly Bill (AB) 52, which amended PRC Section 5097.94 and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to establish a new category of environmental resources

that must be considered under CEQA: TCRs. This amendment took effect on July 1, 2015. TCRs are defined as either (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included in the CRHR or a local register of historical resources, or that are determined to be eligible for inclusion in the CRHR; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the CRHR. For projects with applications filed on or after July 1, 2015, lead agencies are also required to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area, and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or EIR is required for a project.

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.” Furthermore, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects on TCRs, the consultation must include those topics (PRC Section 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)).

### 3.17.2.3 Local Regulations

Local regulations regarding cultural resources are presented in Section 3.5, *Cultural Resources*. No local regulations specifically address TCRs.

## 3.17.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate TCR impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on TCR. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### 3.17.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
  - a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)

- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? (Impact TCR-1)

### 3.17.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential impacts of the Proposed Project:

- Conduct a Sacred Land File search by the Native American Heritage Commission (NAHC).
- Conduct tribal consultation to gather input from local tribal groups concerning existing tribal cultural resources.
- Review and document publicly available data listing NRHP and CRHR sites within the Planning Area.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.

Direct impacts are those effects that occur at the same time and place as project implementations, such as destruction or removal of TCRs. Indirect impacts are those effects that occur either later in time or a distance from project activities, but are reasonably foreseeable, including destruction or removal of TCRs. Direct and indirect impacts can be permanent or temporary.

Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts on TCRs. Impacts on TCRs were assessed on the basis of the Planning Area and review of applicable local government authorities, including the general plans of the Counties of San Bernardino and Riverside, and applicable ordinances. Impacts related to construction and operational impacts on TCRs were assessed based on generally accepted analysis techniques that estimate the TCR impacts in areas where physical land disturbance is needed to implement the Proposed Project.

Because only general locations and durations of habitat improvement activities and conservation actions are currently known, a qualitative approach to TCR impact analysis is provided herein, which relies on typical construction methods and assumptions about the types of activities that would occur to implement, maintain, and manage the Proposed Project. The analysis is based on judgment of the types of TCR impacts that could result from implementing the Proposed Project, considering the types of TCRs recorded to date within the Planning Area. This EIR will serve as the documentation of efforts to identify TCRs and their potentially significant effects for the purpose of CEQA.

The Planning Area is an expansive territory and has been the home to Native American people for thousands of years. Human occupation in the Planning Area is well documented through the previous recordation of thousands of archaeological sites within its boundaries. The activities of the people living here became embedded in the local culture and tradition, which is still alive today. The Planning Area housed all aspects of Native American life prior to European contact from ceremonial

and sacred sites to traditional foods and medicines. The TCRs in the Planning Area range from the Santa Ana River, mineral outcroppings, pre-contact village sites, plants utilized for food, medicine and craft, and traditional landscape. The Planning Area is rich in its variety and extent of TCRs. Therefore, the Proposed Project would have the potential to result in impacts on TCRs. It is reasonable to assume that the implementation of habitat improvement activities at Conservation Areas included in the Proposed Project may affect known, as well as currently unidentified, TCRs.

Impacts on TCRs can be direct or indirect and generally occur in three categories: (1) direct disturbance to a TCR, (2) direct disturbance to the setting of a TCR, and (3) indirect impacts on resources from adjacent or nearby activities, such as providing access to TCRs not previously accessible, through ground vibration and corrosive air contaminants or by the introduction of elements that detract from the resource integrity of the surroundings. For example, TCRs can suffer indirect effects by the development of new transportation facilities if those facilities change the surroundings to such a degree that the environmental setting is no longer compatible or such that the activity's intrusive effects cause the resource to no longer be enjoyed for its original intended purpose (e.g., tourism).

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify, and address potential adverse impacts on TCRs and reduce the potential for delay and conflict in the environmental review process (see PRC Section 21083.3.2). Information may also be available from NAHC's Sacred Lands File per PRC Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c), as discussed above under Section 3.17.2.2, *State Regulations*, contains provisions specific to confidentiality.

California Native American tribes traditionally and culturally affiliated with the Planning Area are required to be consulted pursuant to PRC Section 21080.3.1.

Because the Proposed Project includes issuance of incidental take permits for Covered Activities, a summary of the types of TCR impacts that could result from implementing future Covered Activities is provided for informational purposes and potential future use by Permittees when Covered Activities are implemented (see Chapter 2, *Project Description*, for a discussion of Covered Activities, as well as Section 3.17.4, *Summary of Potential Types of Impacts of Covered Activities*).

## **Native American Outreach**

A letter was sent to NAHC on February 19, 2019, requesting a Sacred Lands File search and list of potentially interested Native American groups and individuals. NAHC responded on February 21, 2019, stating that a search of the Sacred Lands records files revealed that Sacred Lands or traditional cultural properties are located within the Planning Area. NAHC also provided a list of 33 Native American contacts who might have knowledge of cultural resources in the Planning Area.

San Bernardino Valley Municipal Water District (Valley District) sent out initial consultation letters on September 25, 2019, to four Native American representatives to assess recommendations or concerns regarding the project to: Charles Alvarez representing the Gabrieleno-Tongva; Lee Clauss, Director of Cultural Resources from the San Manuel Band of Mission Indians (SMBMI); Andrew Salas, Chairman of the Gabrieleno Band of Mission Indians, Kizh Nation; and Denisa Torres, Cultural Resources Manager of the Morongo Band of Mission Indians. A summary of the correspondences is provided below.

## A) Gabrieleno-Tongva, Charles Alvarez

- On April 30, 2020, Valley District placed a phone call to Mr. Alvarez. During this call Mr. Alvarez provided an updated email address.
- On May 7, 2020, a test email message was sent to Mr. Alvarez to make sure he was receiving messages.
- On May 7, 2020, a message was confirmed received by Mr. Alvarez.
- On May 7, 2020, Valley District emailed requesting to meet to discuss the Proposed Project. Several options for meeting dates were provided. No response.
- On June 22, 2020, Valley District emailed a second time requesting a meeting to discuss the Proposed Project. No response to date.

## B) San Manuel Band of Mission Indians, Lee Clauss, Director of Cultural Resources

- Jessica Mauck responded via email on October 11, 2019, and stated the SMBMI appreciates the opportunity to review the Proposed Project documentation.
- The email states that the majority of the Planning Area is significant to the SMBMI, including major waterways like the Santa Ana River.
- The SMBMI is very supportive of actions like habitat conservation, particularly for flora and fauna of cultural importance; however, the process by which conservation actions occur can affect spaces of cultural significance.
- The SMBMI requests to consult on the Proposed Project and the following information:
  - Language within the Upper SAR HCP
  - Whether or not the “Covered Activities” will be subject to environmental review (and therefore, tribal consultation) or if this effort is meant to be a singular review
- On April 24, 2020, Valley District responded that the SMBMI will be given notification when the draft document is made publicly available; the environmental review will be comprehensive; and the SMBMI will be provided access to conserved lands to harvest medicinal plants. In this message, Valley District requested to set up a follow up meeting to discuss the Project.
- To date, no additional messages were received by Valley District.

## C) Gabrieleno Band of Mission Indians – Kizh Nation, Andrew Salas, Chairman

- On October 22, 2019, responded via email with a letter.
- The Kizh Nation states that the Proposed Project is within its Ancestral Tribal Territory.
- They requested to schedule consultation with Valley District to discuss the Proposed Project in further detail.
- On April 24, 2020, Valley District responded that the Kizh Nation will receive notification when the draft document is publicly available and included a request to schedule a consultation meeting.
- On April 24, 2020, Brandy Salas responded that the next available phone consultation meeting would be on July 1, 2020.

- On May 20, 2020, Valley District and the Kizh Nation conducted a government-to-government meeting via conference call.

D) Morongo Band of Mission Indians, Denisa Torres, Cultural Resources Manager

- On November 1, 2019, Travis Armstrong responded via email stating that the Proposed Project is within the ancestral and traditional use area of the Cahuilla and Serrano people. The land within this area are potentially sensitive for buried deposits regardless of the presence of surface artifacts and features.
- The Morongo requests initiation of government-to-government consultation and requests the following from the lead agency for meaningful consultation:
  - A records search conducted at the appropriate California Historical Resources Information System center with at least a 1.0-mile search radius; copies of the reports and site records generated through this search to allow comparison to Morongo Band records to begin productive consultation.
  - Tribal participation during survey and testing is requested. For any previously conducted cultural resources work conducted for the Proposed Project, the office requests a copy of the Phase I study or other cultural assessments as soon as available.
- Mr. Armstrong also stated that TCRs are non-renewable resources. Avoidance is the preferred alternative over removal, reburial, or monitoring. Out of respect for the ancestors of the Morongo people who left them there, and for the people of today and for generations to come, the Morongo Band of Mission Indians looks forward to working with Valley District to protect these irreplaceable resources.
- On April 24, 2020, Valley District responded that records searches will be made available when completed, and draft and final copies of reports will be made available; tribal participation is granted on a voluntary basis.
- On April 24, 2020, Sasha Waters from the Morongo Band of Mission Indians responded that the Tribal Historic Preservation Officer position is vacant and they will be hiring a new Tribal Historic Preservation Officer; they would like to wait to respond until the new hire is in place.
- On April 24, 2020, Valley District responded that it would reach out again in a few weeks.
- On April 13, 2021, Valley District sent a follow up message to Sasha Waters to see if a meeting could be scheduled to discuss the Proposed Project. No response to date.



### 3.17.3.3 Impacts Analysis and Mitigation

***Impact TCR-1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (a) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k); (b) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

Efforts to identify TCRs included a Sacred Lands File search with NAHC and consultation with Native American tribes through AB 52. The Sacred Lands File search request to NAHC revealed that there are sacred lands within the Planning Area.

The Proposed Project would include the implementation of conservation measures to restore and/or rehabilitate habitats in the Permit Area. Conservation activities include habitat improvement, management, and monitoring activities within dedicated Conservation Areas. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may also be conducted related to hydrologic manipulation and substrate management. Many of these activities could involve the use of construction equipment. For example, improvement projects, such as enhancing existing stream channels or recreating the channels and constructing wood and rock structures within stream channels (along with other activities not listed here), could involve soil disturbance with loaders or excavators, which could affect TCRs.

In addition, hydrologic manipulation and substrate management activities could require the use of construction equipment. Actions to improve stream habitat could include creation of microhabitat with natural instream structures, managing and enhancing river gravel and cobble, river flow and path manipulation, and pumping groundwater from wells into rivers to improve water flow and temperatures. For example, the HCP proposes to install a series of structures made of natural materials within the stream flow of the Santa Ana River to manipulate water movement and create suitable microhabitat areas. These activities could involve the use of loaders or excavators to move material and build structures, and pumps to pump water. Flow enhancement could also involve the use of construction equipment to move materials.

The Planning Area contains over 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, several of which would be considered TCRs. There are also many resources that have been recorded but not formally evaluated and many TCRs are known by tribal groups throughout the Planning Area that are not housed in either the Sacred Lands File administered by NAHC or submitted to the California Historic Resource Information Center. They are known to the tribes and would only be learned about through consultation.

Because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment to affect TCRs is relatively high.

Monitoring, management, and maintenance activities under the Proposed Project that could affect TCRs include installation and maintenance access control features (e.g., gates, barriers, and fences), and vegetation management using sheep grazing, manual labor, or prescribed burning. Other activities, such as control of nonnative invasive species/vegetation through mowing and hand clearing, herbicide application, species surveys and research, seed collection, and preserve patrols, would generate only low levels of ground disturbance. Construction equipment, potentially including backhoes, applicators and compressors, mowers, tractors, and maintenance vehicle use, are anticipated. Some of this equipment would involve ground-disturbing activities, and it is likely that many of these activities could occur in more natural areas that are relatively undeveloped and located near perennial water sources; therefore, the potential for ground-disturbing activities from construction equipment to affect TCRs is relatively high.

Implementation of Mitigation Measure TCR-1 would reduce impacts associated with the Proposed Project but not to a level that is less than significant. Therefore, impacts would be **significant and unavoidable with mitigation incorporated**.

### Mitigation Measures

#### TCR-1: Protect Tribal Cultural Resources

Ground-disturbing activities will avoid damage to any TCR (PRC Section 21084.3(a)) in the Permit Area that is encountered during individual surveys performed for the Project activities during construction, when feasible. Protective measures to protect TCRs include, but are not limited to, the following:

- Further consultation with appropriate tribes to determine appropriate protection for the resource, which could include measures such as avoidance and preservation of the resource in place, including planning and construction avoidance and planning greenspace or other open space to incorporate the resource with culturally appropriate protection, and management criteria, such as planting a barrier of poison oak or erecting exclusionary fencing.
- Treating the resource with culturally appropriate dignity taking into account tribal cultural values and meaning of the resource.

### 3.17.4 Summary of Potential Types of Impacts of Covered Activities

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of TCR effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of other Covered Activities that could create TCR impacts and potential best practices that could be incorporated into future projects to reduce TCR impacts.

Covered Activities by type and their possible relationship to impacts on TCRs if implemented with permit coverage are shown in Table 3.17-1.

**Table 3.17-1. Construction and Operation of Covered Activities Relevant to Tribal Cultural Resources**

<b>Covered Activity</b>	<b>Activities</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Excavation and grading would remove vegetation cover and could unearth and damage TCRs. Siting new facilities, both structures and infrastructure, could affect TCRs.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	Excavation and grading would remove vegetation cover and could unearth and damage TCRs.

Potential TCR impacts that could result from implementing the types of Covered Activities identified in Table 3.17-1 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.17-1, TCR impacts associated with constructing, operating, and maintaining these types of Covered Activities would include ground disturbance during operation and maintenance of new or expanded facilities.

As described in Table 3.17-1, several Covered Activities—depending on where activities are sited and the extent of ground-disturbing activities—could uncover or affect TCRs. These activities include the development of water reuse projects, groundwater recharge, wells and water conveyance infrastructure, and solar energy development, as well as general property and facility maintenance. In addition, Covered Activities include a variety of activities related to implementation of the Conservation Strategy, such as habitat enhancement, management and monitoring, and routine operations and maintenance in the Permit Area. Operations and maintenance Covered Activities with the potential to affect TCRs include routine activities that may require ground disturbance such as bank stabilization. Excavation and grading would remove cover and potentially expose TCRs to erosive forces. General property and facilities maintenance and, in particular the

maintenance of access roads, could limit the availability of and access to recovery sites. These activities could result in impacts on TCRs.

Recommended best practices to reduce TCR impacts of future Covered Activities include conducting project-specific TCR consultation where required and incorporating TCR measures to construction plans for construction, operations, and maintenance activities. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity TCR impacts and best practices that could be employed to reduce potential impacts.

## 3.18 Utilities and Service Systems

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, *utilities* encompass the production, delivery, and service of natural assets for human use and consumption. Specifically, this entails the utilities and service systems for water, wastewater, solid waste, electricity and natural gas, and stormwater.

### 3.18.1 Environmental Setting

#### 3.18.1.1 Regional Setting

The environmental setting for utilities and service systems is primarily the Planning Area, as the Planning Area encompasses the region within which these services are provided.

#### 3.18.1.2 Planning Area

##### **Water and Wastewater**

The Planning Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water agency boundaries extend beyond the Santa Ana River watershed or where the Planning Area is constrained roughly by the Los Angeles County and Orange County lines. Figure 1-4 in Chapter 1, *Introduction*, shows the boundaries of each water agencies' service areas.

##### **Metropolitan Water District of Southern California**

The Metropolitan Water District of Southern California (Metropolitan) is a regional wholesaler that delivers water to 26 member public agencies—14 cities, 11 municipal water districts, and 1 county water authority. Metropolitan owns and operates an extensive water system, including the Colorado River Aqueduct, 16 hydroelectric facilities, 9 reservoirs, 819 miles of large-scale pipes, and 5 water treatment plants. Metropolitan currently delivers an average of 1.5 billion gallons of water per day to a 5,200-square-mile service area. In the Planning Area, Metropolitan provides water to the Inland Empire Utilities Agency (IEUA) and the Western Municipal Water District of Riverside County.

##### **San Bernardino Valley Municipal Water District**

The San Bernardino Valley Municipal Water District (Valley District) is a regional wholesale agency formed to supply water for the San Bernardino Valley. Valley District imports water into its service area through participation in the State Water Project and manages groundwater storage within its basin boundaries. Valley District has authority to provide water and wastewater services along with stormwater disposal, recreation, and fire protection services. Valley District covers about 353 square miles in southwestern San Bernardino County and serves a population of about 660,000 people through delivery of water to the retail water agencies within its service area. Valley District does not deliver water directly to retail customers. The district spans the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, and a portion of the Yucaipa Valley and includes the cities

and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, East Highland, Mentone, Grand Terrace, and Yucaipa.

### **East Valley Water District**

East Valley Water District (East Valley) is a California Special District that provides water and wastewater services to approximately 101,700 residents within the city of Highland and portions of both the city and County of San Bernardino. East Valley's wastewater system contains approximately 215 miles of pipelines within approximately 35 square miles. The wastewater is conveyed to the city of San Bernardino for treatment through a joint powers agreement (East Valley 2014). East Valley was originally formed to provide domestic water service to the unincorporated and agricultural-based communities of Highland and East Highlands. Later, as the population increased, the need for a modern sewer system to replace existing septic tanks became apparent. East Valley's previously agriculturally dominated service area is now urbanized.

### **Inland Empire Utilities Agency**

IEUA is a regional wastewater treatment agency and wholesale distributor of imported water. IEUA is responsible for serving approximately 875,000 people over 242 square miles in western San Bernardino County. The agency is focused on providing three key services: (1) treating wastewater, and developing recycled water, local water resources, and conservation programs to reduce the region's dependence on imported water supplies and drought-proof the service area; (2) converting biosolids and waste products into a high-quality compost made from recycled materials; and (3) generating electrical energy from renewable sources. In addition to the contracting agencies, IEUA provides wholesale imported water from Metropolitan to seven retail agencies: the Cities of Chino, Chino Hills, Ontario, and Upland; the Cucamonga Valley Water District in the city of Rancho Cucamonga; Fontana Water Company in the city of Fontana, and the Monte Vista Water District in the city of Montclair. As a regional wastewater treatment agency, IEUA provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the Cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Upland; and the Cucamonga Valley Water District in the city of Rancho Cucamonga.

### **San Bernardino Valley Water Conservation District**

The San Bernardino Valley Water Conservation District (Conservation District) was created in 1932 to recharge the groundwater basin with local water supply in order to conserve that water for future use. At that time, the water was primarily used for agriculture; however, today the water is used for agricultural, municipal, and industrial purposes. The Conservation District's mission is to ensure recharge of the Bunker Hill Groundwater Basin in an environmentally and economically responsible way, using local native surface water to the maximum extent practicable. The Conservation District serves an area totaling 50,000 acres. It owns or has water recharge easements over 3,600 acres in the Santa Ana River and Mill Creek alluvial washes.

### **City of San Bernardino Municipal Water Department**

The City of San Bernardino Municipal Water Department (Water Department) provides customer service in water supply, water reclamation, and geothermal heating. The Water Department produces all of its own water using 60 wells located in a 45-square-mile service area, and reaches more than 40,000 service connections through 551 miles of water mains. The Water Department also operates two wastewater treatment plants along the Santa Ana River.

### **City of Rialto Utility Authority**

The city of Rialto is provided water by three different agencies; the City of Rialto Water Services by its operator Veolia, West Valley, and the Fontana Union Water Company. Rialto provides wastewater collection and treatment services for its residents and some residents of the city of Fontana through an extra-territorial agreement (Valley District 2015).

### **Orange County Water District**

The Orange County Water District (OCWD) provides water for 2.4 million people in Orange County. Since 1933, OCWD has been entrusted to guard the region's groundwater basin. OCWD manages and replenishes the basin, ensures water reliability and quality, prevents seawater intrusion, and protects Orange County's rights to Santa Ana River water.

### **Riverside Public Utilities**

Established in 1895, Riverside Public Utilities (RPU) is a consumer-owned water and electric utility governed by a board of nine community volunteers and the City Council of Riverside. RPU services more than 106,000 electric customers and over 64,000 water customers (serving a population of more than 300,000) in and around the city of Riverside.

### **West Valley Water District**

West Valley Water District (West Valley) serves approximately 80,000 customers in the communities of Bloomington, Colton, Fontana, and Rialto; various unincorporated areas in San Bernardino; and Jurupa Valley in Riverside County. West Valley's water comes from groundwater wells, surface water, and direct delivery from Valley District. Groundwater wells pump from the Lytle, Rialto, Bunker Hill, and North Riverside Basins. Treated surface water comes from Lytle Creek and Lake Silverwood.

### **Western Municipal Water District of Riverside County**

Western Municipal Water District of Riverside County (Western) provides water and wastewater services to retail customers and wholesale agencies from Corona to Temecula, a service area stretching 527 square miles in Riverside County. This regional area includes the cities of Corona, Norco, and Riverside, and the water agencies serving Box Springs, Eagle Valley, Lake Elsinore, Lee Lake, and Temecula. Western is a member agency of Metropolitan.

## **Solid Waste**

### **County of San Bernardino Solid Waste Management Division**

The County of San Bernardino Solid Waste Management Division is responsible for operation and management of the solid waste disposal system for San Bernardino County. The solid waste disposal system consists of five regional landfills and nine transfer stations. The division also administers the County's Solid Waste Franchise Program and the refuse collection permit program, which permits and regulates trash collection by private haulers in the unincorporated areas. The Solid Waste Management Division operates two solid waste disposal landfills in the Planning Area: the San Timoteo Sanitary Landfill in Redlands and the Mid-Valley Sanitary Landfill in Rialto. The San Timoteo Sanitary Landfill has a permitted capacity of 20,400,000 cubic yards, a remaining capacity of 11,402,000 cubic yards, and an estimated closure year of 2043 (CalRecycle 2019a). The Mid-

Valley Sanitary Landfill has a permitted capacity of 101,300,000 cubic yards, a remaining capacity of 67,520,000 cubic yards, and an estimated closure date of 2033 (CalRecycle 2019b). There are two privately owned landfills in the Planning Area: the Pennsylvania Street Inert Landfill, operated by Robertson Ready Mix for the disposal of construction, demolition, and inert waste; and Agua Mansa Landfill (CalRecycle 2019c). The Pennsylvania Street Inert Landfill has a maximum permitted capacity of 5,000,000 cubic yards, a remaining capacity of 1,000,000 cubic yards, and an estimated closure year of 2013; however, it is still active. The Agua Mansa Landfill, located in Rialto, is operated by E L Yeager Construction Company for the disposal of construction, demolition, and inert waste (CalRecycle 2019d). The remaining capacity at the Agua Mansa Landfill is 1,350,000 tons per day; the maximum permitted capacity and the estimated closure date are not available (CalRecycle 2019d).

### **Riverside County Department of Waste Resources**

The Riverside County Department of Waste Resources manages waste disposal in Riverside County. The department operates six non-hazardous waste landfills, has a contract agreement for waste disposal with a private landfill, and administers several transfer station leases (County of Riverside 2019b). Of the six landfills in the county, the privately owned El Sobrante Landfill is located within the Planning Area. The El Sobrante Landfill is owned by the USA Waste Services of California, Inc., and is permitted for construction/demolition, contaminated soil, mixed municipal, and tire waste. The El Sobrante Landfill has a maximum permitted capacity of 209,910,000 cubic yards, a remaining capacity of 143,977,170 cubic yards, and an estimated closure date of 2051 (CalRecycle 2019e).

## **Electricity and Natural Gas**

### **Southern California Edison Company**

Electrical service in the Planning Area is primarily provided by Southern California Edison (SCE), which is a Permittee for the Proposed Project. SCE provides above- and below-ground facilities for electricity transmission and delivery to more than 15 million people in a 50,000-square-mile area of central, coastal, and southern California (SCE 2007).

### **Colton Electric Utility**

The city of Colton is an exception to the SCE service area; instead of SCE, Colton Electric Utility provides electricity to the city. Colton Electric Utility owns and operates its own power plant, five substations, and the entire electrical infrastructure within the city boundaries, including the transmission and distribution lines. The utility company serves approximately 16,000 residential customers and 2,500 commercial and industrial customers (City of Colton 2019).

### **Rancho Cucamonga Municipal Utility**

The Rancho Cucamonga Municipal Utility provides electricity to 900 metered businesses and residents in a selected area in the southeastern portion of the city of Rancho Cucamonga (City of Rancho Cucamonga 2019). The rest of the city is serviced by SCE.

### **City of Corona**

The City of Corona's electric utility was established in 2001 in response to statewide electric instability. New residents and developments are prospective customers for the city's electric utility in eight different areas of the city, if it is cost effective to have an interconnection with SCE facilities.



The eight areas within the city's electric service area are spread across the north, northeast, and southeast portions of the city (City of Corona 2019).

### **Riverside Public Utilities**

The majority of the city of Riverside is provided electric service by RPU, a publicly owned utility. RPU serves a population of more than 300,000 in and around the city of Riverside, and provides electric services to more than 106,000 metered customers (RPU 2015).

### **Southern California Gas**

Natural gas service in the Planning Area is provided by Southern California Gas Company, a regulated subsidiary of Sempra Energy (Southern California Gas Company 2011).

### **Storm Drains**

Urban runoff is defined by the State of California to include those discharges from residential, commercial, industrial, and construction areas, but excludes discharges from (unimproved) open space, feedlots, dairies, farms, and agricultural fields. Urban runoff discharges consist of stormwater and non-stormwater surface runoff for drainage sub-areas with various, often mixed, land uses within all of the hydrologic drainage areas that discharge into waters of the U.S. Urban runoff does not include background pollutant loads or naturally occurring flows. Stormwater is water that originates from a precipitation or snow event (i.e., rain, hail, sleet, or snowfall). When it does not soak into the ground, it becomes surface runoff and either flows directly into surface waterways or is channeled into storm sewers, which themselves eventually discharge to surface waters.

The County of San Bernardino has Master Plans of Drainage and Comprehensive Storm Drain Plans (County of San Bernardino 2015). Because the San Bernardino County Department of Public Works Flood Control District is so large and many of the drainage issues are more localized, Master Plans of Drainage and/or Comprehensive Storm Drain Plans are created to evaluate the existing drainage systems, identify deficiencies, and recommend improvements and new facilities in an area.

In Riverside County, drainage facilities are operated by the Riverside County Flood Control and Water Conservation District and consist of underground storm drains and open channels. The county's streets and storm drain system is designed to funnel stormwater from the streets to local streams and rivers.

## **3.18.2 Regulatory Framework**

### **3.18.2.1 Federal Regulations**

No Federal regulations related to utilities or service systems are applicable to the Proposed Project.

### **3.18.2.2 State Regulations**

#### **Section 15155 of the State CEQA Guidelines, Water Supply Assessment**

California Environmental Quality Act (CEQA) Guidelines Section 15155, requires preparation of a Water Supply Assessment for certain projects subject to CEQA in which the lead agency is a city or county if it is a "water demand project," which is defined as one or more of the following.

- (A) A residential development of more than 500 dwelling units.
- (B) A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- (C) A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- (D) A hotel or motel, or both, having more than 500 rooms.
- (E) An industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- (F) A mixed-use project that includes one or more of the projects specified in subdivisions (a)(1)(A), (a)(1)(B), (a)(1)(C), (a)(1)(D), (a)(1)(E), and (a)(1)(G) of this section.
- (G) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.
- (H) For public water systems with fewer than 5,000 service connections, a project that meets the following criteria:
  - 1. A proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of a public water system's existing service connections; or
  - 2. A mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

Valley District, the lead agency for the Proposed Project, is a regional water supply agency and not a city or county. Accordingly, Water Code Section 10910 et seq. does not apply to the Proposed Project, and a Water Supply Assessment is not required because the Proposed Project does not propose any of the six types of development described above. For these reasons, Valley District, as lead agency, has determined that a Water Supply Assessment is not required for the Proposed Project. The Proposed Project does not provide CEQA coverage for individual Covered Activities and the lead agencies and water providers for these individual projects would be required to make their own separate determination regarding whether a water supply assessment would be required.

### **California Integrated Waste Management Act**

The State of California passed the California Integrated Waste Management Act in 1989. This legislation (generally known by the name of its enacting bill, Assembly Bill [AB] 939) was passed in response to the increase in waste stream and the decrease in landfill capacity within the state. AB 939 resulted in the establishment of the California Integrated Waste Management Board and provided an integrated framework for waste reduction program implementation, solid waste planning, and solid waste facility and landfill compliance. Additionally, AB 939 required every city, county, and approved regional solid waste management agency in the state to prepare a Source Reduction and Recycling Element in its Solid Waste Management Plan to reduce the amount of solid waste entering existing landfills through reduction, recycling, and composting activities. In order to further the goals of AB 939, statewide strategies to achieve a 75% diversion goal by the year 2020 and beyond were established with the adoption of AB 341 in May 2012. The main component of AB

341 included implementing mandatory commercial recycling by certain businesses and public entities.

### **Public Utilities Act**

The California Public Utilities Commission (CPUC) was first established by Constitutional Amendment as the Railroad Commission in 1911. In 1912, the Legislature passed the Public Utilities Act, expanding the commission's regulatory authority to include natural gas, electric, telephone, and water companies, in addition to the railroad and marine transport companies. In 1946, the commission was renamed as CPUC. CPUC now regulates investor-owned electric and natural gas companies, telecommunications, privately owned water and sewer utilities, and transportation companies, including freight and commuter railroads, and passenger carriers (shuttles, limousines, etc.). CPUC is responsible for ensuring that California utility customers have safe, reliable utility service at reasonable rates, protecting utility customers from fraud, and promoting the health of California's economy. CPUC establishes service standards and safety rules, authorizes utility rates, and enforces CEQA for utility construction. CPUC also regulates the relocation of power lines by public utilities under its jurisdiction, such as SCE, and works with other State and Federal agencies in promoting water quality, environmental protection, and safety.

### **3.18.2.3 Local Regulations**

This section presents an overview of the County of San Bernardino General Plan and the County of Riverside General Plan, along with other local plans, judgments, accords, policies, ordinances, municipal codes, and programs related to utilities and service systems. Most (65%) of the Planning Area is within San Bernardino County, with the remaining portion (35%) in Riverside County; because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, and policies are included to represent the Planning Area. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to utilities and service systems in full.

### **San Bernardino Valley Regional Urban Water Management Plan**

The San Bernardino Valley Regional Urban Water Management Plan (SBVRUWMP) provides a summary of anticipated water supplies and demands for the years 2015 to 2040 (Valley District 2018). The SBVRUWMP was prepared for Valley District, as well as East Valley, the City of Loma Linda, the City of Redlands, the Water Department, West Valley, the Yucaipa Valley Water District, the City of Colton, the City of Rialto, and the Riverside Highland Water Company. The purpose of the SBVRUWMP is to provide background on existing water resources and to estimate water supply and demand from the years 2015 through 2040 for Valley District's member agencies. The SBVRUWMP was used to identify available water sources to support the Proposed Project.

### **Western Judgment**

In the 1960s, dry conditions resulted in the over-commitment of water resources in the Santa Ana River watershed, which led to lawsuits between water users in the upper and lower watersheds regarding both surface flows and groundwater (Valley District 2018). The lawsuits culminated in 1969 in the Orange County and Western Judgments.<sup>1</sup> The San Bernardino Basin Area (SBBA) was

---

<sup>1</sup> See <http://www.sbvmd.com/Home/ShowDocument?id=1316> for a copy of the Western Judgment.

defined, and adjudicated in gross, by the Western-San Bernardino Judgment (Western Judgment) in 1969. The Western Judgment identifies regional representative agencies to be responsible, on behalf of the numerous parties bound thereby, for implementing the replenishment obligations and other requirements of the judgment. The representative entities for the Western Judgment are Valley District on behalf of San Bernardino County agencies identified above and Western on behalf of Riverside County agencies. Western includes the City of Riverside, Riverside Highland Water Company, Meeks & Delay Water Company, and Gage Canal Company.

The Western Judgment settled rights within the upper Santa Ana River watershed (USARW) to ensure that those resources would be sufficient to meet the flow obligations in the lower Santa Ana River, as set by the Orange County Judgment (described below). The Western Judgment determined the natural safe yield of the SBBA to be 232,100 acre-feet per year for both surface water diversions and groundwater extractions. Safe yield is generally considered equal to the average replenishment rate of the aquifer from natural and artificial recharge. Surface water is diverted from Mill Creek, Lytle Creek, and the Santa Ana River. Specific amounts of water that can be extracted from the SBBA were also established. Western was allocated 64,862 acre-feet, or 27.95% of safe yield. San Bernardino agencies are allocated 167,238 acre-feet, or 72.05% of safe yield. Valley District is allowed to extract more than 167,238 acre-feet from the SBBA, as long as it imports and recharges a like amount of water into the SBBA. Valley District has received an increase in pumping rights by participating in “new conservation.” New conservation is defined as any increase in replenishment from natural precipitation that results from operation of works and facilities not in existence as of 1969, other than works installed to offset losses from flood control channelization. In 2013, both Valley District and Western agreed to participate in the cost to capture water that historically flowed to the ocean. This new conservation project was due to the construction and operation of the Seven Oaks Dam. For Valley District, participation in this new conservation project resulted in an additional allocation of 5,507 acre-feet, bringing the adjusted right to a total of 172,745 acre-feet.

### **Orange County Judgment**

The Orange County Judgment imposes a physical solution that requires parties in the USARW to deliver a minimum quantity of water to points downstream including Riverside Narrows and Prado Dam (Valley District 2018). A provision of the Orange County Judgment related to conservation establishes that, once the flow requirements are met, the Upper Area parties “may engage in unlimited water conservation activities, including spreading, impounding, and other methods, in the area above Prado Reservoir.” The Orange County Judgment is administered by the five-member Santa Ana River Watermaster, which reports annually to the court, and the four representative agencies. Valley District, IEUA, and Western nominate one member each to the Watermaster; OCWD nominates two members; and members are appointed by the court. The judgments resolved the major water rights issues that had prevented the development of long-term, region-wide water supply plans and established specific objectives for the management of the groundwater basins.

### **Seven Oaks Accord**

On July 21, 2004, Valley District, Western, the City of Redlands, East Valley, Bear Valley Mutual Water Company, Lugonia Water Company, North Fork Water Company, and Redlands Water Company signed a settlement agreement known as the Seven Oaks Accord (Accord) (Valley District 2018). The Accord calls for Valley District and Western to recognize the prior rights of the water users for a portion of the natural flow of the Santa Ana River. In exchange, the water users agree to withdraw their protests to the water right application submitted by Valley District on behalf of itself

and Western. All the parties to the Accord have agreed to support the granting of other necessary permits to allow Valley District and Western to divert water from the Santa Ana River. By means of the Accord, Valley District agreed to modify its water right applications to incorporate implementation of the Accord. Additionally, the Accord requires Valley District and Western to develop a groundwater spreading program in cooperation with other parties “that is intended to maintain groundwater levels at the specified wells at relatively constant levels, in spite of the inevitable fluctuations due to hydrologic variation.” In response, local agencies included groundwater management in the USARW Integrated Regional Water Management Plan (IRWMP) and have collectively prepared a Regional Water Management Plan annually since 2008.

### **Upper Santa Ana River Watershed Integrated Regional Water Management Plan**

The Valley District service area is incorporated into two IRWMPs: the SBVRUWMP described above and the 2015 USARW IRWMP.

The USARW IRWMP discusses the unique water management challenges and issues that the Upper Santa Ana River faces (Valley District 2015). The purpose of the USARW planning process is to focus on local issues specific to the upper watershed and to assess water management opportunities in greater detail. This collaborative process addresses some of the long-term water management strategies of the USARW and aims to protect and enhance reasonable and beneficial uses of the watershed’s water resources. The USARW IRWMP region covers 852 square miles of the Santa Ana River watershed (approximately 32% of the watershed) and is primarily located in San Bernardino and Riverside Counties.

The USARW IRWMP stakeholders formed a Basin Technical Advisory Committee (BTAC) to facilitate implementation of the IRWMP. The BTAC develops the annual water management plan and works cooperatively on long-term management of water resources by implementing the strategies in the USARW IRWMP. Currently, the BTAC meets monthly with the primary purpose of providing technical advice for the management of local resources to the Western-San Bernardino Watermaster agencies, Western and Valley District. Valley District, Western, and the Conservation District entered into a settlement agreement on August 9, 2005, whereby the agencies would work cooperatively to develop an annual groundwater management plan. Because both parties are members of the BTAC, this requirement is being met by the BTAC’s Regional Water Management Plan, which largely emphasizes groundwater management.

### **County of San Bernardino General Plan**

The County of San Bernardino General Plan (County of San Bernardino 2007) was last amended in April 2014 and includes goals and policies within the Circulation and Infrastructure Element to ensure that public facilities and infrastructure are available and adequately maintained within the county to meet the needs of current and future County residents, including safe water supply for all residents. Goals and policies also focus on ensuring adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

### **San Bernardino Countywide Plan**

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive

services for adults and children, healthcare, public safety, and other regional county services provided by County Government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Infrastructure and Utilities Element of the Countywide Plan seeks to ensure that public infrastructure and utilities are reliable and cost-effective; incorporate groundwater recharge, water conservation, water reclamation, and supplemental water as key components of the County resilient water supply strategy; safely reduce, treat, and dispose of solid and liquid waste; and reduce the risks of flooding, contribute to groundwater recharge, and provide open space and habitat areas.

### **County of San Bernardino Countywide Integrated Waste Management Plan**

The County of San Bernardino Countywide Integrated Waste Management Plan (1995) presents a Countywide Summary Plan and the Countywide Siting Element, to ensure adequate disposal capacity and to establish strategies for the reduction of solid waste. Pursuant to AB 939, the Countywide Integrated Waste Management Plan provides four elements and a summary to address waste disposal issues: the Source Reduction and Recycling Element, Household Hazardous Waste Element, Non-disposal Facility Element, and Countywide Siting Element (County of San Bernardino 2018). The three general strategies for waste reduction are recycling, composting, and source reduction.

### **County of San Bernardino Code of Ordinances**

San Bernardino County does not have any ordinances relevant to potential utilities and service system impacts of the Proposed Project.

### **County of Riverside General Plan**

The County of Riverside General Plan Land Use Element (County of Riverside 2019a) seeks to ensure adequate service provision for public infrastructure and services; ensure that development and conservation land uses do not infringe upon existing essential public facilities and public utility corridors; and emphasizes and expands the use of recycled water in conjunction with local water agencies. The Circulation Element (County of Riverside 2017) seeks to utilize existing infrastructure and utilities to provide for the efficient extension of infrastructure and services.

### **County of Riverside Code of Ordinances**

#### **Title 13, Chapter 13.04 – Sewer Service System Generally**

Ordinance 020 promotes maximum beneficial public use of the county service area facilities through adequate regulation of sewer construction, sewer use, and industrial wastewater discharges, and provides for equitable distribution of the costs.

#### **Title 13, Chapter 13.12 – Stormwater Drainage System Protection Regulations**

Ordinance 020 maintains the existing and future health, safety, and general welfare of county residents by reducing pollutants in stormwater discharges to the maximum extent practicable, regulating illicit connections and discharges to the storm drain system regulating non-stormwater discharges to the storm drain system.

## Riverside Countywide Integrated Waste Management Plan

The Riverside Countywide Integrated Waste Management Plan (County of Riverside 1996) was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095, also referred to as AB 939. The Countywide Integrated Waste Management Plan identifies waste management issues in the jurisdiction and identifies strategies and programs to meet and maintain the diversion mandates.

### 3.18.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate utility impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on utilities. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

#### 3.18.3.1 Significance Criteria

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Impact UTIL-1)
- Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? (Impact UTIL-2)
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (Impact UTIL-3)
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? (Impact UTIL-4)
- Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste? (Impact UTIL-5)

#### 3.18.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project. The following steps were taken to analyze the potential utilities and service systems impacts of the Proposed Project.

- Identify utilities in the Planning Area.
- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in impacts on utilities and service systems.

- Identify and evaluate potential impacts related to utilities and service systems from implementation of the Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential utilities and service systems impacts.

Criteria from Appendix G of the State CEQA Guidelines and standard professional practice were used to determine whether the Proposed Project would result in significant impacts on utilities and service systems. Impacts were determined by reviewing relevant local government authorities or annual reports including, but not limited to, general plans, waste management plans, and urban water management plans. Public agency websites were also reviewed for publicly available information. Impacts would result when the Proposed Project would directly or indirectly conflict with the policies of the plans, introduce a new demand to existing infrastructure, or create new infrastructure that would result in adverse effects on the environment.

### 3.18.3.3 Impact Analysis and Mitigation

***Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?***

The Proposed Project would include implementing a Conservation Strategy to offset potential effects on Covered Species established by the Upper SAR HCP. The Proposed Project would establish and manage Conservation Areas and conduct habitat improvement activities (restoration and/or rehabilitation) in a dedicated Preserve System. Existing or proposed wastewater, storm drainage, or other utility infrastructure facilities would generally not be located in the vicinity of the Proposed Project because of the relatively remote locations in the Preserve System and in or near streams or creeks. If the Proposed Project does not contribute to the need for new water, wastewater, or other infrastructure improvements, the impacts would be less than significant.

The Proposed Project would not require relocation of facilities, would not create new demand for utility infrastructure, and proposes habitat improvement and conservation activities that could be designed to accommodate utility facility expansion in the area, if necessary. Therefore, impacts of the Proposed Project related to relocation or construction of utility facilities would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

***Impact UTIL-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?***

The Proposed Project would not create substantial new demand for water supplies during normal, dry, or multiple dry years given the nature of the project, which focuses on improving habitat for Covered Species. In some cases, minor amounts of water may be needed to establish or support habitat improvement actions, but these amounts would be minor, temporary, and focused in



localized portions of the Preserve System. Furthermore, the Proposed Project does not include residential or other projects that could generate substantial amounts of new water demand in existing services areas. The Proposed Project is also intended to facilitate the permitting process for infrastructure projects in the Planning Area that would improve reliability of the water supply system in the region.

If the actions of the Proposed Project directly or indirectly generated substantial demands for water supplies, there would be a significant impact. However, as discussed above the Proposed Project would not directly or indirectly generate substantial demand for water supplies. Therefore, the potential impact of the Proposed Project on available water supplies would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact UTIL-3: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

Water would be used for habitat improvement and management activities and for the undeveloped, natural, and open spaces that would support the habitat restoration and/or rehabilitation function of the Proposed Project. However, the Proposed Project is not anticipated to generate substantial amounts of wastewater. Specifically, the Proposed Project does not include residential or other projects that could generate substantial amounts of new wastewater in the Preserve System. Existing or proposed wastewater, storm drainage, or other utility infrastructure facilities would generally not be located in the vicinity of the Proposed Project because of the Preserve System's relatively remote location, with activities taking place in or near streams or creeks. The Proposed Project also would not contribute to the need for new water, wastewater or other infrastructure improvements because the nature of Covered Activities would not create substantial new demand for utility infrastructure. The Proposed Project would not result in any increase in demand, and would not interfere with the wastewater treatment providers' ability to meet existing or projected demand. Therefore, the Proposed Project would result in a **less-than-significant impact** on wastewater treatment systems.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact UTIL-4: 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?***

The Proposed Project involves conservation activities within an HCP Preserve System to be established and managed for Covered Species habitat. Activities may include tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/rehabilitation projects. In addition, specific activities may also be conducted related to hydrologic manipulation and substrate management. As summarized in Chapter 3, Table 3-1, many of these activities could involve the use of construction equipment. For example, habitat improvement projects that involve rehabilitating existing stream channels or re-establishing channels and constructing wood and rock structures within the stream channels (along with other activities not listed here) could involve soil disturbance with loaders or excavators.

However, generally, for these types of activities, disposal of solid waste produced during construction would be short term and minimal.

There are four landfills within the Planning Area that are permitted to dispose of construction and demolition debris. Disposal of this waste must comply with the requirements of the landfill and applicable State and local regulations establishing the types of solid waste that can be disposed of in a permitted landfill. As discussed in Section 3.18.1, *Environmental Setting*, there are several municipal and construction/inert permitted landfills in the Planning Area that have available capacity.

State legislation AB 939 mandates cities and counties to reduce solid waste going to landfills by 25% in the year 1995 and 50% by the year 2020. AB 341 does not provide a mandate, but rather a statewide goal of further waste reduction of 75% by the year 2020. The Proposed Project would abide by the State mandate as well as the local regulations that implement reduction and diversion policies. If the actions of the Proposed Project affected the solid waste reduction goal of 75% by the year 2020, the impacts would be significant and mitigation measures would be required to lessen the impacts. The Proposed Project would also comply with the State mandate concerning waste diversion. Therefore, the Proposed Project is not anticipated to conflict with local solid waste standards or impair reduction goals, and the potential impact would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

#### ***Impact UTIL-5: Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?***

Implementation of the Proposed Project would allow for management, monitoring, and maintenance activities, which could produce solid waste related to habitat improvement construction debris, municipal waste from onsite workers, and any other construction- or operation-generated waste. The County of San Bernardino General Plan, the San Bernardino Countywide Plan, the County of Riverside General Plan, the San Bernardino Countywide Integrated Waste Management Plan, and the Riverside Countywide Integrated Waste Management Plan contain several strategies to achieve the State-mandated reduction levels. Waste produced by Conservation Actions would be primarily construction debris from habitat improvement activities, and the amounts of waste would not be substantial. For these reasons, the Proposed Project would be in compliance with the applicable local and State regulatory framework for the reduction of solid waste, and the impact would be **less than significant**.

#### **Mitigation Measures**

No mitigation measures are required.

### **3.18.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of effects on utilities that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create utility impacts and

any potential best practices that could be incorporated into future projects to reduce utilities and service systems impacts.

Covered Activities by type and their possible relationship to utilities impacts if implemented with permit coverage are shown in Table 3.18-1 and discussed below.

**Table 3.18-1 Construction and Operation of Covered Activities and Their Relevance to Utilities and Service Systems**

<b>Covered Activity</b>	<b>Description</b>	<b>Relevance</b>
Water Reuse Projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance of existing and new water treatment plants and associated facilities	Potential land acquisition and development could result in utility relocations and increased need for electricity and gas, and could increase local water supplies.
Groundwater Recharge	Activities related to construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation management activities to infrastructure	There would be minor land disturbance and periodic vehicle trips to sites for maintenance and operations; however, no utilities impacts are anticipated.

Potential utility impacts that could result from implementing the types of Covered Activities identified in Table 3.18-1 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. Implementation of the Covered Activities would not involve development such as residential or commercial uses that could induce population growth and thereby indirectly result in the demand for new or expanded utilities. As such, the Covered Activities would not include residential development or other projects that would increase demand on water supplies; the one-time projects as well as the continuing operation and maintenance activities would support the existing water supply system and ensure water would continue to be delivered to the associated water districts. Some of the Covered Activities would be new water reuse facilities, which could increase the amount of wastewater that can be treated or water than can be provided to customers, but these facilities are intended to replace aging infrastructure in order to keep up with existing and projected demand, and would not result in any

new demand. The Covered Activities spread throughout the Permit Area would result in a positive benefit to water supplies regionally.

Implementation of the Covered Activities would produce solid waste related to demolition and construction debris, and municipal waste from onsite workers. In general, any construction waste production would be short term and minimal. Routine operation and maintenance activities may occur repeatedly in one area or throughout the Permit Area and may produce solid waste. Nevertheless, Covered Activities would be required to comply with local and State policies and regulations related to the appropriate disposal of construction and demolition waste and also waste diversion, and no conflicts are anticipated during either construction or operation.

No best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts on utilities and service systems.

## 3.19 Wildfire

For purposes of this environmental impact report (EIR) and in relation to the potential change that implementation of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP; Proposed Project) may have on the environment as a result of construction and operational activities, the term *wildfire* refers to an unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to extinguish the fire. Wildfire characteristics depend on the circumstances where the fire is burning. Brush fires, which burn both natural vegetation and dry-farmed grain, typically burn fast and very hot, often threaten homes in the area, and lead to serious destruction of vegetation. Woodland fires are relatively cool under natural conditions; however, if a brush fire spreads to a woodland, it could generate a destructive hot crown fire. Currently, no suitable management technique of reasonable cost has been devised to reduce the risk of these fires. However, these fires can typically be controlled relatively quickly and easily if they are reachable by fire equipment.

Short-term effects of wildfires include destruction of timber and loss of wildlife habitat, scenic vistas, and watersheds. Long-term effects of wildfires include smaller timber harvests, reduced access to recreational areas, and destruction of community infrastructure and cultural or economic resources. Wildfires also increase the area's vulnerability to flooding. Wildfire damage to life and property is generally greatest in areas designated as Wildland Urban Interface (WUI), where development is close to densely vegetated areas.

### 3.19.1 Environmental Setting

#### 3.19.1.1 Regional Setting

Most of the wildfire hazards discussed in this section are addressed through programmatic, regional policies and regulations, because they have the greatest ability to reduce risks to future development and are the principal means under the control and jurisdiction of San Bernardino and Riverside Counties and subject to the County of San Bernardino General Plan, San Bernardino Countywide Plan, County of Riverside General Plan, and other policies and regulations listed under Section 3.19.2, *Regulatory Framework*.

Wildfires are already a concern in the region and have historically caused water quality and flood control issues. The *Upper Santa Ana River Watershed Integrated Regional Water Management Plan* states that "should climate change increase drought periods and result in more frequent and intense wildfires, water quality and flood control will be further impacted" (San Bernardino Valley Water Conservation District 2015). Causes of wildfire include, as classified by the California Department of Forestry and Fire Protection (CAL FIRE), arson, campfire, debris burning, electrical power, equipment use, lightning, playing with fire, railroad, smoking, vehicle, undetermined causes, and miscellaneous (CAL FIRE 2016).

Wildfire can alter the topography and hydrologic response of an area such that post-wildfire rains, including mild weather systems, can result in floods and debris flows (USGS n.d.). Describing and predicting post-wildfire effects such as flooding or landslides are active areas of research. Certain

physical characteristics can help predict the severity of post-wildfire response to rain, but there is still a great deal of uncertainty in what specifically will result at any given location.

Floods and debris flows are more likely to result from high severity wildfire than from moderate or low severity because such fires remove more vegetation that would ordinarily hold soil in place and because wildfire can increase soil repellency by drying and burning the soil, creating a less penetrable layer (UCANR 2017; Hubbert and Oriol 2005). Reduced water infiltration increases rainwater runoff and soil erosion, including debris flows in worst-case circumstances, and sedimentation. Due to the increase in runoff, developed areas downslope of a burn scar are at an increased risk for flash flooding. Flooding after a fire is often more severe than under normal circumstances, as debris and ash left from the fire can form mudflows. As rainwater moves across charred and denuded ground, it can also pick up soil and sediment and carry it in a stream of floodwaters. This added material can cause more significant damage (FEMA 2017). Even areas that do not typically flood can be at risk for flash flooding and mudflows for up to 5 years after a wildfire.

The region has relatively high temperatures, low humidity, and low precipitation during the summer, followed by a fall season characterized by high-velocity, very dry winds that come out of the desert. The Santa Ana winds consistently arrive from the middle of October to the end of November. These weather patterns increase extreme fire conditions when combined with unabated and dense vegetative growth, urban development, drought conditions during the past 10 years, the high number of dead trees in the mountainous region (as a result of bark beetle damage between 2003 and 2008), and high visitor numbers and dense populations in forest areas.

### 3.19.1.2 Planning Area

National forest and urban areas make up the greatest acreage in the Planning Area. Other existing land uses in the Planning Area include farmland, grazing land, water conservation/water storage facilities, flood control, habitat conservation, open space, aggregate mining/mineral extraction, agriculture/orchards and vineyards, roadways, and airport operations. Land use type acreages in the Planning Area are detailed in Section 3.10, *Land Use*.

Table 3.19-1 lists the causes and number of fires in San Bernardino and Riverside Counties.

**Table 3.19-1. Number of Fires by Cause, by County**

Cause	San Bernardino County	Riverside County
Arson	4	13
Campfire	17	7
Debris Burning	11	6
Electrical Power	6	5
Equipment Use	3	5
Lightning	3	2
Miscellaneous	22	22
Playing with Fire	1	5
Railroad	1	0
Smoking	0	1
Undetermined	39	63
Vehicle	5	4

<b>Cause</b>	<b>San Bernardino County</b>	<b>Riverside County</b>
Total	112	133

Source: CAL FIRE 2016

The Conservation Areas included for the Proposed Project are heavily used by the homeless population currently in the area. Wildland fires are common in the Santa Ana River watershed from natural causes, arson, and unintended incidents. For example, on December 21, 2017, wildfire erupted under the Mission Inn Avenue bridge, adjacent to Mount Rubidoux. Numerous properties were threatened by the 50-acre blaze, which forced the evacuation of dozens of nearby homes before it was contained hours later. A homeless cooking fire was believed to be the source of this fire (mynews1a.com 2018). Another small fire at an encampment site between the Santa Ana River and a bike trail just east of the Van Buren Bridge occurred on May 9, 2017, prompting the evacuation of 20 homeless people before the fire was contained (*Press-Enterprise* 2017). This fire was caused by an open barbecue. There have been several attempts to relocate transient populations from the Santa Ana River bottom, but the area continues to draw many chronically homeless people to the area, which increases fire risks to the Proposed Project Conservation Areas.

The portion of the Planning Area that is within the boundaries of San Bernardino County includes multiple incorporated cities. The most populated cities in the county are within the Planning Area, including the cities of San Bernardino, Fontana, Rancho Cucamonga, and Ontario (U.S. Census Bureau 2017). The Planning Area also includes disconnected unincorporated areas interspersed throughout the area, generally consisting of development associated with the urban development of the adjacent cities. The urban, developed portions of the Planning Area generally consist of residential, commercial, industrial, and institutional land uses. There are still limited agricultural land uses throughout the Planning Area, including land for livestock, row crops, and orchards. The Planning Area also includes Federally owned land in the northern portion, including the San Bernardino National Forest.

A combination of climate, topography, vegetation, and development patterns creates high fire hazard risks throughout the county, especially in the many areas of WUI located in foothills and mountainous areas countywide. According to U.S. Forest Service and CAL FIRE maps, areas with the highest risk of wildfire are in the southwestern portions of the county in the mountainous region.

Fires of significant size and impact have caused injury, death, and property loss in San Bernardino County. For example, the 2016 Blue Cut Fire burned 36,274 acres, destroying an estimated 105 single-family residences and 216 outbuildings. In addition, three single-family residences and five other structures were damaged. Additionally, losses of watershed and subsequent erosion contribute to landslides and flooding (County of San Bernardino 2018).

Local responsibility areas (LRAs) are areas where fire protection is provided by cities, fire protection districts, counties, or by CAL FIRE under contract with local entities. Based on CAL FIRE's southwestern San Bernardino County Very High Fire Hazard Severity Zones (VHFHSZs) in LRAs Map, the southwestern corner of the county, including the cities of Chino Hills, Chino, Ontario, Montclair, Upland, Rancho Cucamonga, Fontana, Rialto, Colton, Grand Terrace, Loma Linda, San Bernardino, Highland, Redlands, and Yucaipa, is located within LRAs (CAL FIRE 2008). Within this area, lands designated as VHFHSZs are primarily located around the northern and eastern boundaries of the cities of Upland, Rancho Cucamonga, Fontana, Rialto, San Bernardino, Highland, and Yucaipa, generally in areas where urban development meets forested landscapes. VHFHSZs are

also mapped in the southern portions of the jurisdictions of Grand Terrace, Loma Linda, and Redlands.

Communities outside of the LRAs are in the State responsibility areas (SRAs) or Federal responsibility areas (FRAs) where fire protection is provided by CAL FIRE or other Federal fire protection agencies. There is a narrow band of SRAs north of the jurisdictional boundaries of the cities of Upland, Rancho Cucamonga, Fontana, Rialto, San Bernardino, Highland, Redlands, and Yucaipa, the majority of which is designated as very high fire risk (CAL FIRE 2007a). The remainder of the Planning Area is primarily national forest land and under FRA jurisdiction (CAL FIRE 2007a).

Fire protection services in San Bernardino County are provided by the San Bernardino County Fire Department, which has 54 stations throughout the county. The department has a service area of 19,278 square miles across San Bernardino County, including 60 communities/cities and all the unincorporated areas of the county. The department provides fire response, emergency medical response, and wildland fire suppression services. The San Bernardino County Fire Department is a full service, regional fire and emergency medical service agency; however, the department has numerous automatic and mutual-aid agreements with local, State, and Federal jurisdictions for use and assignment of resources in the event of major emergencies. In addition to the San Bernardino County Fire Department stations, there are nearly 50 fire stations, including U.S. Forest Service and CAL FIRE stations within San Bernardino County and within city jurisdictions (County of San Bernardino 2007b). For further discussion of fire protection services, please refer to Section 3.14, *Public Services*. Figure 3.19-1, Figure 3.19-2, and Figure 3.19-3 show the LRAs, SRAs, FRAs, and fire stations within the Planning Area for both San Bernardino and Riverside Counties.

The portion of the Planning Area within the boundaries of Riverside County is primarily developed with urban development associated with the cities of Riverside, Corona, Eastvale, and Jurupa Valley; agricultural uses; and undeveloped land. The urban developed areas consist generally of residential, commercial, industrial, and institutional land uses. The small amount of agricultural land uses are primarily south of the city of Riverside in the unincorporated area and are generally orchards. Land use type acreages in the Planning Area are detailed in Section 3.10, *Land Use*.

A significant portion of Riverside County is undeveloped and consists of rugged topography with highly flammable vegetation. In particular, the hillside terrain of Riverside County has a substantial fire risk. Fire potential for the county is typically greatest in the months of August, September, and October, when dry vegetation coexists with hot, dry Santa Ana winds. However, in Riverside County, fires with conflagration (destructive) potential can occur at any time of the year.

Wildland fires are a serious and growing hazard in Riverside County, as development slowly encroaches on outlying hills and grasslands. More and more people are living in areas of WUI, which pose the most danger for wildfire conditions because of the complex mix of fuels (vegetation), topography (hills), accessibility (roads), and structures (homes) (County of Riverside 2016). Generally, the western end of the county is more urban, densely populated, and covered with vegetation that is susceptible to wildfires. The eastern end of the county is primarily desert, with far less population and far less vegetation than the western end.

There is a long history of wildfires in Riverside County. Recently, the Cranston Fire in July 2018 burned 13,139 acres, caused numerous road and trail closures, and triggered the evacuation of over 7,000 people due to the fire. In October 2006, the Esperanza Fire burned 40,200 acres, destroyed 34 homes and 20 outbuildings, and resulted in 5 firefighter fatalities and 12 minor injuries (CAL FIRE 2019).



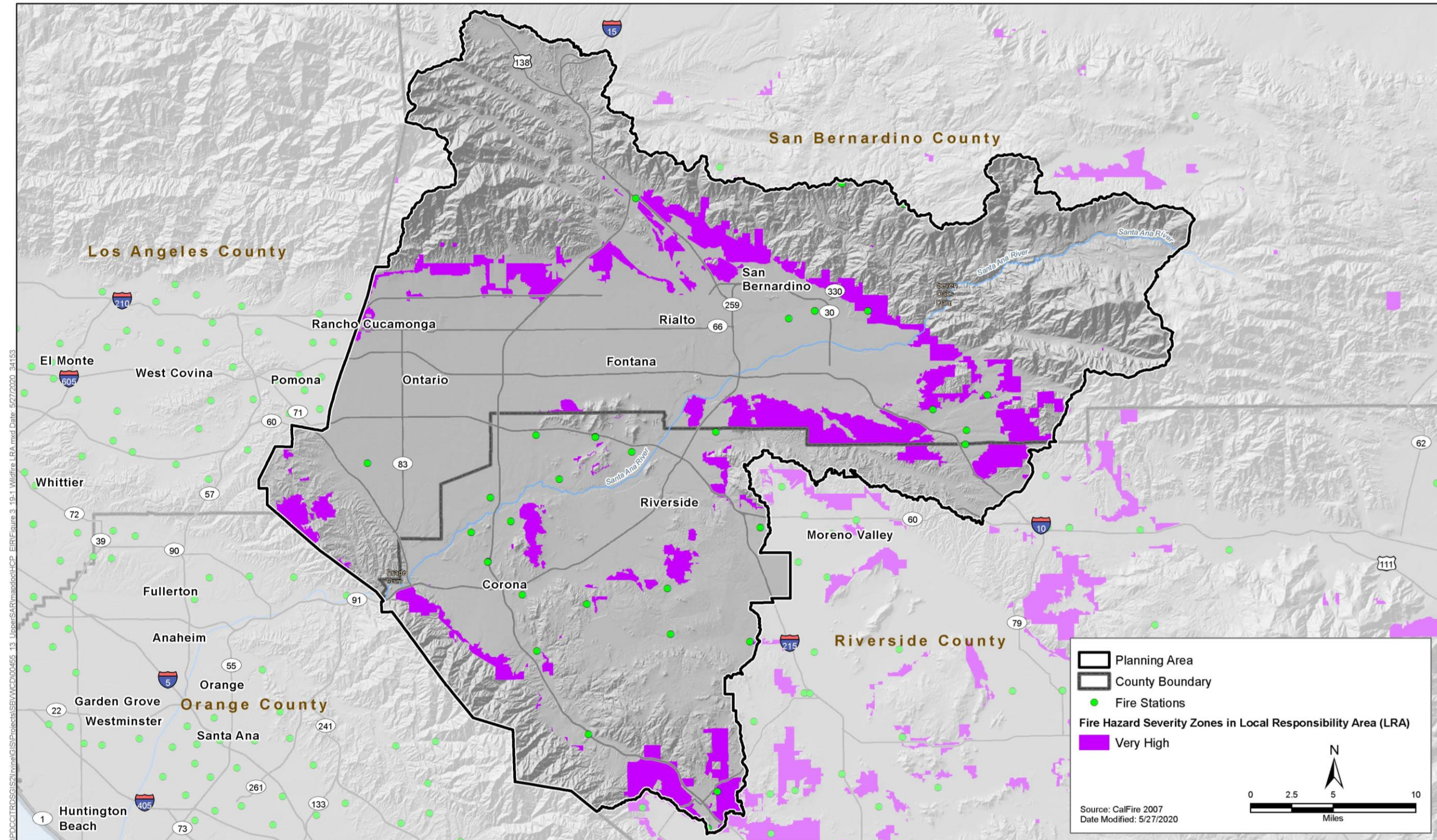


Figure 3.19-1. Fire Hazard Severity Zones - Local Responsibility Area (LRA)











*This page intentionally left blank.*

According to the 2009 CAL FIRE Western Riverside County VHFHSZs in LRAs Map, the incorporated cities of Riverside, Jurupa Valley, Norco, and Corona are in the LRA (CAL FIRE 2009). The VHFHSZs are mapped primarily along the southwestern boundary of the city of Corona, the boundary between Norco and Riverside, the northeastern boundary of Riverside, and the northern and southern boundaries of Moreno Valley jurisdictions.

The unincorporated areas around Lake Mathews and east of the city of Riverside are within SRAs and FRAs and are designated as VHFHSZs in the majority of these areas. There are pockets of FRAs throughout the unincorporated county, including the March Air Reserve Base and in the Elsinore Mountains along the southwestern border of Riverside County (CAL FIRE 2007b).

The County of Riverside contracts with CAL FIRE for fire protection. Under CAL FIRE “Riverside Operational Unit” management, the Riverside County Fire Department operates 94 fire stations in 17 battalions with about 230 pieces of equipment. Fifty-one of these stations, as well as three stations operated directly by CAL FIRE, are in the unincorporated portion of Riverside County. Combined, the Riverside Unit is one of the largest fire departments in the nation. The Riverside County Fire Department also responds to a number of cities and communities through mutual and automatic aid agreements and also provides dispatch under contract (County of Riverside 2016).

Within its service area, the Riverside County Fire Department provides fire suppression, emergency medical, rescue, and fire prevention services and is equipped to fight both urban and wildland emergency conditions. CAL FIRE also has primary responsibility for managing fires on lands designated SRAs. A variety of local fire agencies, for example the City of Riverside and City of Corona departments, have jurisdiction over LRAs. In FRAs, Federal agencies (Bureau of Land Management or U.S. Forest Service) are responsible.

## **3.19.2 Regulatory Framework**

### **3.19.2.1 Federal Regulations**

#### **Disaster Mitigation Act of 2000**

The Disaster Mitigation Act of 2000 provides the legal basis for the Federal Emergency Management Agency’s (FEMA) mitigation planning requirements for State, local, and tribal governments as a precursor to mitigation grant assistance. The Disaster Mitigation Act of 2000 requires that local governments prepare a Local Hazard Mitigation Plan that must be reviewed by the State Mitigation Officer, approved by FEMA, and renewed every 5 years. The plan must include a planning process, a risk assessment, a mitigation strategy, and plan maintenance and updating procedures to identify the natural hazards, risks, and vulnerabilities of the area under the jurisdiction of the government. Natural hazards include, but are not limited to, earthquakes, tsunamis, tornadoes, hurricanes, flooding, and wildfires.

### **3.19.2.2 State Regulations**

#### **Public Resources Code Section 4291**

Section 4291 of the California Public Resources Code (PRC) defines and describes fire protection measures and responsibilities for mountainous, forest, brush, and grass-covered lands. These measures include, but are not limited to, the following.

- Maintenance of defensible space of 100 feet from each side and from the front or rear of a structure, but not beyond the property line.
- Removal of a portion of a tree that extends within 10 feet of the outlet of a chimney or stovepipe.
- Maintenance of a tree, shrub, or other plant adjacent to or overhanging a building free of dead or dying wood.
- Construction or rebuilding of a structure must comply with all applicable State and local building standards.

### **California Building Standards Code**

The State of California's minimum standards for structural design and construction are provided in the California Building Standards Code (CBSC) (24 California Code of Regulations). The standards set forth in the CBSC are based on the International Building Code (International Code Council 2018), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous more detailed or more stringent regulations. The CBSC provides standards for various aspects of construction, including (i.e., not limited to) excavation, grading, and earthwork construction. In accordance with California law, certain aspects of the Proposed Project would be required to comply with all provisions of the CBSC. The CBSC requires certain building requirements to adhere to the Fire Code (Part 9).

Local agencies must ensure that development in their jurisdictions complies with guidelines contained in the CBSC. Cities and counties can, however, adopt building standards beyond those provided in the code.

### **Senate Bill 1241 (Statutes of 2012, Kehoe)**

Senate Bill 1241 revised the safety element requirements for SRAs and VHFHSZs. The Senate Bill requires that any revisions of general plans' housing elements after January 2014 must also include the revision and updating of the safety element, as necessary, to address the risk of fire in SRAs and VHFHSZs.

### **Very High Fire Hazard Severity Zones (Assembly Bill 337)**

As a result of the Oakland Hills Fire (Tunnel Fire) of 1991, the Bates Bill (Assembly Bill 337) was passed in 1992 requiring CAL FIRE to work with local governments to identify high fire hazard severity zones within LRAs throughout each county in the state. Over the years, CAL FIRE has updated the maps and provided new recommendations to local governments.

The Fire Hazard Severity Zone Maps released in 2007 evaluate the likelihood that an area will burn over a 30- to 50-year period, without considering modifications such as fuel reduction efforts, which are temporary and cannot be expected to persist over time. These maps are used to inform building construction standards on building permits; natural hazard disclosure at time of sale; defensible space clearance around buildings; and property development standards, such as road widths, water supply, and address signs. These maps are also used in city and county general plans.

Areas of legal responsibility for fire protection, including SRAs, LRAs, and FRAs, are also shown on the maps. Proposed Fire Hazard Severity Zone Maps for SRA lands and separate draft VHFHSZ Maps for LRA lands are provided to the counties by CAL FIRE.

## State Responsibility Areas Public Resources Code 4102

SRAs are defined by California PRC Section 4102 as areas of the state in which the State Board of Forestry and Fire Protection has determined that the financial responsibility for preventing and suppressing fires lies with the State of California. The SRA land determinations are based on land ownership, population density, and land use. CAL FIRE has a legal responsibility to provide fire protection on all SRA lands. SRA lands typically are unincorporated areas of a county, are not Federally owned, have wildland vegetation cover, have housing densities lower than three units per acre, and have watershed or range/forage value. Where SRAs contain built environment or development, the local government agency assumes responsibility for fire protection.

LRAs include lands that do not meet criteria for SRAs or FRAs, or are lands in cities, cultivated agricultural lands, and nonflammable areas in the unincorporated parts of a county. LRAs can include flammable vegetation and WUI areas. LRA fire protection is provided by the local fire departments, fire protection districts, county fire departments, or by contract with CAL FIRE.

FRAs include lands where Federal agencies have management and administrative responsibility for areas of Federal land and the legal authority to protect those lands from the adverse effects of wildfire. Federal agencies either provide that protection themselves or through contracts and agreements with other protection organizations. In many instances, FRAs are interspersed with private land ownership or leases. Fire protection for developed private property is usually not the responsibility of the Federal land management agency; structural protection responsibility is that of a local government agency.

## 2018 Strategic Fire Plan for California

The 2018 Strategic Fire Plan for California is a comprehensive plan for wildland fire protection in the state. The plan is a cooperative effort between the State Board of Forestry and Fire Protection and CAL FIRE. First developed in the 1930s, the California fire plan is periodically updated; the current plan was prepared in 2018 (California State Board of Forestry and Fire Protection and CAL FIRE 2018). The California fire plan analyzes and addresses the effects of climate change, overly dense forests, prolonged drought, tree mortality, and increased severity of wildland fires through goals and strategies. The primary goals of the 2018 Strategic Fire Plan for California are to do the following.

- Improve the availability and use of consistent, shared information on hazard and risk assessment.
- Promote the role of local planning processes, including general plans, new development, and existing developments, and recognize individual landowner/homeowner responsibilities.
- Foster a shared vision among communities and the multiple fire protection jurisdictions, including county-based plans and community-based plans such as Community Wildfire Protection Plans.
- Increase awareness and actions to improve fire resistance of human-made assets at risk and fire resilience of wildland environments through natural resource management.
- Integrate implementation of fire and vegetative fuels management practices consistent with the priorities of landowners or managers.

- Determine and seek the needed level of resources for fire prevention, natural resource management, fire suppression, and related services.
- Implement needed assessments and actions for post-fire protection and recovery.

### 3.19.2.3 Local Regulations

This section presents an overview of the County of San Bernardino General Plan, the County of Riverside General Plan, and other local plans, policies, ordinances, and programs related to fire hazards. Most (65%) of the Planning Area is within San Bernardino County, with the majority of the remaining portion (35%) in Riverside County, and because these areas encompass the largest areas within the Planning Area, the general plan goals, programs, and policies and the county ordinances are included to represent the Planning Area. The following discussion briefly summarizes the provisions of the San Bernardino and Riverside County general plans and other local plans, policies, ordinances, and programs related to wildfire. Appendix B, *Regional and Local Regulations*, presents the relevant local plans, policies, ordinances, and programs related to wildfire in full.

#### County of San Bernardino General Plan

The County of San Bernardino General Plan, updated in 2007 and last amended in 2014, provides a vision for the future of the county. The Safety Element identifies potential hazards and contains goals and policies pertaining to the management and minimization of risk or danger to residents and property in San Bernardino County (County of San Bernardino 2007a). It seeks to prevent wildfires and continue to provide public safety from wildfire hazards and to minimize the fire hazard posed by expanding development in WUI.

#### San Bernardino Countywide Plan

In October 2020, the County of San Bernardino adopted the San Bernardino Countywide Plan for its unincorporated communities. The County San Bernardino Countywide Plan differs from a typical General Plan in that it is separated into three primary elements: Policy Plan, Business Plan, and Community Action Guidelines. The Policy Plan takes into account land use planning, supportive services for adults and children, healthcare, public safety, and other regional county services provided by County government, and includes the seven required elements of a general plan in California. The Business Plan directs the integration of Countywide Plan goals, policies, and actions into how the County operates and develops its budget. Lastly, the Community Action Guidelines communicate the unique values and priorities of each unincorporated community.

The Hazards and Personal and Property Protection Elements of the Countywide Plan seek to minimize risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

#### County of San Bernardino Multi-Jurisdictional Hazard Mitigation Plan

The Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) was developed to reduce or eliminate loss of life and property for unincorporated areas of the County of San Bernardino and within areas managed by the Flood Control District, Fire District, and Special District Departments. The MJHMP was developed in accordance with the Disaster Mitigation Act and was approved by FEMA on July 13, 2017 (County of San Bernardino 2017). The MJHMP provides coordinated goals and objectives



for the partner organizations to support an effective mitigation program. The MJHMP addresses hazards associated with geologic hazards, wildfire, floods, drought, terrorism, and climate change.

### **San Bernardino County Emergency Operations Plan**

The San Bernardino County Emergency Operations Plan (EOP) addresses the County's response to emergencies associated with natural disasters or human-caused emergencies. The EOP provides a comprehensive, single source of guidance and procedures for the County to prepare for and respond to significant or catastrophic natural, environmental, or conflict-related risks that produce situations requiring coordinated response. It further provides guidance regarding management concepts relating to response and abatement of various emergencies, identifies organizational structures and relationships, and describes responsibilities and functions necessary to protect life and property (County of San Bernardino 2018).

### **County of San Bernardino Code of Ordinances**

#### **Title 2, Division 3, Chapter 3: Abatement of Fire Hazards and Hazardous Trees**

The Duty to Abate Fire Hazards or Hazardous Trees ordinance (Ord. 23.0301) mandates property owners in the unincorporated county to abate all fire hazards and hazardous trees through disposal of flammable vegetation or other combustible growth, fuel breaks, and other fuel modification methods.

#### **Title 8, Division 2, Chapter 82.01: Land Use Plan, Land Use Zoning Districts, and Overlays**

The Fire Safety Overlay is established by the San Bernardino County Development Code Sections 82.01.020, *Land Use Plan and Land Use Zoning Districts*, and 82.01.030, *Overlays*. The purpose of the Fire Safety Overlay is to establish general development standards to provide greater public safety in these areas associated with greater wildland fire hazard.

Projects located in the Fire Safety Overlay must include fuel modification plans and comply with applicable standards required by the responsible Fire Authority, including the standards and provisions of the CBSC Chapter 7A (*Materials and Construction Methods for Exterior Wildfire Exposure*) and California Residential Code Chapter 327.

### **County of Riverside General Plan**

The County of Riverside General Plan Safety Element, last updated in 2016, provides a framework for considering safety issues in the land use planning process and presents policies for identifying hazards and reducing exposure to hazardous conditions. It seeks to develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features in accordance with Riverside County Ordinances, limits or prohibits development or activities in areas lacking water and access roads, and encourages proposed development where fire and emergency services are available or planned, and design to account for topography of a site (County of Riverside 2016).

### **County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan**

The County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) identifies hazards present in the county, assesses previous disaster occurrences, and sets goals and objectives

to mitigate potential risks to reduce or eliminate the risk of loss of life or property due to natural or human-made hazards. Wildfire is one of the natural hazards identified (County of Riverside 2018).

## County of Riverside Code of Ordinances

### Title 8, Chapter 8.32 – Fire Code

The Fire Code Standards ordinance (Ord. 787) addresses implementation of the CBSC, based on the International Conference of Building Officials. The codes prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection and include WUI fire area building standards established by CAL FIRE. Collectively, the ordinance establishes the requirements and standards for fire hazard reduction regulations within Riverside County (including additions and deletions to the California Fire Code) to fully protect the health, safety, and welfare of existing and future residents and workers of the county.

### Title 8, Chapter 8.56 – Hazardous Vegetation

Ordinance No. 695 requires property owners in areas of substantial fire risk to reduce fire danger through mowing and other fuel modification methods and mandates the abatement of “hazardous vegetation” prior to development design and implementation of fuel modification programs.

## 3.19.3 Impacts and Mitigation

This section lists the significance criteria, describes the methods used to evaluate wildfire impacts, presents the analysis of the impacts of the Proposed Project, and identifies mitigation measures where required to reduce significant impacts on wildfires. A discussion of potential types of impacts related to construction and operation of the Covered Activities and potential best practices that could be incorporated into future projects to reduce impacts is found in Appendix C, *Covered Activities Programmatic Environmental Evaluation*, and cumulative impacts are discussed in Chapter 4, *Cumulative Impacts*.

### 3.19.3.1 Significance Criteria

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, if located in or near SRAs or lands classified as VHFHSZ, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below:

- Substantially impair an adopted emergency response plan or emergency evacuation plan? (Impact WF-1)
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? (Impact WF-2)
- 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? (Impact WF-3)
- 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 WF-4)

### 3.19.3.2 Methodology

This section describes the methods used to analyze the environmental consequences of implementing the Proposed Project, including activities related to the Upper SAR HCP's Conservation Strategy and conservation measures. The following steps were taken to analyze the potential wildfire impacts of the Proposed Project:

- Identify and evaluate potential Conservation Strategy components or conservation measures that could result in the impacts on wildfire.
- Identify and evaluate potential impacts related to wildfire resulting from implementation of the HCP Conservation Strategy.
- Evaluate the level of significance of impacts, and apply mitigation as needed.
- Determine the level of significance of potential impacts after implementation of mitigation.
- Identify potential types of impacts related to implementing Covered Activities and provide recommended best practices to reduce potential impacts.

Impacts related to wildfire were assessed based on review of the HCP, consultation with the Permittees, and review of applicable general plans and ordinances for Riverside and San Bernardino Counties. Criteria from Appendix G of the State CEQA Guidelines were used to determine whether the Proposed Project would result in significant impacts related to wildfire. This analysis of impacts related to wildfire relies on available resources from CAL FIRE, including fire hazard severity zone mapping, and applicable emergency response plans, general plans, EIRs, regulations, and policies of the local agencies.

### 3.19.3.3 Impact Analysis and Mitigation

#### ***Impact WF-1: Substantially impair an adopted emergency response plan or emergency evacuation plan?***

The Permit Area encompasses several jurisdictions with coordinated emergency response strategies. The EOP, the MJHMP, and Disaster Recovery Plan, Phase I, provide a coordinated framework for the Operational Area of San Bernardino County. The Riverside County MJLHMP and General Plan provide strategy and regulation for emergency response in Riverside County. In addition, the Permit Area cities have coordinated plans for emergency response. The Proposed Project sites are mostly within natural areas, and the conservation activities would not alter any roadways that could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. None of the habitat improvement, management, maintenance, or monitoring activities would involve modifications to facilities that are critical to emergency response, such as police, fire, and hospital facilities, and the Proposed Project would not impede access to these facilities in an emergency.

Construction associated with habitat improvement actions could temporarily result in impacts on emergency response, such as temporary traffic stops or road closures. This could result in some conflict with existing emergency response or evacuation plans. However, the Proposed Project would be required to comply with State and Federal regulations related to emergency response, as well as local land use policies and emergency response plans. Compliance with applicable regulations, policies, and guidelines would reduce impacts related to any interference with emergency response and evacuation plans. Therefore, impacts would be **less than significant**.

### Mitigation Measure

No mitigation is required.

***Impact WF-2: Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***

In San Bernardino County, LRAs designated as VHFHSZs are primarily located around the northern and eastern boundaries of the cities of Upland, Rancho Cucamonga, Fontana, Rialto, San Bernardino, Highland, and Yucaipa, generally in areas where urban development meets forested landscapes. VHFHSZs are also mapped in the southern portions of the jurisdictions of Grand Terrace, Loma Linda, and Redlands. SRAs designated as VHFHSZs are located north of the jurisdictional boundaries of the cities of Upland, Rancho Cucamonga, Fontana, Rialto, San Bernardino, Highland, Redlands, and Yucaipa. San Bernardino County ordinance requires that projects located in the Fire Safety Overlay must include fuel modification plans and comply with applicable standards required by the responsible Fire Authority.

Riverside County has a long history of significant wildland fires. CAL FIRE is the forestry agency assigned to the unincorporated areas of Riverside County. The City of Riverside Fire Department has working automatic and mutual aid agreements with CAL FIRE to assist in fire protection. In Riverside County, LRAs designated as VHFHSZs are mapped primarily along the southwestern boundary of the city of Corona, the boundary between Norco and Riverside, the northeastern boundary of Riverside, and the northern and southern boundaries of Moreno Valley jurisdictions. SRAs designated as VHFHSZs are located in the unincorporated area around Lake Mathews and east of the city of Riverside. Prior to construction associated with habitat improvement activities, Conservation Areas in VHFHSZs would be required to implement fuel modification programs for the interface between developed and natural areas within and adjacent to the Permit Area. Such fuel modification plans will be subject to approval by the Riverside County Fire Department. Additionally, certain developments in hazardous fire areas may require Fire Protection Plans consistent with the unique fire protection issues resulting from the vegetative, topographic, and climatic conditions of the proposed Conservation Areas.

Construction activities associated with habitat improvement implemented as part of the Conservation Strategy are expected to follow fire-management goals and policies set forth by the County of San Bernardino General Plan and the San Bernardino Countywide Plan; requirements of the San Bernardino Fire Safety Overlay and Fuel Modification Areas; County of Riverside General Plan; Riverside County Fire Code; requirements of CAL FIRE and of the responsible Fire Authority; and all other applicable fire and safety policies or regulations set forth in Section 3.19.2, *Regulatory Framework*, to minimize risk of wildfire. Compliance with these established goals, policies, and requirements would reduce potential impacts related to wildfire risks and its pollutants and decrease interactions between the WUI.

The County of Riverside General Plan's EIR states that, "compliance with existing regulations and General Plan policies would be sufficient to ensure that [impacts related to the exposure of people to a significant risk of loss, injury or death involving wildland fires are] less than significant" (County of Riverside 2014). However, the County of San Bernardino General Plan states that, "development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas." Limited structures would be built in the Permit Area and would include flow manipulation structures made

of natural materials such as boulders, large cobble, and large woody debris. Therefore, no structures would be damaged or destroyed during a wildland fire.

Activities implemented as part of the Conservation Strategy would include activities to decrease wildfire risk. For example, monitoring, management, and maintenance activities would include the eradication of flammable nonnative plant species (such as palms and giant reed) from Conservation Areas. The Conservation Strategy includes management activities (i.e., routine activities that occur in natural habitats as a part of general land stewardship, such as trash removal, access control, and signage) and habitat management (e.g., habitat improvement, nonnative species control, vegetation management, and fire break/fuel management). Fuel modification can be in the form of manual, mechanical, or chemical vegetation control for the purposes of wildfire management. Methods may include thinning, trimming up, and removal of vegetation within buffer zones. Such activities could occur periodically throughout the year in the Permit Area. The Proposed Project would also streamline permitting for Covered Activities, which would increase reliable water supplies that could be used to fight fires.

As stated in Section 3.8, *Hazards and Hazardous Materials*, the Proposed Project sites are heavily used by the homeless population currently in the area. In addition, wildland fires are common in the Santa Ana River watershed due to natural causes, arson, and unintended incidents that burden the police and fire service systems. The Proposed Project conservation activities could potentially reduce the incidences of crime and arson through removal of homeless encampments from the Proposed Project sites. Long-term management and monitoring would also be conducted through park ranger patrol of the Conservation Areas and other areas along the Santa Ana River to deter unauthorized human disturbances, including garbage disposal and homeless encampments, from disturbing and destroying conservation sites or adjacent areas. Additionally, there would be no substantial increase in naturally caused fires due to maintaining similar natural, open spaces as currently exist at the sites and through the provision of additional water to the sites to ensure success of newly installed vegetation.

Management activities and habitat management, such as the establishment of fuel breaks, are expected to follow fire-management goals and policies set forth by the San Bernardino County General Plan, San Bernardino Countywide Plan, requirements of the Fire Safety Overlay and Fuel Modification Areas, Riverside County General Plan, Riverside County Fire Code, requirements of CAL FIRE and the responsible Fire Authority, and all other applicable fire and safety policies or regulations set forth in Section 3.19.2, *Regulatory Framework*, to minimize risk of wildfire. Compliance with these established goals, policies, and requirements would reduce potential impacts related to wildfire risks and its pollutants, as well as decreased interactions in the WUI.

Although the Proposed Project would include some maintenance and management activities to decrease wildfire risk, the potential remains for some activities to be located in high fire hazard areas that could exacerbate wildfire risks of, and thereby expose nearby receptors to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk and ensure that impacts are **less than significant**.

### **Mitigation Measures**

No mitigation measures are required.

***Impact WF-3: 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?***

As discussed in Section 3.19.1, *Environmental Setting*, and under *Impact WF-2*, portions of the Permit Area are under the responsibilities of SRAs, LRAs, and FRAs and have fire hazard severity zone designations that range from no fire hazard to very high fire hazard. Ground and vegetation disturbance could occur in VHFHSZs mapped by CAL FIRE (as discussed in Section 3.19.1.2, *Planning Area*). All access points, storage, and staging areas during construction associated with habitat improvement activities would be located in a manner that has the least impact on native vegetation as well as vehicular and pedestrian traffic. An irrigation system (e.g., a groundwater well) may be required to enhance the survivorship of newly installed native plants and seed when plants have been grown in nursery conditions, when they are planted under initially dry or drought conditions, or when planting does not occur within an ideal seasonal planting time frame. This additional infrastructure is not anticipated to exacerbate fire risk in the Proposed Project area. In addition, implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk and ensure that impacts are **less than significant**.

**Mitigation Measures**

No mitigation measures are required.

***Impact WF-4: 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?***

The risk of the Proposed Project resulting in wildfire is discussed in *Impact WF-2* and *Impact WF-3*. As noted in the assessment of such impacts, the risk is low, and implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk. Therefore, the Proposed Project would not increase post-fire risk, and impacts would be **less than significant**.

**Mitigation Measures**

No mitigation measures are required.

### **3.19.4 Summary of Potential Types of Impacts of Covered Activities**

As noted under *Introduction to the Analysis* in this chapter, a brief summary of the types of wildfire effects that could occur when Covered Activities are implemented is presented here for informational purposes. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed discussion of Covered Activities that could create wildfire impacts and potential best practices that could be incorporated into future projects to reduce potential impacts on wildfires.

Covered Activities by type and their possible relationship to impacts are shown in Table 3.19-2.

**Table 3.19-2. Covered Activities Relevant to Wildfire**

<b>Covered Activity</b>	<b>Description</b>	<b>Relevance</b>
Water reuse projects	Activities related to projects associated with water reuse, including construction of new water treatment plants and associated facilities, and operations and maintenance (O&M) of existing and new water treatment plants and associated facilities	Potential land acquisition and new development of structures, which could be located in fire-sensitive areas
Groundwater recharge	Activities related to construction of new structures associated with diversions, O&M of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and O&M of existing and new recharge basins	Similar to Water Reuse Projects
Wells and Water Conveyance Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges), and the O&M of this infrastructure and associated development	Similar to Water Reuse Projects
Solar Energy Development	Activities related to the construction and maintenance of new solar facilities	Similar to Water Reuse Projects
Routine O&M	Actions that occur repeatedly in one location and/or in many locations over a wide area periodically and include minor construction, earth-moving, or vegetation-management activities to infrastructure	Low potential for contributing to wildfire hazards with implementation of AMM-24 and AMM-25

Wildland fires are common in the Santa Ana River watershed, resulting from natural causes, arson, and unintended incidents. Typically, when structures and people are added to an area, the risk of wildfire increases. Potential wildfire impact that could result from implementing the types of Covered Activities identified in Table 3.19-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. Construction of new facilities and infrastructure development could introduce new potential ignition sources in the form of building materials, vegetation for landscaping, vehicles, and small machinery (e.g., for typical landscape maintenance) in high fire hazard areas. Construction and operation of Covered Activities would be required to comply with applicable construction and design standards that ensure the incorporation of fire prevention features. Future projects within lands designated as VHFHSZs are subject to additional fire safety provisions, including fuel modification plans and review by the responsible Fire Authority. Implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk-reducing measures into Covered Activities, including conservation activities, would address this risk. Please refer to Appendix C, *Covered Activities Programmatic Environmental Evaluation*, for a more detailed overview of potential Covered Activity wildfire impacts and best practices that could be employed to reduce potential impacts.

## 4.1 Cumulative Impacts

Under the California Environmental Quality Act (CEQA), cumulative impacts are “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (State CEQA Guidelines § 15355; Public Resources Code Section 21083(b)). Section 15130 of the State CEQA Guidelines requires that an environmental impact report (EIR) evaluate potential environmental impacts that are individually limited but cumulatively significant.

## 4.2 Approach to Cumulative Impacts Analysis

For the purposes of this EIR, significant cumulative impacts would occur if impacts related to the implementation of the Proposed Project, added to the environmental impacts of other past, present, and reasonably foreseeable similar actions, result in a significant adverse effect. For an impact to be considered cumulative, these incremental impacts and potential incremental impacts must be related to the types of impacts caused by the Proposed Project. The cumulative impact analysis also considers the potential contribution to cumulative effects of impacts of Covered Activities, as summarized in Appendix C, *Covered Activities*. Other plans and projects were also included in the cumulative impact analysis.

Potential cumulative impacts are assessed within this chapter based on the impacts provided in the individual resource sections in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*.

Under CEQA, *cumulative impacts* refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- a. The individual effects may result from a single project or a number of separate projects.
- b. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant impacts taking place over a period of time. (Cal. Code Regs. § 15355)

The following projects and other factors would be involved in the assessment of cumulative impacts for this project.

- Implementation of Covered Activities associated with the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP) (refer to Appendix C).
- Management of State and Federal lands and the needs of threatened and endangered species. The management of these lands is considered in the assessment of cumulative impacts.



- Other HCPs in the Planning Area that address the conservation of species in the context of land-use changes. These plans address Planning Area-specific Covered Species and other species proposed for coverage under the Upper SAR HCP.
- Planned capital improvement programs (CIPs) and relevant plans, including projects in adopted or available plans, such as regional transportation plans, local land use general and specific plans, agencies' budget or CIP, and recent environmental documents for other large-scale projects within the Planning Area.
- Other economic and environmental factors in the Planning Area and globally, including global climate change and the COVID-19 global pandemic that began in 2020 with stay-at-home orders and other restrictions that forced businesses to close to allow for social distancing per Federal, State, and local orders.

Once actions, activities, and other factors were identified, they were combined with the impacts of Covered Activities and the Proposed Project in the evaluation of cumulative impacts through the following steps.

- Defined a cumulative impact area for the cumulative impacts for each resource. In most cases, this area was the entirety of the Planning Area.
- Determined whether there would be a cumulative impact to which the Proposed Project could potentially contribute.
- Determined whether the incremental contribution of the Proposed Project to the cumulative impacts for each resource area are cumulatively considerable under CEQA. The cumulative discussion only includes direct or indirect impacts found to result from the Proposed Project; there is no need to evaluate other projects' similar actions if no impact would be incurred.
- Identified reasonable, feasible options for avoiding or mitigating the Proposed Project's contribution to cumulatively significant considerable impacts under CEQA.

The individual resource evaluations in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, form the basis for analyzing the cumulative impacts for each resource. The cumulative analysis includes all resources considered in Chapter 3 (i.e., Sections 3.1 through 3.19). Where applicable, the cumulative impacts analysis sections note the impacts to which the Proposed Project would not contribute and explains the rationale.

## 4.3 Activities Included in the Cumulative Impacts Analysis

The analyses presented in this EIR are focused on the direct and indirect impacts that may result from implementing the Proposed Project, which includes the following major elements.

- Issuance of permits for the incidental take of 20 of the 22 Covered Species
- Conservation activities within an HCP Preserve System to be established and managed for Covered Species habitat
- Additional actions to improve aquatic, riparian, and alluvial scrub habitats, as well as additional sensitive habitats throughout the Upper Santa Ana River watershed (i.e., not necessarily within the preserve system)

- Species-specific conservation measures also including the re-establishment of native fish species, through processes of captive headstarting and translocation, to create additional resilience to extinction by establishing redundant populations in the Upper Santa Ana River watershed mountain tributary streams
- Upper SAR HCP Preserve System management and monitoring, including habitat improvement (restoration and/or rehabilitation), the control of nonnative species (flora and fauna), Covered Species captive headstarting and translocation activities, species surveys and research, additional vegetation management to reduce fire potential, site cleanup, preserve patrols, and others

Types of past, present, and reasonably foreseeable actions that have the potential, in combination with the impacts of the Proposed Project, to result in cumulative impacts are listed in Section 4.2 and are described in detail in this section.

The specific cumulative activities and actions identified for consideration in the cumulative impact analysis are described below. Generally, the analysis of cumulative impacts includes plans and actions that could affect the management of Covered Species in the Permit Area or directly adjacent to the Planning Area. This broad scope helps provide an understanding of the relative importance of the Proposed Project to overall population conditions and other environmental impacts that could occur in combination with the Proposed Project. The Proposed Project includes the full implementation of all Covered Activities within the Planning Area for the 50-year permit term. Other activities in combination with the Proposed Project could include management of Federal and State lands and full implementation of other HCPs, local agency programs, general plans, CIPs, and other factors, as stated previously. The activities and factors that are included in the analysis of cumulative effects are as follows.

### 4.3.1 Management of State and Federal Lands

The region contains several wildlife refuges and other State and Federal lands that provide benefit to wildlife, including many of the Covered Species (Figure 4-1). Because management of these State and Federal lands must consider the needs of threatened and endangered species, the management of these lands is considered in the assessment of cumulative impacts. Specific refuge lands with geographic proximity to the Planning Area are as follows (California Protected Areas Database 2019), including a brief description of refuge management activities.

- Federal
  - Bureau of Land Management (open access)
    - Unnamed lands. The Bureau of Land Management promotes multiple use on public lands: development, conservation through shared stewardship, promoting jobs, and allowing traditional uses of public lands (e.g., hunting, fishing, and other recreational uses) (Bureau of Land Management n.d.).
  - U.S. Forest Service (public access)
    - Cleveland National Forest. The Cleveland National Forest is the southernmost national forest in California and encompasses 460,000 acres (U.S. Forest Service n.d.1). It is managed for resources, including fire, ecological resources, archaeological resources, and recreation (U.S. Forest Service n.d.2).
    - Angeles National Forest. The Angeles National Forest is near the metropolitan area of Los Angeles and encompasses 700,000 acres (U.S. Forest Service n.d.3). It is managed

for resources and recreation and includes natural environments, developed campgrounds and picnic areas, swimming, fishing, and skiing.

- San Bernardino National Forest. The San Bernardino National Forest is in the San Bernardino and Jacinto Mountains and encompasses approximately 810,000 acres, including approximately 140,000 acres of inholdings (U.S. Forest Service n.d.4). It is managed for resources and recreation and includes national monuments, wilderness areas, wild and scenic rivers, and other resources (U.S. Forest Service n.d.5).
- State
  - California Department of Fish and Wildlife (restricted access or no public access)
    - Lake Mathews-Estelle Mountain Ecological Reserve. The Lake Mathews-Estelle Mountain Ecological Reserve is jointly managed by the Metropolitan Water District of Southern California, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Riverside County Habitat Conservation Agency (Western Riverside County Regional Conservation Authority 2021). The reserve is approximately 13,000 acres (Metropolitan Water District of Southern California 2016). This area is important for bird nesting and feeding, among other values.
    - Sycamore Canyon Ecological Reserve (Inland Deserts Region/Region 6). The Sycamore Canyon Ecological Reserve is 131 acres (California Department of Fish and Wildlife 2019). The dominant vegetation type is annual grassland, with some sparse coastal sage scrub species (primarily white sage and flat-topped buckwheat). There is also a small riparian area dominated by willow and mulefat, with thorny berry bushes in the understory. The area is undeveloped and has been used primarily for non-consumptive recreation such as hiking. The property was purchased to protect habitat for endangered species and to provide compatible public uses.
  - California Department of Parks and Recreation (public access)
    - California Citrus State Historic Park. This park, which is 250 acres (California Department of Parks and Recreation 2003), preserves some of the rapidly vanishing cultural landscape of the citrus industry and tells the story of this industry's role in the history and development of California (California Department of Parks and Recreation 2019a). The park recaptures the time when citrus was "king" in California, recognizing the importance of the citrus industry in Southern California. The park includes a visitor center, walkways, and a stage area.
    - Chino Hills State Park. This park is more than 1,400 acres (California Department of Parks and Recreation 2002) and is a critical link in the Puente-Chino Hills biological corridor. This "bio-link" stretches nearly 31 miles from the Santa Ana Mountains to the Whittier Hills. The park includes a visitor center, campground, picnic areas, and equestrian facilities.



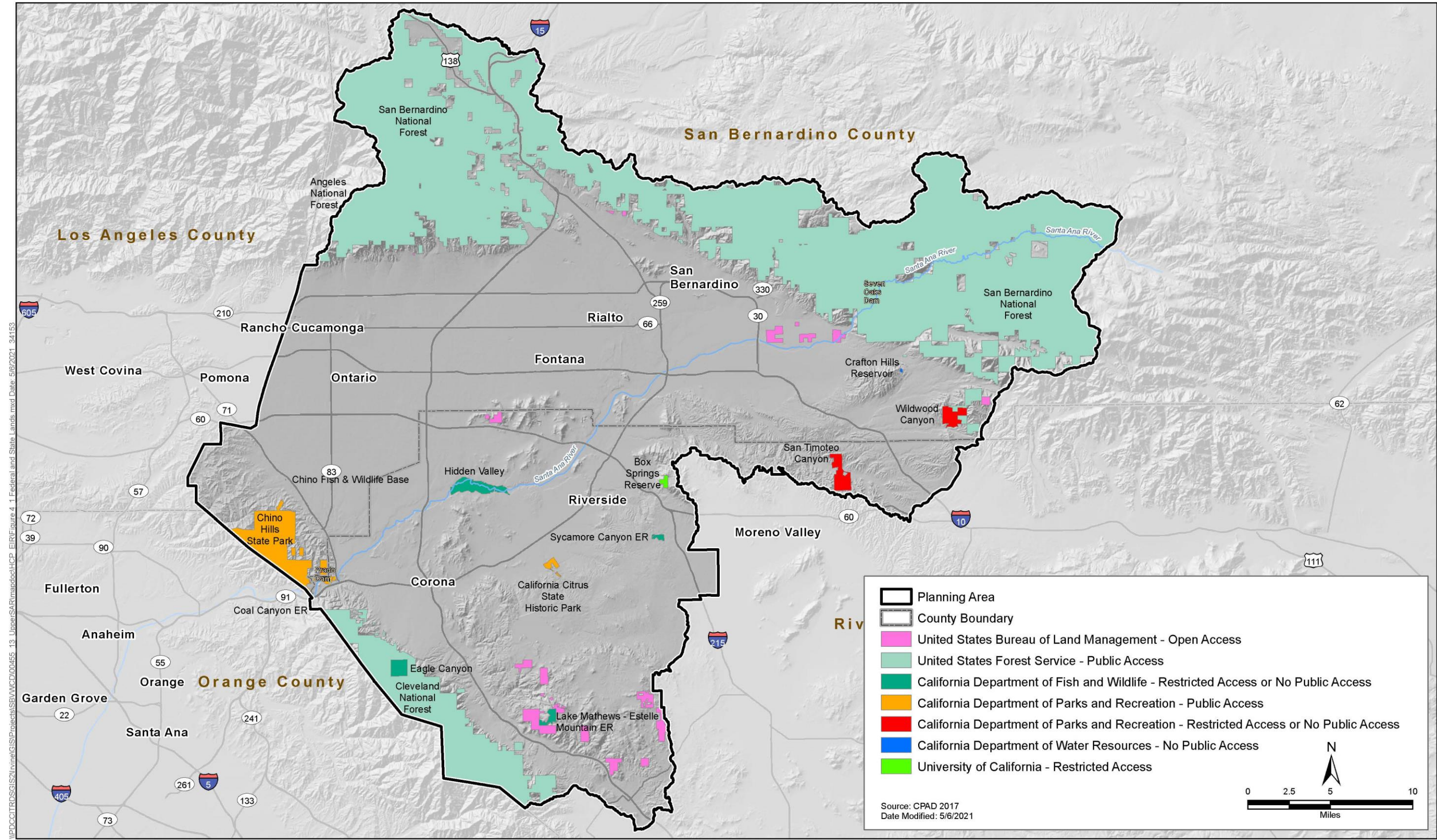
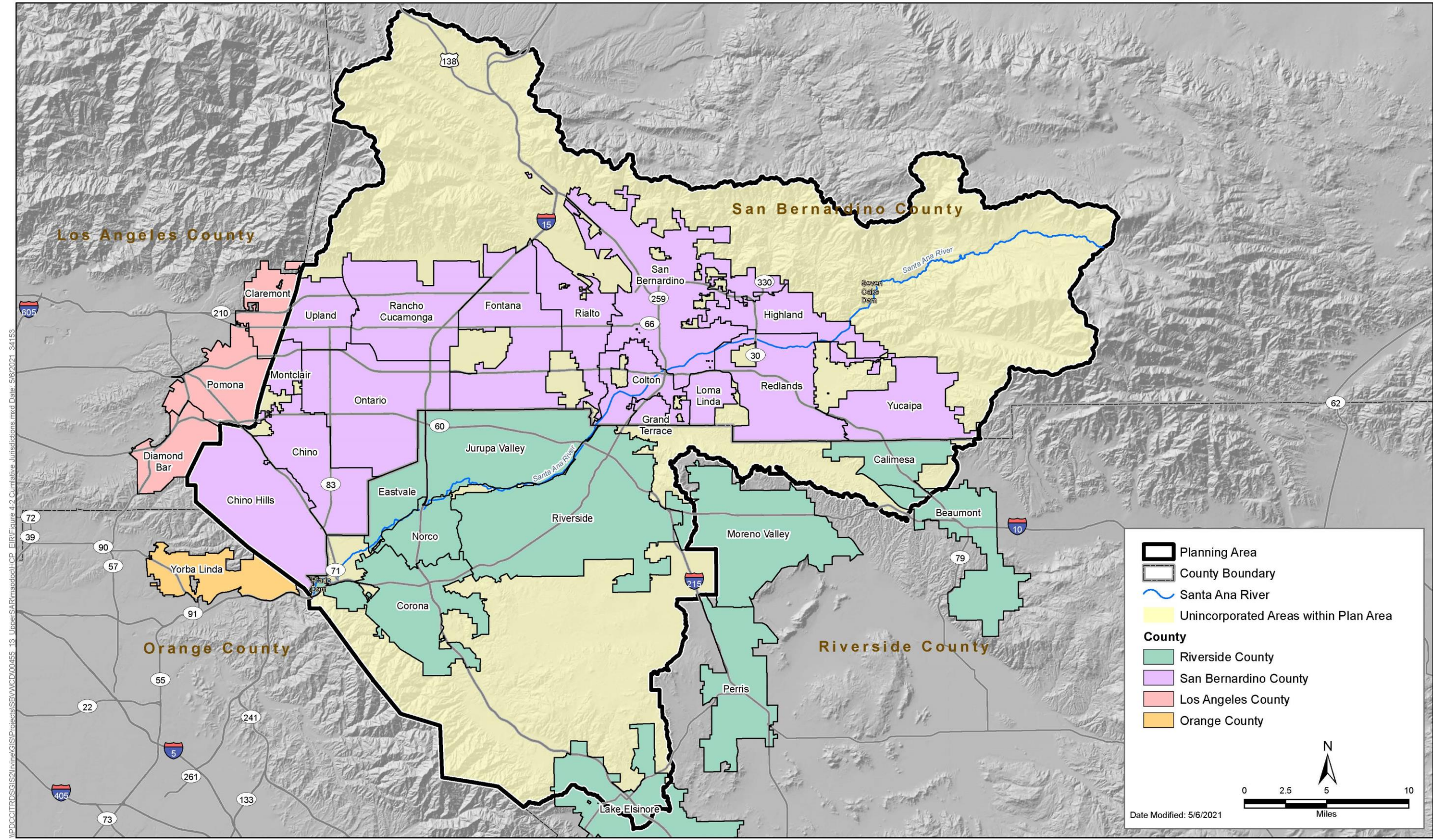


Figure 4-1. Cumulative Managed Lands in the Planning Area





**Figure 4-2. Cumulative Programs, Projects, and Jurisdictions in the Planning Area**



- California Department of Parks and Recreation (restricted access or no public access)
  - San Timoteo Canyon. This park is a new day-use facility planned to offer trails for hiking and horseback riding, picnic areas, nature and wildlife viewing, and geocaching (California Department of Parks and Recreation 2019b). Facilities may not yet be available to the public.
  - Wildwood Canyon. This park is 900 acres (California Department of Parks and Recreation 2010) and home to hundreds of species of wildlife and native plants, some of them rare and endangered (California Department of Parks and Recreation 2019c). The park also preserves the human history of the area in the form of past ranches and homesteads. The park offers trails for hiking and horseback riding, picnic areas, a historical/cultural site, nature and wildlife viewing, and geocaching.
- California Department of Water Resources (restricted access or no public access)
  - Crafton Hills Reservoir. Crafton Hills Reservoir is a lake in San Bernardino County that allows the public to go fishing. The Crafton Hills Reservoir Expansion Project would enlarge the Crafton Hills Reservoir from a usable storage capacity of 85 acre-feet to approximately 225 acre-feet. The reservoir would be enlarged by constructing a new earthen dam in the adjoining drainage to the west of the existing reservoir (State of California 2009).
- University of California (restricted access)
  - Box Springs Reserve. This reserve is 160 acres (University of California Natural Reserve System 2019). Box Springs Reserve lies on a steep and rugged granitic slope near the top of Box Springs Mountain, in a transitional zone between coastal sage scrub and chamise chaparral. A cold spring on the adjacent land gives rise to freshwater seeps and an intermittent stream. Rare species are resident at this reserve, as well as a diversity of more common species. Fire occurs frequently in this area.

### 4.3.2 Implementation of Habitat Conservation Plans in the Planning Area

Similar to the Upper SAR HCP, other HCPs in the Planning Area (Figure 3.4-3) address the conservation of species in the context of land-use changes. This includes the acquisition of habitat reserves and the avoidance or minimization of impacts on Covered Species. These plans address Planning Area-specific Covered Species, including the Santa Ana River woolly-star, slender-horned spineflower, Delhi Sands flower-loving fly, Santa Ana sucker, arroyo chub, arroyo toad, mountain yellow-legged frog, western spadefoot, burrowing owl, coastal California gnatcatcher, cactus wren, least Bell's vireo, southwestern willow flycatcher, tricolored blackbird, western yellow-billed cuckoo, yellow-breasted chat, San Bernardino kangaroo rat, Los Angeles pocket mouse, and other species proposed for coverage under the Proposed Project.

- **Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan HCP).** This HCP was permitted in July 2020. The City of Redlands, City of Highland, San Bernardino Valley Water Conservation District, San Bernardino Valley Municipal Water District (Valley District), East Valley Water District (East Valley), Cemex, Inc, and Robertson's Ready-Mix will participate in the implementation of the HCP (San Bernardino Valley Water Conservation District 2013). The primary goal of the Wash Plan HCP is to balance the ground-disturbing activities of water conservation, aggregate mining, recreation activities, and other public services with the

conservation of natural communities and populations of Covered Species, all of which are also covered by the Upper SAR HCP. The Wash Plan HCP Planning Area (4,892 acres) is entirely within the Upper SAR HCP Planning Area and includes the area from approximately 1 mile downstream of the Seven Oaks Dam to approximately 6 miles westward from Greenspot Road in the city of Highland to Alabama Street in the city of Redlands (Figure 3.4-6).

- **Western Riverside County Multiple Species Habitat Conservation Plan (WRC MSHCP).** This Natural Community Conservation Plan/HCP was adopted in June 2003. Participation by Riverside County in the WRC MSHCP is intended to streamline the environmental process for future transportation and development projects in western Riverside County (County of Riverside Transportation and Land Management Agency and U.S. Fish and Wildlife Service 2003). There are 164 listed and non-listed Covered Species in the WRC MSHCP, some of which are also covered by the Upper SAR HCP. The southern portion of the Upper SAR HCP occurs within the boundaries of the WRC MSHCP Planning Area (Figure 3.4-4).
- **West Valley HCP.** This HCP was adopted in June 2014. The City of Colton participates in this HCP (RBF Consulting 2014). The purpose of the West Valley HCP is to fulfill the permit requirements for proposed activities under the plan in areas containing occupied and suitable habitat for Delhi Sands flower-loving fly in order to maximize economic development in the city of Colton while also conserving the Delhi Sands flower-loving fly, also covered by the Upper SAR HCP. The West Valley HCP occurs entirely within the Upper SAR HCP Planning Area near Fontana (Figure 3.4-7).
- **Lake Mathews Multiple Species Habitat Conservation Plan (Lake Mathews MSHCP).** This HCP was adopted in July 1995. The Metropolitan Water District and the Riverside County Habitat Conservation Agency in cooperation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife participate in this HCP (Metropolitan Water District of Southern California and Riverside County Habitat Conservation Agency 1995). The purpose of the MSHCP includes creating a mechanism to coordinate the stewardship activities of multiple public agencies with land protection or management responsibilities. The Upper SAR HCP also covers 31 of the 65 Covered Species in this HCP. The Lake Mathews MSHCP occurs entirely within the Upper SAR HCP Planning Area (Figure 1-4). It consists of approximately 6,000 acres of open land surrounding Lake Mathews in northwestern Riverside County (Figure 3.4-4).
- **Stephens' Kangaroo Rat HCP (SKR HCP).** This HCP was adopted in March 1996. Conservation goals include the acquisition and conservation of Stephens' kangaroo rat (SKR) habitat within a regional reserve system and conservation of 15,000 acres in seven core reserves within the plan's boundary for SKR (Riverside County Habitat Conservation Agency 1996). The Upper SAR HCP Planning Area encompasses three SKR HCP core reserve areas: Lake Mathews/Estelle Core Reserve, Steele Peak Core Reserve, and Sycamore Canyon Core Reserve (Figure 3.4-5). None of the Upper SAR HCP Conservation Areas would affect SKR.

### 4.3.3 Capital Improvement Programs Buildout

The Planning Area includes many CIPs, representing a multi-year program of individual infrastructure projects and laying out the agencies' planned capital improvements and budgetary considerations for their completion (Government Finance Officers Association 2018). CIPs in the Planning Area include a variety of large and small infrastructure projects, such as roadway improvements, water conveyance infrastructure, transmission lines, and energy. Many Covered

Activities are included in the CIPs for the individual Permittees.<sup>1</sup> Note that Permittees like the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife do not have CIPs and are not included in this list.

- Permittee Agencies
  - Rialto Utility Authority (2018)
  - East Valley Water District (2018)
  - Inland Empire Utilities Agency (2018a)
  - Metropolitan Water District of Southern California (2015)
  - Orange County Water District (2018)
  - Riverside Public Utilities (City of Riverside 2018)
  - San Bernardino Municipal Water Department (no date)
  - San Bernardino Valley Municipal Water District (2019)
  - San Bernardino Valley Water Conservation District (no date)
  - West Valley Water District (2018)
  - Western Municipal Water District of Riverside County (2019)
- Southern California Edison (Capital Investment Plan) (Permittee) (2019)
- Cities and Counties
  - San Bernardino County
    - Chino (City of Chino 2018)
    - Chino Hills (City of Chino Hills n.d.)
    - Colton (City of Colton n.d.)
    - Fontana (City of Fontana 2020)
    - Grand Terrace (City of Grand Terrace 2019)
    - Highland (Dodge Data & Analytics 2019)
    - Montclair (City of Montclair 2019)
    - Ontario (City of Ontario 2016)
    - Rancho Cucamonga (City of Rancho Cucamonga n.d.)
    - Redlands (City of Redlands n.d.)
    - Rialto (City of Rialto 2018)
    - San Bernardino (City of San Bernardino 2018)
    - Upland (City of Upland 2019)
    - Yucaipa (City of Yucaipa 2018) [NOTE: city budget including CIP]
    - Unincorporated San Bernardino County (County of San Bernardino 2019) [NOTE: city budget including CIP]
  - Riverside County
    - Beaumont

---

<sup>1</sup> A summary of Covered Activities is provided in Chapter 2, *Project Description*, Table 2-3, Summary of Covered Activities.



- Calimesa
- Corona
- Eastvale
- Jurupa Valley
- Lake Elsinore
- Moreno Valley
- Norco
- Riverside (see Riverside Public Utilities under Permittees above)
- Unincorporated Riverside County
- Water Districts
  - County of San Bernardino
    - Beaumont-Cherry Valley Water District
    - Big Bear Municipal Water District
    - City of Brea Water Services Agency
    - City of Chino Hills Water Services Agency
    - City of Chino Water Services Agency
    - City of Colton Water Services Agency
    - City of Corona Water Services Agency
    - City of Loma Linda Water Services Agency
    - City of Ontario Water Services Agency
    - City of Rialto Water Services Agency
    - County of San Bernardino Water Services Agency
    - Cucamonga County Water District
    - East Valley Water District
    - Jurupa Community Services District
    - Lake Arrowhead Sanitation District
    - Main San Gabriel Basin
    - Monte Vista Water District
    - Riverside Highland Water Co.
    - Rubidoux Community Services District
    - San Bernardino County Water Services Agency
    - San Gabriel Valley Water Co
    - South Mesa Water Co.
    - Terrace Water Company
    - Three Valleys Municipal Water District
    - Walnut Valley Water District
    - West San Bernardino County Water District
    - Yorba Linda Service Area
    - Yucaipa Valley Water District
  - County of Riverside
    - Beaumont-Cherry Valley Water District
    - City of Chino Hills Water Services Agency
    - City of Colton Water Services Agency
    - City of Corona Water Services Agency

- City of Loma Linda Water Services Agency
- City of Ontario Water Services Agency
- City of Riverside Water Services Agency
- County of San Bernardino Water Services Agency
- Eastern Municipal Water District
- Elsinore Valley Municipal Water District
- Elsinore Water District
- Home Gardens County Water District
- Jurupa Community Services District
- Lee Lake Water District
- Riverside Highland Water Co.
- Rubidoux Community Services District
- San Gabriel Valley Water Co.
- Santiago County Water District
- South Mesa Water Co.
- West San Bernardino County Water District
- Western Municipal Water District
- Yucaipa Valley Water District

Cumulative analysis for the Proposed Project assumes completion of projects described in these CIPs over the 50-year term of the permit, including updates to the CIPs.

#### 4.3.4 Local Agency General Plan Buildout

Every city and county jurisdiction within the Planning Area includes a general plan that is typically updated every 10 to 30 years. California State law requires each city and county to adopt a general plan “for the physical development of the county or city, and any land outside its boundaries which in the planning agency’s judgment bears relation to its planning” (Gov. Code § 65300) (Office of Planning and Research 2017). Therefore, each of these listed jurisdictions is guided by its general plan and related general plan elements or topic categories (Gov. Code § 65302). A general plan guides land use planning decisions, describing a vision for future anticipated growth and development of the jurisdiction to which it belongs. Housing elements must be updated every 5 years or every 8 years, according to a schedule set by the Department of Housing and Community Development for each jurisdiction. Local jurisdictions update their general plans as needed.

The counties and cities included in the Planning Area are listed below.

- San Bernardino County
  - Chino
  - Chino Hills
  - Colton
  - Fontana
  - Grand Terrace
  - Highland
  - Loma Linda

- Montclair
- Ontario
- Rancho Cucamonga
- Redlands
- Rialto
- San Bernardino
- Upland
- Yucaipa
- Unincorporated San Bernardino County
- Riverside County
  - Beaumont
  - Calimesa
  - Corona
  - Eastvale
  - Jurupa Valley
  - Lake Elsinore
  - Moreno Valley
  - Norco
  - Riverside
  - Unincorporated Riverside County

Cumulative impact analysis for the Proposed Project assumes build-out of the local jurisdiction general plans in the Planning Area over the 50-year term of the permit, including subsequent general plan updates.

#### **4.3.5 Southern California Association of Governments, Regional Transportation Plan/Sustainable Communities Strategy Implementation**

The Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy and associated Amendment 1 and Amendment 2 describe current and planned transportation projects and strategies for sustainable communities (SCAG 2012, 2013, 2014). The plan and amendments include projects intended to increase mobility for the region's residents and visitors. A key characteristic of the plan and amendments is to reduce emissions from transportation sources to comply with Senate Bill 375, improve public health, and meet National Ambient Air Quality Standards as set forth by the Clean Air Act.

Cumulative impact analysis for the Proposed Project assumes implementation of projects included in the SCAG Regional Transportation Plan/Sustainable Communities Strategy over the permit term, including those updated in future publications of this document.

### 4.3.6 Other Development Projects in the Planning Area

Other large-scale programs and projects are proposed in the Planning Area. The cumulative impact analysis for the Proposed Project assumes implementation of the programs and projects listed below. Other large-scale development projects and programs may be developed in the future. Because these are speculative and would not cover the extent of future development for the next 50 years, this cumulative impact analysis does not assume an exhaustive list of other future large-scale programs or projects within the Planning Area. However, a few key projects are included here.

#### Santa Ana River Conservation and Conjunctive Use Program

The Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) is a watershed-scale collaborative program among five agencies designed to improve the Santa Ana River watershed's water supply resiliency and reliability by increasing available dry-year yield from local groundwater basins. The five partner agencies are Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, Valley District, and Western Municipal Water District. Four of these agencies are also Permittees under the Proposed Project.

The SARCCUP consists of the following planned projects that would address (1) conjunctive use, (2) invasive weed removal and habitat creation and restoration, and (3) water use efficiency and conservation measures.

- Chino Basin Production Wells, Refurbishment, and Treatment System
- Arlington Production Wells and Pipeline
- Cannon Pump Station
- ID-4 Colorado River Aqueduct Crossing Refurbishment
- Santa Ana River Arundo Removal

The cumulative analysis assumes that these projects would be implemented. The cumulative analysis also assumes that related projects that would support the SARCCUP and that would undergo separate CEQA compliance would also be implemented.<sup>2</sup>

#### Santa Ana Watershed Project Authority Proposition 84, Round 1 Projects

Round 1 of projects under the Santa Ana Watershed Project Authority Proposition 84 will implement the first phase identified in the Santa Ana River Watershed's "One Water One Watershed" Integrated Regional Water Management Plan (Santa Ana Watershed Project Authority 2019). The Integrated Regional Water Management Plan Grant Program was designed to encourage integrated regional management of water resources and provide funding for projects that support integrated water management planning and implementation. This is the first round of grant funding under the

---

<sup>2</sup> These additional projects are described in the SARCCUP EIR (Inland Empire Utilities Agency 2018b) in Chapter 6, *Cumulative Impacts*.

Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84).

The project portfolio integrates projects across geographic boundaries. Thirteen lead agencies from across the region will be constructing projects that, when complete, will offset up to 15% of projected imported water demand for the region. These projects include use of recycled water and groundwater recharge, flood management/habitat and surface water quality, and salt removal and groundwater quality projects.

## Harmony Master Planned Community

Harmony is a proposed master-planned community in the city of Highland (Harmony 2015). Harmony meets the diverse needs of the region by providing a variety of housing types totaling up to 3,600 units, parks, trails, roads, gathering places, and open space. Harmony will provide a site for a new school, a new fire station, a police substation, and 14 active and passive parks spanning over 100 acres. Along with parks and trails, there will be 582 acres of natural open space and 111 additional acres of community greenway. Harmony will include road, water, sewer, parks, and flood control infrastructure built in phases over several years. Even though a judge ruled against the proposed development (Redlands Daily Facts 2018), with lawsuits pending, this proposal is still considered reasonably foreseeable and has been included in this analysis.

## Lytle Creek Ranch Development Project

The Lytle Creek Ranch Development Project is a development agreement/pre-annexation agreement between the City of Rialto and the project applicant. The Lytle Creek Ranch Development Project was reviewed and approved through the Lytle Creek Ranch Specific Plan and established new land-use policies for approximately 2,447.3 acres along the northern Rialto city limits. The planned development project would include the construction of up to 8,407 dwelling units and 849,420 gross leasable square feet of general and specialty commercial, office, business park, light industrial and manufacturing, warehouse and distribution center, and other similar uses (excluding institutional, educational, recreational, and infrastructure-related uses). Additionally, the development project would allow for a substantial portion of the development site to be retained for open space and conservation purposes; a range of public, semi-public, and private recreational facilities; and associated public improvements, public works, and infrastructure facilities. The Lytle Creek Ranch Specific Plan was approved in 2012 and has a reported build-out date of 2030.

### 4.3.7 Economic Factors in the Region

As the individual general plans, CIPs, and SCAG plans within the Planning Area are implemented, their focus of development will change over time. This assumes periods of economic growth and recession over the 50-year permit term for the Proposed Project. Currently, due to the COVID-19 global pandemic, economic and job growth have substantially slowed in the world, not just in the Inland Empire. The COVID-19 global pandemic began in early 2020 with stay-at-home orders and other restrictions that forced businesses to fully or partially close to allow for social distancing as a safety precaution per Federal, State, and local orders. Beginning in March 2020, the State of California and the Counties of Riverside and San Bernardino implemented different tiered restrictions at different stages based on criteria for loosening and tightening restrictions on activities and test positivity (State of California 2021). The COVID-19 pandemic and the associated stay-at-home orders have led to unprecedented economic disruption around the world. The

economic outcomes from public officials and businesses making policy and business decisions to halt the spread of the disease include less spending; businesses shutting down, either temporarily and/or permanently; and workers experiencing reduced incomes through a reduction in hours, furloughs, or layoffs, which puts further downward pressure on economic growth. However, this current pattern of economic slowdown is not assumed at this current pace for the next 50 years. Local governments may need to adjust their budgets as less revenue will be generated through retail and hospitality sectors. Priorities may shift toward emergency relief measures. These economic factors will affect individual agencies' ability to implement the plans as originally intended at the local level. Implementation of many development projects and CIPs would either be delayed or may be put on hold until the economic situation improves as there is less available funds to support development of those projects.

Cumulative analysis for the Proposed Project assumes that economic factors in the Planning Area will continue to be slow in 2021 but will eventually grow overall over the 50-year permit term, at an inconsistent rate.

### 4.3.8 Environmental Factors

Future environmental factors that are relevant to the cumulative analysis include multi-year drought and the effects of climate change (U.S. Geological Survey n.d.1; California Office of Environmental Health Hazard Assessment and California Department of Environmental Protection 2018). These will affect water availability and habitat sustainability.

California has experienced severe multiple-year droughts, including the recent 2012–2016 drought (U.S. Geological Survey n.d.1; California Office of Environmental Health Hazard Assessment and California Department of Environmental Protection 2018), and can be expected to experience periods of drought in the future. Effects of drought include lower surface water runoff, which results in both less surface water and less groundwater recharge (U.S. Geological Survey n.d.1). Lower water availability has broad-reaching implications (Hanak et al. 2015), including less water for many functions, such as the following.

- Human consumption (both urban/suburban and rural)
- Agriculture, including lower productivity, increased fallowing of land, and potential permanent conversion of land from agricultural use
- Ecosystems, including effects on reduction in populations of a range of native species

In addition, lower water availability can result in ground subsidence in certain areas (U.S. Geological Survey n.d.1, n.d.2), leading to damage to buildings and infrastructure, increased flood risk in low-lying areas, changes in hydrology, damage to aquatic ecosystems, and damage to groundwater aquifers.

Projected higher temperatures associated with climate change are likely to exacerbate the effects of drought, as described above (Hanak et al. 2015), among other effects (California Office of Environmental Health Hazard Assessment and California Department of Environmental Protection 2018; Hanak et al. 2015). Higher temperatures reduce snowpack, decrease soil moisture, and raise water temperatures.

Other likely effects of climate change include increased severity and frequency of wildfire; changes in native vegetation distribution, including loss of vegetation communities; changes in species

migration patterns and timing; changes in species range; changes surface water temperatures; changes in crop maturation time; changes in snowmelt runoff; extreme heat events, which can affect evaporation and transpiration; and sea level intrusion and sea level rise (California Office of Environmental Health Hazard Assessment and California Department of Environmental Protection 2018).

The cumulative analysis for the Proposed Project assumes that drought and climate change will continue to affect the Permit Area in the future and that conditions as described above are likely to worsen over time, affecting implementation of plans, including HCPs that aim to protect and conserve natural resources and endangered and threatened species.

## 4.4 Cumulative Impacts Analysis

The cumulative impacts analysis considers whether the Proposed Project, Covered Activities and implementation of other plans and projects when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact, and, if it is determined that there could be cumulative impacts, the analysis then proceeds to determine whether the incremental contributions of the Proposed Project to the identified cumulative impacts would be cumulatively considerable. If the incremental effects of the Proposed Project would be cumulatively considerable, the analysis then describes additional feasible mitigation measures beyond those already identified, if available, to address the contribution of the Proposed Project to a cumulative impact.

For cumulative impacts, the analysis includes the geographic extent of each affected resource within which Proposed Project impacts would accumulate or interact with the impacts of other closely related past, present, or reasonably foreseeable probable future projects, including water infrastructure projects considered as Covered Activities. For purposes of this analysis, the geographic area considered is the entirety of the Planning Area or as otherwise noted in this section.

### 4.4.1 Aesthetics

This analysis determines whether the Proposed Project, Covered Activities and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact. Proposed Project activities, Covered Activities and plans that have the potential to contribute to cumulative visual impacts in the Planning Area include projects that would result in a visible change to the visual environment, even though reasonably foreseeable future projects would include typical design and construction practices to avoid or minimize potential impacts. Therefore, the visual environment is expected to change as a result of past, present, and reasonably foreseeable future projects related to changes in land use (see Section 3.10, *Land Use*). Consequently, a cumulative impact exists. Covered Activities could contribute substantially to the cumulative impact.

Temporary construction impacts associated with the Proposed Project and Covered Activities would contribute to cumulative visual impacts because they would compound the visual presence of construction in the Permit Area, especially when factored with other larger-scale infrastructure, development, and transportation projects. Impacts from construction activities are temporary in nature and conservation sites and habitat improvement, management, and monitoring sites would

be in a transitional state over a period of one to several years until plant species mature and vegetation recolonizes the sites, thus restoring the visual character.

Planned infrastructure, development, and transportation projects would also alter the existing visual character of the Planning Area in the long term and affect the area's visual quality and character, including the open space and rural areas and scenic vistas. Viewers would be able to see open space and rural areas within the landscape gradually transition and infill to industrial, mixed-use, commercial, and residential development and this development would include the associated transportation and utility infrastructure needed to support it. Future infrastructure, development, and transportation projects would also add to ambient atmospheric lighting and glare in the Planning Area by infilling unlit open space areas with lit buildings and roadways and by adding reflective surfaces to areas that are currently undeveloped. However, this is a trend that is not project-specific and would occur with or without implementation of the Proposed Project in San Bernardino and Riverside Counties.

As described previously, the Proposed Project would include the implementation of conservation measures to improve habitats in the Permit Area. Conservation activities include habitat improvement, management, and monitoring activities as well as operations and maintenance (O&M) activities within the Conservation Areas in the Permit Area. The Proposed Project would not install any lighting, nor would Proposed Project activities require any lighting because all work would be conducted during daylight hours. Habitat improvement, management, and monitoring would likely result in beneficial impacts such as rehabilitating degraded riparian habitat by nonnative invasive species management and returning selected sites to natural conditions. The improved habitat areas would increase the visual diversity of the Permit Area. However, the Proposed Project would contribute to visual changes related to planned and/or proposed development in the area because Covered Activities would alter and have the potential to degrade the existing visual character and quality of the visual environment, affect scenic vistas and scenic highways, and could negatively affect associated viewers. Therefore, the Proposed Project's contribution to cumulative impacts on visual resources would be **less than cumulatively considerable**.

## Mitigation Measures

No mitigation measures are required.

### 4.4.2 Agricultural and Forestry Resources

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on agricultural and forestry resources. As described in Section 3.2, the Proposed Project would affect less than an acre of Important Farmland. Within the HCP Preserve System, the majority of designated farmland is considered Grazing Land and not Important Farmland. Similarly, within the undeveloped areas of the Planning Area, only limited areas are considered Important Farmlands. Therefore, there would be **no significant cumulative impact**.

While the Project could result in temporary effects to forest lands, as discussed in Section 3.2, overall, the Project will result in the permanent conservation of forest lands, and no permanent conversion of forest lands. Therefore, there would be **no significant cumulative impact**.



### 4.4.3 Air Quality

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on air quality.

As described in Impact AQ-2, Implementation of avoidance and minimization measure (AMM)-17 and Mitigation Measures AQ-1, AQ-2, and AQ-3 would reduce emissions associated with the Proposed Project. However, the magnitude of emissions with potential reductions achieved by required mitigation is not reasonably foreseeable. As such, emissions levels from the Proposed Project are anticipated to contribute a significant level of air pollution such that regional and local air quality would be degraded. Therefore, the Project would result in a **cumulatively considerable contribution to a cumulative impact** even after mitigation is implemented.

Impacts of the Proposed Project related to exposing sensitive receptors to substantial pollutant concentrations is conservatively determined to be significant and unavoidable with mitigation incorporated. Covered Activities could generate emissions during construction and O&M activities that could exceed South Coast Air Quality Management District or Mojave Desert Air Quality Management District thresholds, conflicting with air quality attainment plans and resulting in a **significant cumulative impact** to which the Project's contribution would be **cumulatively considerable**. Criteria pollutant and diesel particulate matter emissions generated by some Covered Activities may also expose receptors to substantial pollutant concentrations. Covered Activities could result in the generation of criteria pollutants from on-road vehicle movement, use of mobile and stationary equipment, painting and asphalt paving, and earthmoving (e.g., grading) in the Permit Area. Emissions would vary substantially depending on the level of activity, length of the activity, specific operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Operational activities typically include inspection, monitoring, testing, facility upkeep and maintenance, excavations and cleanups, and other components. These activities could generate emissions from mobile and stationary equipment, earthmoving, and on-road vehicles. The specific types and amounts of construction and O&M activities would differ depending on the Covered Activity. When combined with ambient risks in the South Coast Air Basin and the Mojave Desert Air Basin, these emissions may result in a **significant cumulative impact** to which the Project's contribution would be **cumulatively considerable**.

Similarly, operation of new water reuse projects and treatment facilities could generate odors adversely affecting a substantial number of people, resulting in a **significant cumulative impact** to which the Project's contribution would be **cumulatively considerable**.

### 4.4.4 Biological Resources

This analysis determines whether the Proposed Project, implementation of the Conservation Strategy, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on biological resources. For biological resources, impacts of the Proposed Project addresses the net effect of implementing the conservation actions in context with the Covered Species habitat impacts that could result from implementing Covered Activities. The Proposed Project is specifically designed to offset (minimize and mitigate) Covered Activity impacts to habitat of Covered Species and streamflow impacts on Covered Species.

Implementation of the Proposed Project could directly and indirectly affect 20 of the 22 Covered Species (Table 4-1). These 20 species have been divided into Group 1, Group 2, and Group 3 (review Section 3.4 for explanation of these groups). Impacts, in the form of incidental take, are not anticipated for Delhi Sands flower-loving fly or arroyo toad for any activities described by the Upper SAR HCP. Both species were analyzed during the development of the Upper SAR HCP, and avoidance measures for these species were developed. Avoidance measures for Delhi Sands flower-loving fly and arroyo toad are outlined in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP.

**Table 4-1. Estimated Impacts on Covered Species Modeled Habitat and Designated Critical Habitat from the Covered Activities**

Covered Species	Acres of Impact	
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary
<b>Slender-Horned Spineflower</b>		
Current Occupied Habitat (modeled)	0.0	0.0
Historic Occupied Habitat (modeled)	<0.1	0.0
Potentially Suitable Habitat	311.2 (30.6)	114.0
<b>Santa Ana River Woolly-Star</b>		
Potentially Suitable Habitat	406.6 (31.9)	57.8
<b>Santa Ana Sucker</b>		
Preferred Habitat	1.3	0
Designated Critical Habitat Wet <sup>c</sup>	13.5	4.8
Designated Critical Habitat Dry <sup>c</sup>	42.3	14.2
<b>Arroyo Chub</b>		
Potentially Preferred Habitat	2.4	0
<b>Santa Ana Speckled Dace</b>		
Potentially Suitable Habitat (Wetted Area <sup>b,d</sup> )	<0.1	0
<b>Mountain Yellow-Legged Frog</b>		
Potentially Suitable Aquatic Habitat <sup>b,d</sup>	5.9 (5.4)	0.3
Refugia/Foraging/Dispersal Habitat	176.0 (151.3)	12.8
Designated Critical Habitat	0.0	0.0
<b>Western Spadefoot</b>		
Potentially Suitable Habitat	704.5 (304.1)	111.7
<b>California Glossy Snake</b>		
Potentially Suitable Habitat	801.3 (145.2)	173.5
<b>South Coast Garter Snake</b>		
Potentially Suitable Habitat	14.7	43.5
<b>Southwestern Pond Turtle</b>		
Aquatic Habitat <sup>b,d</sup>	0.9	4.8
Potentially Suitable Upland Habitat	18.5	53.9
<b>Tricolored Blackbird</b>		
Occupied Colony Habitat	0.0	0.0
Suitable Colony Habitat	55.2 (50.3)	10.7

Covered Species	Acres of Impact	
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary
Breeding Season Foraging – Natural	157.6 (7.6)	43.6
Breeding Season Foraging – Agriculture	67.0	101.0
Non-Breeding Season Foraging – Natural	0.4	0.3
Non-Breeding Season Foraging – Agriculture	0.1	0.9
<b>Burrowing Owl</b>		
Potentially Suitable Habitat	736.3 (181.6)	242.6
<b>Cactus Wren</b>		
Known Suitable Nesting	14.6	0.3
Potential Nesting and Foraging Habitat	681.7 (186.0)	180.2
Recently Burned (2008–2018)	1.6	6.4
<b>Yellow-Breasted Chat</b>		
Potentially Suitable Habitat	126.7 (68.5)	44.7
<b>Western Yellow-Billed Cuckoo</b>		
High Value Breeding Habitat	<0.1	0.8
Other Potentially Suitable Breeding Habitat	8.7	8.2
<b>Southwestern Willow Flycatcher</b>		
Core Southwestern Willow Flycatcher Habitat	15.5	3.7
Very High Value Habitat	<0.1	0.4
High Value Habitat	<0.1	0.2
Moderate Value Habitat	<0.1	0.1
Other Potentially Suitable Habitat	111.2 (68.5)	40.2
Designated Critical Habitat	95.9	12.7
<b>Coastal California Gnatcatcher</b>		
Very High Value Habitat	40.5 (13.8)	6.0
High Value Habitat	46.3 (8.4)	17.0
Moderate Value Habitat	55.6 (18.3)	21.0
Low Value Habitat	188.9 (95.7)	65.0
Other Suitable Habitat	71.6 (1.3)	4.1
Designated Critical Habitat	2.9	2.6
<b>Least Bell's Vireo</b>		
Core Breeding Habitat	0.2	17.2
Other Breeding Habitat	126.5 (68.5)	27.5
Designated Critical Habitat	1.9	55.8
<b>Los Angeles Pocket Mouse</b>		
Potentially Suitable Habitat	657.0 (181.9)	144.2
<b>San Bernardino Kangaroo Rat</b>		
Suitable Habitat	681.4 (377.2)	72.7
Refugia <sup>e</sup>	149.9 (118.6)	46.4
Assumed Occupied <sup>f</sup>	681.6 (57.5)	94.4

Covered Species	Acres of Impact	
	Permanent (portion within Existing Basins) <sup>a</sup>	Temporary
Designated Critical Habitat	656.3 (109.4)	110.1

<sup>a</sup> Impact acreages in parentheses are within existing water recharge/flood control basins subject to regular O&M activities and are a subset of the total acres. For example, of the 681.4 acres of permanent impacts on SBKR, 377.2 acres occur within existing basins. Consequently, impacts outside of basins are:  $681.4 - 377.2 = 304.2$  acres.

<sup>b</sup> Impacts from changes to hydrology, not from ground-disturbance (see Upper SAR HCP Section 3.6.4).

<sup>c</sup> Designated critical habitat for Santa Ana sucker was split into two portions: dry and wet. Designated critical habitat dry includes unoccupied intermittently flowing portions of the Santa Ana River designated as critical habitat as a source of coarse sediment to be supplied to downstream-occupied reaches, where the fish depend on coarse substrate for feeding and spawning. Designated critical habitat wet includes the downstream occupied reaches of the Santa Ana River.

<sup>d</sup> The difference between wetted area impact estimates and aquatic habitat impact estimates are due to two separate analytical methods. Wetted area is calculated based on three-dimensional hydrology models, while aquatic habitat is calculated based on regional land cover mapping.

<sup>e</sup> SBKR refugia habitat is composed of modeled habitat that occurs outside of the 100-year floodplain.

<sup>f</sup> "Assumed Occupied" is not a modeled dataset; it is a separate data layer that was estimated to indicate all areas that are assumed to be currently occupied by SBKR. The layer was generated from review of available trapping data (positive and negative) and known extant occurrences and estimates of likely occupied areas where data were absent. It provides a conservative estimate of all areas where SBKR has the potential to be found.

Covered Activities could result in the permanent removal of up to 706.3 acres of shrubland plant communities, of which 465.3 acres is alluvial fan sage scrub, and 282.3 acres is grassland habitat; loss or disturbance of 51.1 acres of riparian habitat, 81.6 acres of wetlands, and 754.7 acres of other waters that may be occupied by Group 1, Group 2, and Group 3 covered special-status plant and wildlife species. In the absence of other conservation actions, this would constitute a significant impact through habitat modification and potential direct mortality of covered plant and wildlife species. However, implementation the Conservation Strategy would offset direct and indirect impacts and would protect, enhance, and increase special-status wildlife habitat. Implementation of relevant avoidance and minimization measures would protect against direct and indirect mortality of special-status plant and wildlife species.

Implementing the Covered Activities would result in aquatic habitat modification and loss in river flow and commensurate flow velocities in the upper Santa Ana River and some tributaries. Aquatic habitat modifications could result in the following.

- Loss of deep pool habitat and general increase in shallow water conditions
- Reducing river flow velocities and stream depths
- Potential for improved habitat suitability for nonnative aquatic predators (e.g., bullfrog, sunfish, bass, and catfish)
- Loss of Santa Ana sucker and arroyo chub occupied habitat
- Reduced gravel/cobble substrate availability
- Reduction in gravel/cobble substrate availability due to lower velocity flows and reduced sand transport
- Reduced amount of wetted habitat (acreage) available for each life stage (reduced wastewater discharge and temporary direct effects)
- Reduced habitat suitability: warmer water, reduced depth and high velocity areas leading to overall reduced viability for Covered Species (reduced wastewater discharge)

- Reduced recruitment resulting from degraded conditions and/or increased competition for suitable habitat and resources (reduced wastewater discharge)

Activities that may reduce perennial base flow in the mainstem Santa Ana River may reduce the amount and quality of aquatic habitats, otherwise adversely affecting Covered Species like the Santa Ana sucker and arroyo chub. Incidental take may be needed during the operation of water reuse projects. Activities that may divert surface water from tributary streams also have the potential to adversely affect Santa Ana sucker and arroyo chub. Diversion of surface flow removes a portion of the total stream flow, reducing the potential for the remaining flow to transport sediment and degrading environmental functions downstream. The flow that is diverted into groundwater recharge basins contains water, sediment, and nutrients that are removed from the natural system. Incidental take may be needed for the operation of groundwater recharge basins.

Activities that may create ground disturbance within aquatic habitats on the mainstem Santa Ana River, including activities associated with implementation of the Conservation Strategy, have the potential to adversely affect Covered Species like the Santa Ana sucker, arroyo chub, south coast garter snake, and western pond turtle. Incidental take may be needed during the construction of habitat improvement projects. Activities that may reduce perennial base flow in the mainstem Santa Ana River may reduce the total acreage of riparian habitat in the watershed through drying and type conversion of the habitat to xeric shrubland. This action would have the potential to adversely affect Covered Species as well.

The Conservation Strategy would partially offset direct and indirect impacts on aquatic habitat in the Santa Ana River from construction and operation of water reuse and stormflow capture projects, and habitat improvement, management, and monitoring (Covered Activities) that would occur in the Permit Area. However, even with these estimated habitat losses, overall, the Proposed Project would offset impacts on the Group 3 covered wildlife species (including Santa Ana sucker, Santa Ana speckled dace, and arroyo chub) in the Permit Area.

Implementing the Proposed Project in shrublands, grasslands, and riparian habitats has the potential to adversely affect Group 1 and 2 Covered Species, including the Santa Ana River woolly-star or slender-horned spineflower, western spadefoot, glossy snake, south coast garter snake, western pond turtle, coastal cactus wren, California coastal gnatcatcher, least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, San Bernardino kangaroo rat, and Los Angeles pocket mouse through the temporary and permanent removal of habitat. Implementation of the Conservation Strategy could also temporarily impact habitats and result in harassment and injury/mortality of Covered Species. Incidental take may be needed during the construction of habitat improvement projects.

Past losses of natural communities and impacts on other biological resources in the Planning Area caused by urban development, mining, water infrastructure, and flood control management have resulted in the loss of substantial amounts of riparian and alluvial scrub habitats in the Planning Area. Water infrastructure projects and O&M activities covered under the general plans for the applicable local agencies and by the Upper SAR HCP would further contribute to these losses and cumulative effects on biological resources in the Planning Area. However, the Upper SAR HCP is designed to be comprehensive and takes an ecological, region-wide approach to conservation that focuses conservation strategies in areas where it is most needed to maintain or improve habitat for self-sustaining populations of Covered Species under the Proposed Project. The full implementation of the Upper SAR HCP provides for the conservation and long-term management of Covered Species and their habitats to offset the direct, indirect, and cumulative effects of these activities and projects.

Detailed, quantitative assessments for special-status species will be performed during the project-specific impact analysis that will occur during the independent environmental review process for each individual project including Covered Activities. The Upper SAR HCP is intended to contribute to the recovery of Covered Species, an objective that exceeds mitigation for the effects of Covered Activities, including mitigation for cumulative effects. Species not covered by the Upper SAR HCP (i.e., noncovered special-status species) would also benefit from the Upper SAR HCP Conservation Strategy's approach to preserving and restoring/rehabilitating contiguous blocks of natural upland and aquatic habitats, improving watershed health, and restoring hydrological connectivity and flows in the Planning Area.

Biological goals and objectives are required elements of an HCP and form the Conservation Strategy of the Proposed Project. Biological goals are broad, guiding principles based on the conservation needs of the Covered Species. Biological objectives are expressed as conservation targets or desired future conditions and are designed to achieve the biological goals. Biological objectives should be specific and commensurate with the impacts and duration of the Proposed Project and may be either habitat or species based. To the extent practicable, objectives are written to be "SMART" (Specific, Measurable, Achievable, Result-Oriented, Time-Fixed).

Implementation of the Proposed Project may contribute to adverse direct and/or indirect cumulative effects on Covered Species. However, implementation of the Proposed Project's Conservation Strategy is anticipated to offset such contribution that may occur. The measures provided in the Conservation Strategy would avoid, minimize, and compensate for potential project-related impacts on Covered Species while contributing to the long-term conservation of Covered Species and other associated species within the Permit Area. The only exception to this conclusion is Santa Ana sucker. As more fully described below, although Santa Ana sucker is expected to benefit significantly from the measures provided in the Conservation Strategy, it cannot confidently be concluded that the Project's contribution to cumulative impacts on Santa Ana sucker will be reduced to a level that is not cumulatively considerable.

The net effect of the Proposed Project (issuance of the incidental take permits and implementation of the Conservation Strategy) is anticipated to be overall **beneficial** on Group 1, 2, and the majority of Group 3 Covered Species (all except Santa Ana sucker) and other biological resources during the Permit Term through the establishment of the HCP Preserve System, which would conserve and improve habitat for Covered Species. The Proposed Project would also require the long-term management and monitoring of the HCP Preserve System for the benefit of Covered Species. Absent mitigation measures, the Proposed Project, which includes demonstration of achievement of the HCP's Up-Front and Stay-Ahead Provisions (requiring that mitigation for each HCP Implementation Phase stay ahead of Covered Activity impacts by a minimum of 10%) prior to implementation of Covered Activities, as well as habitat improvement (restoration and/or rehabilitation) activities, could result in a contribution to significant cumulative impacts on Group 1, 2, or 3 Covered Species. However, implementation of the Conservation Strategy and AMMs would reduce the Project's contribution to impacts on Group 1, 2, and all Group 3 Covered Species other than Santa Ana sucker to a level that is **less than cumulatively considerable with mitigation**.

Although implementation of the HCP's conservation measures is anticipated to fully offset the Project's contribution to cumulative impacts associated with implementation of Covered Activities, suitable aquatic habitat for the Group 3 Covered Species, including Santa Ana sucker, would be affected by the reduction in surface water flows proposed in the Planning Area. As discussed in Section 3.4, *Biological Resources*, Santa Ana sucker has relatively narrow aquatic habitat

requirements compared to other Group 3 Covered Species and the amount of suitable habitat within the Planning Area is more limited. Consequently, although it is expected that the HCP's Conservation Strategy will expand the range of the Santa Ana sucker via the creation of new habitats in Santa Ana River tributary streams and through translocation to mainstem Santa Ana River mountain streams, and reduce direct impacts on the species with implementation of AMMs, because implementing the Proposed Project would affect open water habitat within the Santa Ana River by the reduction in surface water flows proposed in the Planning Area it is conservatively concluded that the Proposed Project would result in a **cumulatively considerable contribution** to this significant cumulative impact. The EIR reached this conclusion because, although the Conservation Strategy is designed and expected to result in a net beneficial effect to Santa Ana sucker, it cannot be concluded with complete confidence that all of the proposed conservation measures (e.g., translocation) will necessarily achieve their intended result.

Considering the regional scale of the Conservation Strategy, which is designed to address cumulative impacts on Covered Species and natural communities, long-term management and monitoring of conservation lands, and the Upper SAR HCP's contribution to species recovery, the Proposed Project would result in a **less than cumulatively considerable contribution** to cumulative effects on all Covered Species, except Santa Ana sucker. Given that the EIR conservatively identifies a significant and unavoidable impact on Santa Ana sucker, and considering that other projects may affect Upper Santa Ana River aquatic resources, the Proposed Project would result in a **cumulatively considerable contribution to effects on the Santa Ana sucker**.

#### 4.4.5 Cultural Resources

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on cultural resources. The Planning Area contains more than 75 properties listed on the National Register of Historic Places (NRHP) and, by extension, the California Register of Historical Resources (CRHR) and 28 registered California Historical Landmarks, as well as many resources that have been recorded but not evaluated for listing as a California Historical Landmark, or in the NRHP or CRHR. However, because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment associated with habitat improvement actions to affect historical resources is relatively low. Because the Proposed Project monitoring, management, and maintenance activities would not involve maintenance to built environment, the effect on historical resources is relatively low, and impacts to built environment historical resources are not anticipated at this point, but could occur.

There are also many resources that have been recorded but not formally evaluated, and many archaeological resources are known by tribal groups throughout the Planning Area that are not housed in either the Sacred Lands File administered by the Native American Heritage Commission (NAHC) or submitted to the California Historic Resource Information Center. Because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment associated with habitat improvement actions to affect archaeological resources is relatively high. There is a strong likelihood that additional unrecorded NRHP- or CRHR-eligible archaeological resources exist within the Permit Area. Until the lands have been completely inventoried and the resources located there evaluated for their potential NRHP and CRHR eligibility,

it must be assumed that archaeological resources may be present and that they may be eligible for inclusion in the NRHP and CRHR. Proposed Project impacts in the Permit Area could potentially be significant because ground-disturbing construction activities associated with habitat improvement actions could demolish or damage unknown or unrecorded archaeological resources resulting in a substantial adverse change to their significance.

As discussed in Section 3.5, *Cultural Resources*, the Project would result in a less-than-significant impact on cultural resources if Mitigation Measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, and CUL-6 are implemented. If damage from the project is coupled with additional damage from another project on the same cultural resource, the damage could potentially contribute to a cumulative impact on cultural resources. Cultural resource impacts resulting from Covered Activities on CRHR- and NRHP-eligible cultural resources would be mitigated through a variety of methods, including resource documentation, data recovery excavations, public interpretive programs, among other forms of mitigation. For example, establishing Environmentally Sensitive Areas is an avoidance method that could potentially avoid significant impacts to a sensitive cultural resource by preserving it in place. In addition, archaeological assessments, reviews, and surveys of construction areas would identify potentially significant resources to better inform areas that can be avoided or mitigated. However, Covered Activities would contribute to the cumulative impact.

The Proposed Project, Covered Activities, and foreseeable development within the Planning Area also have the potential to result in similar significant impacts on these and other resources. While environmental review for each project would include inventory and evaluation of cultural resources to determine if CRHR- and NRHP-eligible resources exist in the Planning Area, since impacts from all of the cumulative projects could affect the same resources as the Proposed Project, there would be a significant cumulative impact to which the Project's contribution would be **cumulatively considerable**.

#### 4.4.6 Geology and Paleontological Resources

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on geology, soils and seismicity, and paleontological resources.

##### Geology, Soils, and Seismicity

Multiple faults that are recognized by the State to have risk of surface fault rupture—the Alquist-Priolo-zoned faults—exist in the Permit Area. All Proposed Project activities, including Covered Activities, do not have the potential to cause fault rupture, or strong ground shaking. Furthermore, construction or operation activities would not exacerbate risk of surface fault rupture.

The Permit Area includes areas subject to potential liquefaction and landslides. It is possible, depending on specific sites, that the load that new structures would place on the ground could exacerbate risk of liquefaction, lateral spreading, seismic densification, differential settlement, and the possibility of landslides. However, Proposed Project construction associated with habitat improvement actions, monitoring, management, and maintenance activities needed for the Conservation Strategy are not anticipated to involve structures that could exacerbate expansive soils by placing rigid structures on soils that undergo expansion and contraction when soil moisture content varies. In addition, the Proposed Project would be required to comply with requirements to



reduce the potential for effects from expansive soils and adhere to all established design standards. In general, a project's potential impacts related to geology and soils are individual and localized, depending on the project site and underlying soils, the level of excavation, cut-and-fill work, and grading, along with other factors. Past, present, and reasonably foreseeable projects similarly have localized geological and soil impacts. All projects are constructed within a regulatory environment with requirements reducing impacts related to ground failure, seismic ground shaking, erosion, and other geological impacts on a project-by-project basis. Therefore, there is **no cumulative impact** related to geology and soils.

## Paleontological Resources

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on paleontological resources. The Proposed Project construction associated with habitat improvement actions and construction and/or implementation of Covered Activities could disturb significant paleontological resources, depending on where they are sited. Specifically, ground-disturbing activities could disturb previously undisturbed geologic units with undetermined or high paleontological sensitivity that are exposed at ground surface or that are below ground surface but within the depth disturbed by construction.

The geographic context for paleontology comprises the geologic units affected by the Project. Geologic units that have potential to yield significant paleontological resources, including vertebrate fossils, exist in the region. Past, present, and reasonably foreseeable projects in the study area, including Covered Activities, could encounter and potentially damage or destroy paleontological resources. Therefore, a cumulative impact on paleontological resources as a result of damage to and destruction of significant paleontological resources exists with respect to the geologic units affected by the Project.

As discussed in Section 3.6, *Geology, Soils, and Paleontological Resources*, implementation of Mitigation Measure GEO-1, including construction monitoring and compliance with a recovery plan for found resources, would reduce project-specific impacts to a less-than-significant impact on paleontological resources. This mitigation would also reduce the Project's contribution to the cumulative impact to **less than cumulatively considerable** levels.

### 4.4.7 Greenhouse Gas Emissions and Energy

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on greenhouse gas (GHG) emissions and energy consumption.

## Greenhouse Gases

Climate change is a global problem and GHG emissions are global pollutants, unlike criteria air pollutants (such as ozone precursors), which are primarily pollutants of regional and local concern. Given the long atmospheric lifetimes of GHGs, GHGs emitted by many sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of countless past, present, and future sources. Thus, GHG impacts are inherently cumulative, and the analysis in

Section 3.7, *Greenhouse Gas Emissions and Energy*, is inclusive of cumulative impacts. As discussed in Section 3.7, construction associated with habitat improvement, management, and maintenance activities implemented by the Proposed Project are not anticipated to result GHG emissions exceeding adopted thresholds, and the Proposed Project is not anticipated to result in substantial GHG emissions or impede attainment of State or local reduction targets, and therefore the Project would make a **less than cumulatively considerable contribution** to cumulative impacts.

## Energy

Similar to GHG impacts, energy impacts are inherently cumulative, and the analysis and the analysis in Section 3.7, *Greenhouse Gas Emissions and Energy*, is inclusive of cumulative impacts.

As discussed in Section 3.7, Proposed Project activities would generate a minimal amount of energy use during construction associated with habitat improvement actions and would comply with local general plan policies to avoid inefficient and unnecessary energy use. Electricity use associated with construction of the Proposed Project would not be considered an inefficient, wasteful, and unnecessary consumption of energy, and significant impacts on electricity resources are not anticipated.

The Proposed Project may result in a commitment of energy resources in the form of diesel fuel, gasoline, and electricity during construction associated with habitat improvement, management, and maintenance activities. However, it would not result in the wasteful, inefficient, or unnecessary consumption of energy given compliance with local general plan policies and plans. Energy consumption during construction and management and maintenance would not substantially contribute to an increase in energy consumption or be any different than any other similar habitat improvement, maintenance, or management project, and therefore would not substantially affect local and regional energy supplies or result in wasteful or inefficient use of energy.

The Proposed Project would not conflict with or obstruct implementation of an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs or renewable energy or energy efficiencies.

Therefore, the Proposed Project's contribution to cumulative energy impacts would be **less than cumulatively considerable**.

### 4.4.8 Hazards and Hazardous Materials

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact for hazards and hazardous materials.

The Proposed Project would include construction activities from conservation actions, including construction in the HCP Preserve System, and implementation of conservation measures to improve habitats in the Permit Area. Construction would not require the use of acutely hazardous materials. The transport of hazardous materials is regulated by the U.S. Department of Transportation hazardous materials regulations, as described in Chapter 3, Section 3.8.2.1, *Federal Regulations*. The use and disposal of hazardous materials is regulated by several Federal, State, and local regulations, as described in Section 3.8.2, *Regulatory Framework*. In addition, the use of hazardous materials during construction associated with habitat improvement actions generally involves small amounts, and for short time periods, due to the nature of construction activities, which generally occur in

phases. Compliance with the existing regulatory framework is intended to reduce potential impacts from construction activities associated with the transport, use, or disposal of hazardous materials. Use of hazardous materials as a part of the Proposed Project, and habitat improvement activities in areas where former landfills are located, would not result in significant impacts due to compliance with existing regulations and implementation of AMMs.

Construction of Covered Activities in the Permit Area may include features that could result in impacts on emergency response, such as temporary traffic stops or road closures. This could result in a potential conflict with existing emergency response or evacuation plans. The Proposed Project and Covered Activities would not result in residential or commercial development that would directly result in increased population growth beyond estimated growth, nor would it result in indirect population growth by increasing capacity of existing water and wastewater facilities or extending the service area of utility providers. **No cumulative impact would occur.**

#### 4.4.9 Hydrology

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on hydrology and water quality.

#### Water Quality

Specific objectives of the Proposed Project include complying with all applicable laws and regulations related to biological and natural resources in the Planning Area, including those that would reduce violations of any water quality standards or potentially degrade surface or groundwater quality. The Proposed Project would collaboratively manage the conservation of biological and aquatic resources and improve the quantity, quality, and function of vulnerable habitats, including aquatic habitats. However, surface water quality impacts would likely continue to be significant due to the reduction in flow in the Santa Ana River, and no additional feasible mitigation measures are available to reduce this impact, resulting in project-level impacts on surface water quality that are significant and unavoidable.

Implementation of the Proposed Project, Covered Activities and foreseeable projects, combined with other past and future development or redevelopment in the geographic context, could degrade stormwater quality through an increase in impervious surface area and an increase in contaminated runoff. This could ultimately violate water quality standards, affect beneficial uses, and/or further impair 303(d)-listed waters within the watershed. Stormwater drainage can result in cumulative effects on water quality within the affected basin. Development within the vicinity of the Proposed Project, including Covered Activities, could degrade stormwater quality during construction through land disturbance and during operation through an increase in impervious surface area and contaminated runoff. During construction, runoff may contain sediments and other construction debris, resulting from activities such as vegetation management, grading and excavation, and access roadwork. During operation, runoff may contain oil, grease, and metals that accumulated on access roadways as well as pesticides, nutrients, animal waste, and trash.

When the effects of the Proposed Project on water quality are considered in combination with the overall project and potential effects of other cumulative projects, there would be the potential for cumulative impacts on surface and groundwater quality. The significant and unavoidable impact of

the Project on surface water quality would make a **cumulatively considerable contribution** to this significant cumulative impact.

## Groundwater

Future development in the Permit Area would likely result in a net increase in impervious surfaces (i.e., roads, treatment facilities and associated buildings). As a result, groundwater recharge capacity could be reduced. During construction of other reasonably foreseeable development projects, potential dewatering could be conducted on a one-time or temporary basis during the construction phase but would not result in a loss of water that would deplete groundwater supplies. During operation, new impervious areas can reduce the potential for groundwater recharge. Cumulative development could also require increases in water supplies. Therefore, there would be a significant cumulative impact on groundwater.

Implementation of tributary restoration/rehabilitation projects by the Proposed Project would improve groundwater recharge in the affected creeks. Within the context of the potential groundwater management in the Permit Area, the overall effect of implementing the Proposed Project on groundwater resources would be less than significant because the effect of conservation, rehabilitation, and restoration would be improvements in multiple groundwater basins, and this would also ensure that the Project's contribution to any cumulative impacts on groundwater would be **less than cumulatively considerable**.

## Drainage and Flooding

Future development in the Permit Area would likely result in a net increase in impervious surfaces (i.e., roads, treatment facilities, and associated buildings). As a result, rates or amounts of surface runoff may increase and cause localized ponding, flooding, erosion, or siltation; create or contribute runoff that could exceed the capacity of existing or planned stormwater drainage systems; or impede or redirect flood flows. Cumulative development within the vicinity of the Proposed Project could increase the volume and rate of stormwater runoff. Such increases could cause localized flooding if the storm drainage capacity is exceeded or if excess flows are conveyed to overbank areas where flood storage may not be available, resulting in a potentially significant cumulative impact. The overall effect of implementing the Proposed Project would be to improve hydrological function in restored/rehabilitated streams for Covered Species. Some of these drainages would be modified to increase habitat value for aquatic Covered Species, and the aquatic, riparian, and adjacent floodplain habitat restoration/rehabilitation actions would reduce erosion and siltation. Flooding or the capacity of channels to contain floods would not be appreciably changed compared to existing conditions because the Proposed Project would not change watershed precipitation and hydrology conditions. Therefore, the cumulative drainage capacity and flood risk impact would be less than significant.

Implementation of the Proposed Project would not contribute to the potential for flooding or the exposure of people and structures to flood risks. The majority of the Planning Area is outside of the Federal Emergency Management Agency 100-year floodplain, and not within a special flood hazard area. With implementation of the Proposed Project and Covered Activities to improve drainage and habitat function, and maintenance of existing water infrastructure facilities, any potential for overland flood flows would be minimized. Compliance by other reasonably foreseeable development projects to relevant regulations would also reduce or avoid any significant cumulative impact.

**No significant cumulative impacts would occur.**

#### 4.4.10 Land Use

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact related to land use. Covered Activities would be unlikely to contribute to a cumulative impact, as described in Section 3.10.4. The Proposed Project would have no impacts related to land use, and therefore **could not contribute to any cumulative impact**. Therefore, no further analysis is required.

#### 4.4.11 Minerals

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on mineral resources. Future population growth in Southern California, along with the implementation of the Proposed Project, Covered Activities, and other foreseeable development in the Planning Area, would decrease the amount of undeveloped land in Riverside and San Bernardino Counties, resulting in a significant cumulative impact. If Covered Activities are sited in areas of known or unevaluated mineral resources and result in the loss of availability of a mineral resource, they may require project-specific mitigation to reduce impacts. Implementation of recommended best practices would reduce impacts of construction associated with Covered Activities by determining the mineral resource zone of the project sites and evaluating whether the construction would impair future mineral resource extraction by introducing an inherently incompatible use or by restricting access to other mineral resource areas. In addition, the Permittees would be required, during siting of new infrastructure projects, to avoid impacts on mineral resources by following the goals, policies, and actions outlined in the applicable general plans and ordinances relevant to the site. The Covered Activities could potentially contribute to a cumulative impact.

While the Proposed Project could potentially result in ground disturbance in areas of important minerals, sites would remain as undeveloped, natural, open spaces with only minimal other development and, for this reason, the Proposed Project's contribution to cumulative impacts to mineral resources would be **less than cumulatively considerable**.

#### 4.4.12 Noise

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact related to noise.

Construction and O&M activities associated with Covered Activities in the Permit Area could potentially result in significant noise impacts. Depending on the proximity of construction and O&M activities for Covered Activities to other construction activities and sensitive receptors, noise from Covered Activities could combine with noise from other construction projects to result in a potentially significant cumulative noise impact in a given portion of the Planning Area.

In addition, construction associated with Covered Activities could potentially result in significant vibration impacts in the Planning Area. Similar to the potential for noise impacts, vibration resulting

from pile-driving conducted for Covered Activities could combine with vibration from other adjacent construction activities to result in a cumulative vibration impact, depending on the proximity of Covered Activity construction to other construction activities and sensitive receptors.

Under the Proposed Project, short-term increases in ambient noise could result from conservation actions needed to implement the Conservation Strategy. Noise could be generated when construction equipment is needed for habitat improvement, maintenance, and management in the Permit Area. Construction equipment associated with habitat improvement actions could potentially include backhoes, applicators and compressors, mowers, and tractors, and maintenance vehicle use. As the Proposed Project would include the implementation of conservation measures to improve habitats in the Permit Area, many of these actions could involve the use of construction equipment such as loaders, excavators, and graders that could generate groundborne vibration and noise. Some groundborne vibration effects could also occur from equipment used for habitat maintenance activities but to a lesser extent than for habitat improvement and stream modification activities. While these impacts would be less than significant at the project level, the Proposed Project's contribution to the cumulative noise impact could be **cumulatively considerable**.

#### 4.4.13 Population and Housing

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on population and housing. Reasonably foreseeable cumulative projects in the Planning Area would include development projects that could increase population and housing. However, as described in detail in Chapter 3, Section 3.13, *Population and Housing*, the Proposed Project would not include any projects such as residential development or roadways that would directly increase population by providing new housing and access, and would be unlikely to result in a substantial increase in permanent employment that would generate a population increase.

For these reasons, the Proposed Project's contribution to cumulative impacts related to population and housing would be **less than cumulatively considerable**.

#### 4.4.14 Public Services

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on public services. Potential public service impacts that could result from implementing the types of Covered Activities identified in Table 3.14-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. As summarized in Table 3.14-2, new construction could result in demand for police and fire services during construction. The Covered Activities would likely result in no increase in demand for other public services.

Under the Proposed Project, demand for public services is not anticipated to result from conservation actions needed to implement the Conservation Strategy. Reasonably foreseeable cumulative projects in this area would include development projects that could increase the demand for public services. Because of rapid growth in some portions of the Planning Area, a cumulative impact on public services already exists. Under the Proposed Project, habitat improvement activities within existing park lands and recreational areas could result in a beneficial improvement to these

lands and area, as stated in Chapter 3, Section 3.15, *Recreation*. While there may be short-term construction impacts associated with habitat improvement actions, overall, these Conservation Areas would be improved, and higher quality habitat and safer opportunities for park (e.g., nature centers) use could occur. For these reasons, the Proposed Project's contribution to cumulative impacts on public services would be **less than cumulatively considerable**.

#### 4.4.15 Recreation

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on recreation.

Covered Activities combined with other conservation planning, would maintain large areas of open space, which is a land use that does not place high demand on recreational services. The Conservation Strategy and conservation measures would also provide opportunities for additional managed recreation and open space use by the public (e.g., enhanced habitat adjacent to recreational resources adjacent to the Santa Ana River) and provide additional amenities to existing recreational facilities already in use. Furthermore, as other reasonably foreseeable future projects could increase demand for use of recreational facilities, local city and county governments would ultimately be responsible for planning and developing parks and recreational facilities to serve their respective populations on a project-specific basis. Therefore, there would be **no significant cumulative impact**.

Implementation of the Proposed Project would not induce additional population growth or increase the demand placed on parks and open space areas. The Conservation Strategy and conservation measures would not increase the use of existing parks or other recreational facilities and would not result in physical deterioration. Open space would be preserved as part of the HCP Preserve System, which in some limited cases could enhance recreation opportunities for the public, such as improvements to areas of the Santa Ana River that could potentially provide additional amenities to existing recreational facilities already in use. The Proposed Project would provide additional amenities to existing recreational facilities rather than increase the demand.

The Proposed Project is not anticipated to result in the increased need for new or expanded recreational facilities because implementing the Conservation Strategy would not create greater demand for recreational facilities. Because of this, the Proposed Project would not result in adverse impacts on the environment associated with recreation facility expansion and is expected to result in net improvements to recreational resources because improvements to areas of the Santa Ana River and its tributaries would provide additional amenities to existing recreational facilities already in use.

#### 4.4.16 Transportation

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on transportation.

Future population growth in Southern California, along with the implementation of the Proposed Project and other reasonably foreseeable development in the Planning Area, will decrease the amount of undeveloped land in Riverside and San Bernardino Counties and likely cause more

vehicle trips within the Planning Area through new and expanded development. There would likely be a significant cumulative impact.

Potential impacts on transportation and public access are expected to occur around construction areas, with traffic entering and exiting the individual Covered Activities areas. Collectively, larger projects such as the East Valley Water District Pipeline Maintenance (EV.2 (Phase 1)), Sterling Natural Resource Center (EV.4.01, 4.02 and 4.03 (Phase 1)), and Riverside North Aquifer Storage and Recovery Project (RPU.5 (Phase 2)) may result in temporary impacts on transportation. However, the temporary impacts would be mitigated through effective traffic control plans and coordination with local jurisdictions.

The Proposed Project would not involve alterations to the existing traffic or circulation system in the Planning Area or nearby communities. Construction activities associated with habitat improvement actions may temporarily interfere with the nearby bike paths or trails, like the Santa Ana River Trail Bike Path, adjacent to many of the Proposed Project sites. Generally, construction vehicles interfering with traffic along any bike path or trail would likely be guided by personnel using signs and flags to direct traffic to ensure that access is maintained. After construction, any potential increases to the traffic volume in the surrounding areas would be limited to trips taken by vehicles to remove trash and nonnative plant material from the Proposed Project locations to local county landfills in the area in Riverside and San Bernardino Counties.

As there would be no additional population growth or traffic generation due to a change or expansion in land uses at Conservation Areas, no conflicts to the circulation system would occur and a less-than-significant impact is anticipated. Some access roads could be built to access the sites. However, these roads would not interfere with transportation plans, programs, or ordinances addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Implementation of the Proposed Project would not impair emergency access to the Proposed Project sites. As such, the Proposed Project would not result in inadequate access for any emergency response entities. Because no habitable structures or buildings are proposed, and the Proposed Project would only improve the existing onsite natural habitat, emergency access would be adequate, similar to existing conditions.

For these reasons, the Proposed Project's contribution to cumulative impacts on transportation would be **less than cumulatively considerable**.

#### 4.4.17 Tribal Cultural Resources

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on tribal cultural resources (TCRs). As discussed previously, efforts to identify TCRs included a Sacred Lands File search with NAHC and consultation with Native American tribes through Assembly Bill 52. The Sacred Lands File search request to NAHC revealed that there are sacred lands within the Planning Area. The Planning Area contains over 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, several of which would be considered TCRs.

Potential TCR impacts from the Proposed Project would result from the implementation of conservation activities, including tributary stream restoration/rehabilitation projects, riparian floodplain habitat restoration/rehabilitation projects, and alluvial fan scrub restoration/



rehabilitation projects. Specific activities such as hydrologic manipulation and substrate management would involve soil disturbance with loaders or excavators, which could affect TCRs. Additionally, monitoring, management, and maintenance activities under the Proposed Project could affect TCRs, including installation and maintenance of access control features (e.g., gates, barriers, and fences), and vegetation management using sheep grazing, manual labor, or prescribed burning.

Covered Activities associated with construction or as a result of O&M activities could potentially cause a significant adverse change to a TCR through physical disturbances or by altering the setting of the affected TCR, and mitigation would be required to reduce impacts. Implementation of Mitigation Measure TCR-1 would reduce cumulative impacts on tribal cultural resources, but even with mitigation impacts would be **cumulatively considerable**.

#### 4.4.18 Utilities and Service Systems

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact on utilities and service systems. Reasonably foreseeable cumulative projects in this area would include development projects that could increase the demand for service systems and utilities. Because of rapid growth in some portions of the Planning Area, a cumulative impact on utilities exists. Some Covered Activities would be new water reuse facilities, which could increase the amount of wastewater that can be treated or water that can be provided to customers, but these facilities are intended to replace aging infrastructure in order to keep up with existing and projected demand, and would not result in any new demand.

The Proposed Project would not create substantial new demand for water supplies during normal, dry, or multiple dry years because of the species conservation nature of these actions, which focuses on improving habitat for Covered Species. The Proposed Project would not include residential development or other projects that would increase demand on water supplies; the Covered Activity one-time projects as well as the continuing O&M activities would support the existing water supply system and ensure water would continue to be delivered to the different water districts.

The Proposed Project would not increase demand on the existing water supply or on the existing wastewater treatment facilities.

For these reasons, the Proposed Project's contribution to cumulative impacts on utilities and systems services would be **less than cumulatively considerable**.

#### 4.4.19 Wildfire

This analysis determines whether the Proposed Project, Covered Activities, and implementation of other plans and projects, when combined with the past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact related to wildfire. Wildland fires are common in the Santa Ana River watershed, resulting from natural causes, arson, and unintended incidents. Typically, when structures and people are added to an area, the risk of wildfire increases. As evident in the past couple of years, wildfires throughout the state of California can be far reaching and result in widespread damage. The severity and damage done by a wildfire are dependent on the amount of rain the area has received at that point in time, fuel availability, and whether certain fire management techniques have been implemented, among many other factors. With increased development throughout San Bernardino County and Riverside County, there is a cumulative impact

with respect to wildfire. The Upper Santa Ana River Watershed Integrated Regional Water Management Plan states that “should climate change increase drought periods and result in more frequent and intense wildfires, water quality and flood control will be further impacted” (San Bernardino Valley Water Conservation District 2015).

The County of Riverside concluded in its general plan EIR that potential impacts associated with wildfire, fire prevention, and exposure of people or structures to fire resulting from general plan buildout would be less than significant and that impacts associated with development on or near affected sites resulting from general plan buildout would be less than significant.

Fires of significant size and impact have caused injury, death, and property loss in San Bernardino County. A recent example of this is the El Dorado Fire. The County of San Bernardino concluded in its general plan EIR that “development in high fire hazard areas will be subject to periodic wildland fires that occur in these areas. Even if structures are built with the most current fire-safe building techniques and standards, these structures may be damaged or destroyed during a wildland fire. People occupying these structures during a wildland fire will also be subject to injury or death” (County of San Bernardino 2007).

Covered Activities identified in Table 3.19-2 would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. Construction of new facilities and infrastructure development could introduce new potential ignition sources in the form of building materials, vegetation for landscaping, vehicles, and small machinery (e.g., for typical landscape maintenance) in high fire hazard areas. Construction and operation of Covered Activities would be required to comply with applicable construction and design standards that ensure the incorporation of fire prevention features. Future projects within lands designated as Very High Fire Hazard Severity Zones are subject to additional fire safety provisions, including fuel modification plans and review by the responsible Fire Authority. Implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk-reducing measures into Covered Activities, including conservation activities, would address this risk, and could reduce the contribution of Covered Activities to cumulative impacts.

The Proposed Project sites are mostly within natural areas, and the conservation activities would not alter any roadways that could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. None of the habitat improvement, management, maintenance, or monitoring activities would involve modifications to facilities that are critical to emergency response, such as police, fire, and hospital facilities, and the Proposed Project would not impede access to these facilities in an emergency.

However, operation of the Proposed Project would include some activities to decrease wildfire risk, such as removal of flammable nonnative plant species such as palms and giant reed within Conservation Areas, fuel modification zones, and increasing reliable water supplies that could be used to fight fires. Fuel modification can be in the form of manual, mechanical, or chemical vegetation control for the purposes of wildfire management. Methods may include thinning, trimming up, and removing vegetation within buffer zones. Such activities could occur periodically throughout the year in the Permit Area.

The Proposed Project would not involve the addition of a substantial number of structures or people to the Permit Area. The Proposed Project also includes habitat management activities, such as the removal of flammable nonnative plant species from Conservation Areas, establishment of fuel breaks, and potentially prescribed burning, that would minimize the risk of wildfire in the future by

decreasing the amount of potential fire fuel. Development of other future projects in the Planning Area would require that any required construction, demolition, and/or remediation occur in compliance with State and Federal environmental regulations, including those related to wildfire risk. Furthermore, Proposed Project implementation generally would reduce the risk of wildfire within the Planning Area.

Implementation of AMM-24 and AMM-25 (see Chapter 5, *Conservation Strategy*, of the HCP), which require incorporation of fire risk reducing measures into Covered Activities, including conservation activities, would address this risk and ensure that impacts are less than significant, as well as reduce the Proposed Project's contribution to cumulative wildfire impacts to **less than cumulatively considerable**.

## 4.5 Cumulative Impacts Analysis Summary

As shown in Section 4.4, *Cumulative Impacts Analysis*, the Proposed Project would result in a cumulatively considerable contribution to a significant cumulative impact for the following resources.

- Air Quality
- Biological Resources
- Cultural Resources
- Water Quality
- Noise
- Tribal Cultural Resources

## 5.1 Growth Inducing Impacts

The California Environmental Quality Act (CEQA) Guidelines require that an environmental impact report (EIR) include the analysis of a project's potential to induce growth. Specifically, Section 15126.2(d) requires that environmental documents "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth-inducing impacts can occur if a project would induce urban growth either directly or indirectly in the surrounding environment. Furthermore, Section 15126.2(d) of the State CEQA Guidelines states that "[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

As stated in Chapter 2, *Project Description*, the Upper Santa Ana River is home to dozens of water districts, flood control districts, and other, local water management agencies with an interest in the sound management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. Recent cooperative planning initiatives among the water districts and stakeholders have resulted in a comprehensive vision for sustainable stewardship and watershed management. However, several considerable challenges remain in the Upper Santa Ana River watershed, including ongoing modification of the Santa Ana River hydrogeomorphology, reduction of river flow, alteration of natural habitats, and the long-term effects of these changes on the functional ecology and native species of the watershed. The challenges facing water districts and other local agencies in the Upper Santa Ana River include the effects of population growth that increase water demand and decrease natural hydrological processes and groundwater recharge, the reduction of imported water availability, and the effects of climate change. These public infrastructure projects have tremendous public value by increasing regional water supply reliability and improving flood protection.

The Proposed Project would not have any direct growth-inducing impacts because no development that would increase the demand for water and wastewater services would be specifically authorized. The Planning Area experiences the effects of population growth that increase water demand and decrease natural hydrological processes and groundwater recharge, the reduction of imported water availability, and the effects of climate change. Implementation of Covered Activities would facilitate public infrastructure projects that have tremendous public value by increasing regional water supply reliability and improving flood protection. Some of the Covered Activities included in the Proposed Project may include facilities that require full-time workers on site; however, it would not represent a substantial increase in jobs relative to the Planning Area. Approval of the Proposed Project does not confer or imply authorization of specific activities or projects; all Covered Activities and projects would be subject to the approval authority of the individual Permittee Agencies in whose jurisdiction the activity or project would occur. Therefore, the Proposed Project would not result in direct or indirect growth-inducing impacts.

## 5.2 Significant Irreversible Environmental Changes

In accordance with CEQA (State CEQA Guidelines Section 15126.2(c)), an EIR must discuss uses of nonrenewable resources that would occur during the initial phases and the continued operation of a project.

The Proposed Project would result in an irreversible commitment of fossil fuel resources for conservation actions such as habitat improvement, management, and monitoring activities, as well as irreversible commitment of fossil fuels to perform surveys, manage the administrative functions of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP), and maintain and manage the conservation areas and Preserve System for successful implementation.

However, the net positive effect of preserving and improving habitat value for special-status species, enhancing recreational areas, and streamlining permitting for development of public infrastructure projects—which have public value in the provision of reliable water supply that would otherwise occur under capital improvement programs for the Permittee Agencies—largely outweigh this irreversible commitment of resources.

## 5.3 Significant and Unavoidable Impacts

Table ES-1 of the *Executive Summary* lists the significant and unavoidable impacts, as disclosed in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, that the Proposed Project identified. Resources with significant and unavoidable impacts associated with the Proposed Project are summarized below.

- **Air Quality:** Impacts would occur as a result of conflict with implementation of the applicable air quality plan due to required construction emissions related to conservation activities; exposure of substantial pollutant concentrations to sensitive receptors in excess of South Coast Air Quality Management District (SCAQMD) or Mojave Desert Air Quality Management District (MDAQMD) standards; and cumulatively considerable criteria pollutant and emissions that exceed SCAQMD or MDAQMD thresholds.
- **Biology:** Although implementation of the HCP's conservation measures is anticipated to fully offset most impacts associated with implementation of Covered Activities, suitable aquatic habitat for the Group 3 Covered Species, including Santa Ana sucker, would be affected by the reduction in surface water flows proposed in the Planning Area. Santa Ana suckers have more narrow aquatic habitat requirements than other Group 3 Covered Species and the amount of suitable habitat within the Planning Area is more limited. Consequently, although it is anticipated that the HCP's Conservation Strategy will expand the range of the Santa Ana sucker, via the creation of new habitat in Santa Ana River tributary streams and through translocation to mainstem Santa Ana River mountain streams, and will also reduce direct impacts on the species with implementation of avoidance and minimization measures, because of the reductions of surface waters that occur in affected reaches as a result of the Covered Activities, to be conservative, this EIR identifies a significant and unavoidable impact on the Santa Ana sucker. Restoration activities associated with the Conservation Strategy are anticipated to benefit aquatic habitat for Santa Ana sucker through quality enhancements compared with existing conditions. Furthermore, avoidance and minimization measures for Santa Ana sucker will be implemented, and the HCP's Up-Front and Stay-Ahead Provisions will require that

implementation of the Conservation Strategy and progress towards assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. However, given the threatened status of the species and consideration of the species current limited distribution within the Santa Ana River, for the purposes of this CEQA analysis, the potential impact on Santa Ana sucker is conservatively found to be significant and unavoidable. The EIR reaches this conclusion because, although the Conservation Strategy is designed and expected to result in a net beneficial effect on Santa Ana sucker, it cannot be concluded with complete confidence that all of the proposed conservation measures (e.g., translocation) will necessarily achieve their intended result.

- **Hydrology:** Surface water quality impacts would likely continue to be significant due to the reduction in flow in the Santa Ana River.
- **Tribal Cultural Resources:** Because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment to affect tribal cultural resources is relatively high. Implementation of mitigation measure TCR-1 would reduce impacts associated with the Proposed Project but not to a level that is less than significant. Therefore, impacts would be significant and unavoidable with mitigation.

# Chapter 6

## Alternatives Analysis

---

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) examine a reasonable range of feasible alternatives to the project or the project location that could substantially reduce one or more of the project's significant environmental impacts while meeting most or all of its objectives. The EIR is required to analyze the potential environmental impacts of each alternative, though not at the same level of detail as the project. However, there must be sufficient detail to be able to compare the respective merits of the alternatives. The key provisions of State CEQA Guidelines § 15126.6 that relate to alternatives analyses are summarized below.

- The discussion of alternatives shall focus on alternatives to the project or project location that are feasible, would meet most or all of the project objectives, and would substantially reduce one or more of its significant impacts.
- The range of alternatives must include the No-Project Alternative. The no project analysis will discuss the existing conditions at the time the Notice of Preparation was published, as well as conditions that would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. The No-Project Alternative is not required to be feasible, meet any of the project objectives, or reduce the project's expected impacts to any degree.
- The range of alternatives required is governed by a rule of reason. The EIR must evaluate only those alternatives necessary to permit a reasoned choice. An EIR is not required to analyze every conceivable alternative to a project.
- An EIR does not need to consider an alternative that would not achieve the basic project objectives, for which effects cannot be reasonably ascertained, and for which implementation is remote and speculative.

### 6.1 Project Objectives

The goal, or underlying purpose, of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP or Proposed Project) is to streamline permitting for Covered Activities by protecting and restoring the habitats needed for Covered Species to offset the effects of water supply management activities in the HCP Planning Area. To meet this goal, the Upper SAR HCP includes a Conservation Strategy that will conserve and protect the long-term ecological health and resilience of Covered Species and other non-listed native species within the HCP Preserve System.

In addition to this overarching goal, the Proposed Project would achieve the following, specific project objectives.

- Provide Federal incidental take permits (ITPs) that facilitate the ability of the Permittee Agencies to construct new facilities and/or operate and maintain facilities associated with their mission.
- Establish the HCP Preserve System.

- Maintain, enhance, or establish meta-populations of Covered Species within the HCP Preserve System.
- Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between meta-populations of Covered Species.
- Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

The following HCP objectives will support the HCP goals:

- Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.
- Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.
- Maintain and successfully enhance existing and new Santa Ana sucker habitats.
- Maintain and successfully enhance existing San Bernardino kangaroo rat (SBKR) habitats.
- Implement successful conservation measures to promote the recovery of Covered Species.
- Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.

To achieve these goals and objectives, the Upper SAR HCP describes avoidance and/or minimization of impacts and mitigation measures to ensure habitat conservation strategies, compatible joint uses of lands, and land use restrictions.

## 6.2 Significant Impacts

Alternatives should provide a means of reducing the level of one or more significant impacts that would otherwise result from implementation of the project. The following significant impacts would result from the Proposed Project. This list includes both significant impacts that can be reduced by mitigation measures as well as significant and unavoidable impacts.

### 6.2.1 Air Quality

Emissions from the Proposed Project, even with mitigation, could exceed thresholds adopted by the South Coast Air Quality Management District and Mojave Desert Air Quality Management District and cause or contribute to a violation of ambient air quality standards, which may delay regional attainment goals. The impact would be significant and unavoidable with mitigation.

Emissions levels from the Proposed Project are anticipated to contribute a significant level of air pollution such that regional and local air quality would be degraded. The impact would be significant and unavoidable with mitigation.



Impacts of the Proposed Project related to exposing sensitive receptors to substantial pollutant concentrations would be significant and unavoidable with mitigation.

## 6.2.2 Biological Resources

Ground-disturbing activities associated with habitat improvement activities within the Preserve System could result in the injury or death of non-covered special-status wildlife species. Impacts would be less than significant with mitigation.

Implementation of Covered Activities, including the Conservation Strategy, could have significant impacts related to temporary and permanent loss of areas within established HCPs. Impacts would be less than significant with mitigation.

Although implementation of the HCP's conservation measures is anticipated to fully offset most impacts associated with implementation of Covered Activities, suitable aquatic habitat for the Group 3 Covered Species, including Santa Ana sucker, would be affected by the reduction in surface water flows proposed in the Planning Area. Santa Ana suckers have more narrow aquatic habitat requirements than other Group 3 Covered Species and the amount of suitable habitat within the Planning Area is more limited. Consequently, although it is anticipated that the HCP's Conservation Strategy will expand the range of the Santa Ana sucker, via the creation of new habitat in Santa Ana River tributary streams and through translocation to mainstem Santa Ana River mountain streams, and will also reduce direct impacts on the species with implementation of avoidance and minimization measures (AMMs), because of the reductions of surface waters that occur in affected reaches as a result of the Covered Activities, to be conservative, this EIR identifies a significant and unavoidable impact on the Santa Ana sucker.

Restoration activities associated with the Conservation Strategy are anticipated to benefit aquatic habitat for Santa Ana sucker through quality enhancements compared with existing conditions. Furthermore, AMMs for Santa Ana sucker will be implemented, and the HCP's Up-Front and Stay-Ahead Provisions will require that implementation of the Conservation Strategy and progress toward assembly and management of the HCP Preserve System will stay ahead of Covered Activity impacts by a minimum of 10%. However, given the threatened status of the species and consideration of the species current limited distribution within the Santa Ana River, for the purposes of this CEQA analysis, the potential impact on Santa Ana sucker is conservatively found to be significant and unavoidable. The EIR reaches this conclusion because, although the Conservation Strategy is designed and expected to result in a net beneficial effect on Santa Ana sucker, it cannot be concluded with complete confidence that all of the proposed conservation measures (e.g., translocation) will necessarily achieve their intended result.

## 6.2.3 Cultural Resources

There is a strong likelihood that additional unrecorded National Register of Historic Places (NRHP)- or California Register of Historical Resources (CRHR)-eligible archaeological resources exist within the Permit Area. Until the lands have been completely inventoried and the resources located and evaluated for their potential NRHP and CRHR eligibility, it must be assumed that archaeological resources may be present and that they may be eligible for inclusion in the NRHP and CRHR. Impacts on archaeological resources would be less than significant with mitigation.

Because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, there is a potential for ground-disturbing activities from construction equipment to affect human remains. Impacts would be less than significant with mitigation.

## **6.2.4 Geology, Soils, and Paleontological Resources**

Depending on where conservation construction activities occur in the Permit Area, impacts on significant paleontological resources could be potentially significant because some portions of the Permit Area have high sensitivity for paleontological resources that could be disturbed by Proposed Project activities. Impacts would be less than significant with mitigation.

## **6.2.5 Hazards and Hazardous Materials**

It is possible that a nearby school could be affected by a specific relatively short-term construction activity in the Permit Area, such as grading, or the release of fuel, solvents, chemicals, and oils for the operation of construction equipment. Monitoring, management, and maintenance activity procedures would require the use of hazardous materials such as oil and fuel. If these activities were to occur on a property with a historical or ongoing release of hazardous material to the environment, the ground disturbance could expose contamination to the public or the environment within 0.25 mile of a school. Impacts would be less than significant with mitigation.

The Proposed Project would result in a potentially significant impact related to exposure of the public or the environment to contaminated materials as a result of being located on a site on the Cortese List. Impacts would be less than significant with mitigation.

## **6.2.6 Hydrology and Water Quality**

Even with the proposed stream and habitat improvements in the Upper Santa Ana River, which could potentially have positive effects, reducing streamflow by substantial amounts in some cases would likely result in effects on temperature and potentially water quality constituent concentrations. This impact would be significant and unavoidable.

## **6.2.7 Noise**

Noise from heavy and/or construction equipment for the Proposed Project could be significant, but would be reduced to less-than-significant levels with mitigation.

## **6.2.8 Tribal Cultural Resources**

Because the Proposed Project conservation activities would occur mainly in open space or relatively undeveloped areas near perennial water sources, the potential for ground-disturbing activities from construction equipment to affect tribal cultural resources is relatively high. Implementation of mitigation measure TCR-1 would reduce impacts associated with the Proposed Project but not to a level that is less than significant. Therefore, impacts would be significant and unavoidable with mitigation.

## 6.3 Methodology and Screening Criteria

A range of potential alternatives was developed and subjected to the screening criteria. A number of representative alternatives were considered. There was no attempt to include every conceivable alternative. The following criteria were used to screen potential alternatives.

- Does the alternative meet most or all of the project objectives?
- Is the alternative potentially feasible?
- Would the alternative substantially reduce one or more of the significant impacts associated with the project?

Based on the State CEQA Guidelines, “feasible” is defined as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors” (State CEQA Guidelines § 15364). CEQA does not require that an EIR determine the ultimate feasibility of a selected alternative, but rather that an alternative be potentially feasible.

The significant effects of the project may include those that are significant and unavoidable or that are less than significant with mitigation. The alternative should provide a means of reducing the level of impact that would otherwise result from implementation of the project.

Those alternatives that meet the project objectives, that are probably feasible, and that would reduce one or more of the project’s impacts are discussed in greater detail below.

## 6.4 Alternatives Development and Screening Process

Below is a detailed description of the alternatives screening process, including the full range of alternatives considered and a discussion of why alternatives were eliminated from further consideration as a result of the initial screening process.

### 6.4.1 Evolution of the Proposed HCP

As discussed in Section 8.1 of the HCP, the Upper SAR HCP development process has evolved over the time as have the analytical scenarios used as the basis for the Upper SAR HCP. Previous HCP iterations included Covered Activities that resulted in greater impacts on species and the riverine system than were acceptable or likely to be permittable under the Federal and State Endangered Species Acts. Preliminary impact analyses, including substantial hydrology modeling, led to the modifications to the Covered Activities to substantially reduce the potential biological and hydrological impacts resulting in the Covered Activities. Similarly, many iterations and additions to the conservation strategy led to substantial improvements in the measures to avoid and minimize impacts and the expected outcomes for each species covered by the HCP. The modifications resulted in reduced impact on the Santa Ana River and increased conservation values to species in a way that protects and enhances the ecological function of the system far more than earlier iterations of the HCP.

The largest change to the proposed Covered Activities was the modification of water reuse projects in order to reduce impacts on Santa Ana sucker and other aquatic species. In an early iteration of the HCP, the initial proposed versions of Covered Activities would have resulted in much larger

reductions in baseflow in the Santa Ana River, and larger impacts on covered aquatic species, especially to the Santa Ana sucker and arroyo chub. Most notably, the initial round of hydrologic modeling demonstrated that the water reuse projects, as proposed, would have resulted in a reduction of effluent discharge into the Rialto Channel and Santa Ana River by more than 50%, and a 73% loss of suitable sucker habitat (i.e., areas with suitable water depth, velocity, and river bottom substrate) in the upper reach of the Santa Ana River and a 100% loss of suitable sucker habitat in the lower reach. Given the unacceptable potential impacts on the Santa Ana sucker and other aquatic species resulting from this scenario, the original proposed version for the Covered Activities was rejected as a viable alternative. Using the hydrologic and habitat suitability modeling as a guide to determine a minimum flow necessary to maintain occupied Santa Ana sucker habitat, the Permittee Agencies then developed new alternatives for the Covered Activities, making the water reuse projects smaller and less impactful. This resulted in a commitment to a minimum amount of baseflow to be discharged into the river by the wastewater treatment plants, which reduced potential impacts on the Santa Ana sucker and other aquatic species to a level that could still sustain healthy populations in the Santa Ana River and could be fully offset through the conservation strategy of the HCP.

The current set of Covered Activities in the Upper SAR HCP, as now proposed, was determined through the partnership and the collaborative efforts with the lead agency (San Bernardino Valley Municipal Water District [Valley District]), other Permittees, Wildlife Agencies, and involved stakeholders. The complete HCP Conservation Strategy for all Covered Species was also developed through this collaborative partnership and includes a comprehensive strategy for long-term protection, habitat improvement, and conservation to manage the natural resources and species of the Upper Santa Ana River watershed in a way that ensures long-term ecological value to the region and species recovery.

## 6.4.2 HCP Alternatives Selection

After the Upper SAR HCP Covered Activities and Conservation Strategy were refined as described above, and preliminary alternatives were developed, Valley District held a stakeholder engagement discussion via conference call on October 2, 2018, with involved HCP stakeholders, Wildlife Agencies, and other interested parties to review a draft list of CEQA and National Environmental Policy Act (NEPA) alternatives for consideration in the Upper SAR HCP Draft EIR and NEPA document (to be prepared later either as an environmental impact statement or an environmental assessment). Comments were received during the meeting and reviewed by Valley District as a part of the alternatives screening process. A summary of this meeting, including the list of invited attendees and participants, is provided in Appendix 6-1 of the HCP.

## 6.4.3 Screening of Alternatives

The alternatives considered during development of the HCP were considered as part of the range of alternatives for analysis in the EIR. The full range of alternatives considered in addition to the required No Project Alternative was as follows.

- Increased Reduction of Baseflow Alternative (i.e., More Recycled Water Project Impacts)
- Fewer Covered Activities Alternative
- Fewer Covered Species Alternative

- More Covered Species Alternative
- Optimize Flows for Covered Fish Species Alternative
- Reduced Permit Term Alternative
- Reduced Covered Activities Impacts on Jurisdictional Wetland and Other Waters of the U.S. Alternative
- No Santa Ana Sucker Translocation into Streams with Southern California Edison (SCE) Operations Alternative
- Phase 1 Covered Activities Only Alternative
- Reduced Impacts on Santa Ana Sucker Alternative
- Reduced Impacts on San Bernardino Kangaroo Rat Alternative

Alternatives were screened for meeting Proposed Project objectives, feasibility, providing benefits to threatened and endangered species (part of the Proposed Project objectives) and reducing impacts of the Proposed Project. According to CEQA, an EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are clearly infeasible. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (State CEQA Guidelines § 15126.6(f)(3)). This section identifies alternatives considered by the lead agency but rejected as infeasible at this time and provides a brief explanation of the reasons for their exclusion. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the Proposed Project objectives, are infeasible, or do not avoid any significant environmental effects (State CEQA Guidelines § 15126.6(c)).

#### 6.4.4 Alternatives Considered But Eliminated from Further Consideration

As a result of screening, a number of alternatives were eliminated from further consideration in the EIR because they did not accomplish most of the basic Proposed Project objectives, they would be infeasible to construct, and/or they did not provide the same benefits to threatened and endangered species. The alternatives considered but rejected during the HCP development are listed in Table 6-1. The justification for the elimination of the alternatives not considered further in this chapter is provided below.

**Table 6-1. Alternatives Considered But Rejected Following Stakeholder Engagement and HCP Preparation**

<b>Alternative Name</b>	<b>Description of Alternative</b>
Increased Reduction of Baseflow Alternative (i.e., More Recycled Water Project Impacts)	This alternative would include greater than 50% reduction of effluent discharge into Rialto Channel and the upper reach of the Santa Ana River, resulting in over 70% loss of Santa Ana sucker habitat.
Fewer Covered Activities Alternative	This alternative would include a shorter list of Covered Activities proposed for coverage in the Upper SAR HCP. The HCP includes over 100 Covered Activities. With this alternative, up to 25% fewer activities would be covered in the HCP.

<b>Alternative Name</b>	<b>Description of Alternative</b>
Fewer Covered Species Alternative	This alternative would include a reduction in the number of Covered Species (fewer than 22) that would be included and proposed for coverage in the Upper SAR HCP.
More Covered Species Alternative	This alternative would include additional Covered Species (more than 22) that would be included and proposed for coverage in the Upper SAR HCP.
Optimize Flows for Covered Fish Species Alternative	This alternative would optimize Santa Ana River flows to improve habitat conditions for specific fish species like the Santa Ana sucker.
Reduced Permit Term Alternative	This alternative would include the same permit conditions for Covered Activities and the same Conservation Strategy as the HCP, but with a shorter permit term of 30 years instead of 50 years.
Reduced Covered Activities Impacts on Jurisdictional Wetland and Other Waters of the U.S. Alternative	This alternative would assume a reduction in Covered Activities that directly affect wetlands and waters of the U.S.
No Santa Ana Sucker Translocation into Streams with SCE Operations Alternative	This alternative would not translocate Santa Ana sucker into streams where SCE currently operates hydroelectric facilities. This alternative assumes that translocation would still occur but only in stream reaches where SCE is not present, therefore, no ITP would be necessary for SCE through the HCP.

## Increased Reduction of Baseflow Alternative

The Increased Reduction of Baseflow Alternative would include a much larger reductions in baseflow in the Santa Ana River. The large reduction of effluent discharge would occur at the Rialto outfall, reducing the discharge from 9.3 cubic feet per second (cfs) to 0.0 cfs, and reducing the discharge from 41.2 cfs to 20.8 cfs from the San Bernardino Municipal Water Department Recycled Water Project Rapid Infiltration and Extraction facility. The combined effluent discharge reductions into the Rialto Channel and Santa Ana River would reduce instream flow at this location by more than 50%, resulting in a 73% loss of sucker habitat in the upper reach of the Santa Ana River and a 100% loss of sucker habitat in the lower reach.

Given the dramatic potential impacts on the Santa Ana sucker and other aquatic species, the initial set of Covered Activities was no longer considered a viable alternative, and for this reason this alternative was considered and rejected from further consideration in this EIR.

## Fewer Covered Activities Alternative

The Fewer Covered Activities Alternative would include a reduced list of Covered Activities proposed for coverage in the Upper SAR HCP. Covered Activities include construction, infrastructure development, and operations and maintenance (O&M) of water conservation, water infrastructure development, habitat improvement, solar energy facility activities, and ongoing or foreseeable O&M, management, and monitoring activities. The Upper SAR HCP identifies over 100 Covered Activities that could result in take of Covered Species within San Bernardino and Riverside Counties in the Planning Area. With this alternative, up to 20% fewer activities would be covered in the HCP, which

could involve removal of some of the activities that may result in direct impacts on threatened or endangered species.

Although Covered Activities would be removed with this alternative, the Permittee Agencies would still need to obtain permits for those Covered Activities, and there would be no assurance that those permits would be granted. Furthermore, this alternative would result in reduced conservation, species projection, and funding for conservation. This alternative may cause fewer Covered Activities to be implemented in certain locations, which could reduce additional impacts on some species depending on the project location and type. However, there would also be less conservation required to mitigate the impacts of the fewer activities being implemented. As such, this alternative would result in less conservation, potentially fewer partners to the HCP, and less funding to pay for conservation activities to support the HCP's overall Conservation Strategy and the project objectives. For these reasons, this alternative was considered and rejected from further consideration in this EIR.

### **Fewer Covered Species Alternative**

The Fewer Covered Species Alternative would include a reduction of Covered Species from the 22 Covered Species proposed for coverage in the Upper SAR HCP. This alternative may not provide the ITPs ultimately needed by Permittee Agencies if Covered Activities affect listed species not included in the HCP. Permittee Agencies would still need to obtain permits for any impacts on those species not included, and there would be no assurance that permits would be granted for Covered Activities that affect those additional listed species not covered in the HCP. Furthermore, this alternative would also result in reduced conservation and species protection for species not covered by the HCP. For these reasons, this alternative was considered and rejected from further consideration during the stakeholder engagement meeting held on October 2, 2018.

### **More Covered Species Alternative**

The More Covered Species Alternative would include an expansion of Covered Species list to include more than the 22 listed and non-listed species proposed for coverage in the Upper SAR HCP. This alternative would involve up to 10 additional species within the Planning Area, as shown on Figure 1-4. Even though this alternative would provide additional protections within the Planning Area for more species, these species are less likely to need ITPs in the foreseeable future for the set of Covered Activities in the HCP. Additional conservation measures and funding would be required for conservation of these additional species, which may not be available from the member agencies involved in this HCP.

This alternative would be difficult and unrealistic to implement, as the member agencies would need to develop committed, meaningful conservation for these additional species, as well as additional funding to implement the HCP. Additional biological resources studies would need to be developed to prioritize which additional species could be affected by the HCP, and, based on those studies, anywhere from one to ten species may be added. Even though this alternative would meet the HCP and project objectives, it may not be practical to implement, as additional funding would need to be identified. This alternative does not balance requirements for conservation, mitigation, and funding. For these reasons, this alternative was considered and rejected from further consideration in this EIR.

## Optimize Flows for Covered Fish Species Alternative

This alternative would consider optimizing Santa Ana River flows to improve habitat conditions for specific fish species like the Santa Ana sucker. The Santa Ana sucker has been a focal point of the Santa Ana River through years of litigation. This option was considered as an alternative that would focus conservation of and other benefits to the threatened Santa Ana sucker as well as the arroyo chub. Both fish species are included in the Upper SAR HCP. With this alternative, Covered Activities that substantially reduce flows in the Santa Ana River may not be compatible with optimized flows for fish species. Therefore, some Covered Activities would have to be dropped from the HCP. The emphasize of species in this alternative is assumed to come at the expense of other Conservation Actions for other species, which may make it difficult to get permit coverage for those other species.

If Covered Species would be removed with this alternative, the Permittee Agencies would still need to obtain permits for any impacts on those other species. There would be no assurance that permits would be granted for Covered Activities that affect additional listed species not covered in the HCP. Furthermore, this alternative would result in reduced conservation and species protection, which would not meet the project objectives.

There would be limited additional benefit for the fish species through implementation of this alternative, and there would be reduced conservation and mitigation throughout the Planning Area. As such, this alternative would result in reduced conservation and species protection, which would not meet the project objectives. For these reasons, this alternative was considered and rejected from further consideration during the stakeholder engagement meeting held on October 2, 2018.

## Reduced Permit Term Alternative

The Permittee Agencies are seeking 50-year ITPs with implementation of the Upper SAR HCP, which would accommodate the expected schedule for construction of Covered Activities in the Planning Area and ongoing associated O&M for up to 50 years. Under the Reduced Permit Term alternative, the HCP would include the same permit conditions for Covered Activities and Covered Species and the same conservation measures and Conservation Strategy as the HCP, except the permit term would be reduced to 30 years. If the permit term was reduced from 50 to 30 years, the Permittee Agencies may apply to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to renew their permits prior to expiration of the take permits.

The benefit of a shorter permit term is to better forecast environmental conditions for a shorter time period, as conditions can change over time. For example, this alternative would involve approximately two rainfall cycles in the permit term of fewer than 30 years, and rainfall cycles can vary on a regular basis. By including two completed cycles of an average of 13 to 15 years per cycle, the HCP can be further assessed and revised according to the conditions at a nearer term, especially if change in typical precipitation or global climate change is a factor. Also, management staff and the mission statements for each member agency can evolve over time, which can be reassessed at a shortened permit term.

Most Covered Activities would take fewer than 30 years to be constructed; however, O&M activities will occur well beyond the 30-year permit term. Therefore, a 50-year term was selected to provide Valley District with additional flexibility in the implementation of Covered Activities, especially O&M, included in the Upper SAR HCP. Because this alternative would result in no change to the HCP specifically related to Covered Activities, Covered Species, conservation strategies, mitigation, etc. (except for the permit term), this alternative was not considered a meaningful alternative, as stated



during the stakeholder engagement meeting on October 2, 2018. As such, this alternative was considered and rejected from further consideration, as concluded during the stakeholder engagement meeting.

### **Reduced Covered Activities/Reduced Impacts on Jurisdictional Wetland and Other Waters of the U.S. Alternative**

This alternative would assume a reduction in impacts involving Covered Activities that directly affect wetlands and waters of the U.S., such that some of the proposed Covered Activities would be removed from the HCP. Although Covered Activities would be removed with this alternative, the Permittee Agencies would still need to obtain permits for those Covered Activities, and there would be no assurance that those permits would be granted. Furthermore, this alternative would result in reduced conservation, species projection, and funding for conservation. There is the potential that there would be fewer Covered Activities to be implemented in certain locations, which could reduce additional impacts on some species depending on the project location and type. However, there would also be less conservation required to mitigate the impacts of the fewer activities being implemented. As such, this alternative would result in less conservation, potentially fewer partners to the HCP, and less funding to pay for conservation activities to support the HCP's overall Conservation Strategy and the project objectives. For these reasons, this alternative was considered and rejected from further consideration in this EIR.

### **No Santa Ana Sucker Translocation into Streams with SCE Operations Alternative**

The USFWS *Recovery Plan for the Santa Ana Sucker* (USFWS 2017) and the *Santa Ana Sucker Translocation Plan* (Valley District 2018) are guidance documents for the translocation and recovery effort for Santa Ana sucker into areas where suitable habitat is present, but historical occupation is not documented, and would involve reintroduction of Santa Ana sucker in areas of its historic range where it has been extirpated. Translocation has been identified as essential for recovery of the species in the Santa Ana sucker draft Recovery Plan. Establishment of additional occupied areas would increase the redundancy and resiliency of the Santa Ana sucker population. One specific Conservation Strategy that is supported by the Recovery Plan (USFWS 2017) and would be implemented by the HCP is the reintroduction of Santa Ana sucker into formerly occupied upper tributaries of the Santa Ana River as well as the translocation of Santa Ana sucker into other tributaries with suitable habitat that lack historical records. Several of the tributaries identified within the Planning Area having the best potential for translocation also happen to have SCE hydroelectric facilities currently in operation. This alternative would not translocate Santa Ana sucker into streams where SCE currently operates hydroelectric facilities. This alternative assumes that translocation would still occur, but only in stream reaches where SCE is not present; therefore, no ITP would be necessary for SCE through the HCP.

The removal of the translocation opportunity in these streams where SCE operates hydroelectric facilities would represent a significant loss of conservation benefit to the species, making it more difficult to obtain ITPs for Santa Ana sucker. This alternative was rejected because translocation is an essential part of the HCP and the overall Conservation Strategy, providing long-term assurances to the Santa Ana sucker. Translocation is a key Conservation Strategy to Santa Ana sucker recovery. Without this key Conservation Strategy, this alternative would not be consistent with the goals set out by the HCP, it would not meet the project objectives. This alternative does not meet the

objectives of the Project or the USFWS Recovery Plan for Santa Ana sucker. Therefore, this alternative was considered and rejected from further consideration during the stakeholder engagement meeting held on October 2, 2018, and through an additional project team review of the feasibility of this alternative.

## 6.4.5 Alternatives Carried Forward for Analysis in this EIR

Four alternatives were determined to be feasible or potentially feasible to meet Upper SAR HCP objectives and to have some potential to reduce or minimize the impacts of the Proposed Project. For these reasons, these alternatives were carried forward for evaluation in this alternatives analysis. Table 6-2, below, briefly describes each of these alternatives, and full descriptions of the alternatives follow. The descriptions include what elements of the Proposed Project would be included in the alternative as well as a brief discussion of how the changes that would occur to the HCP under each alternative would affect the HCP's ability to achieve project objectives.

**Table 6-2. Alternatives Selected for Further Analysis During Stakeholder Engagement and HCP Preparation**

<b>Alternative Name</b>	<b>Description of Alternative</b>
Alternative 1: No Project Alternative	No Upper SAR HCP or jointly held Section 10 ITP would be granted to the Permittees to permit Covered Activities. No HCP Preserve System would be established and activities like Tributaries Restoration/Rehabilitation and translocation of Santa Ana sucker would occur without the Section 10 permit issued as part of the Proposed Project. Note that Covered Activities could be implemented individually by independently seeking permits, but without HCP or programmatic permit coverage.
Alternative 2: Phase 1 Covered Activities Only Alternative	This alternative would only include those high-priority near-term Covered Activities that are identified in Phase 1 (Years 0–5) of the Upper SAR HCP.
Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative	This alternative assumes that those proposed recycled water projects that reduce effluent discharge to the Santa Ana River and have the most impact on Santa Ana sucker would be scaled back or eliminated from Covered Activities. This alternative would result in reduced impacts on the baseflow in the Santa Ana River; therefore, Santa Ana sucker habitat would not require the same level of conservation measures and mitigation to offset the impacts, such as Tributaries Restoration/Rehabilitation and Translocation.
Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative	This alternative assumes storm flow diversion projects that potentially have the most impact on the SBKR habitat would be scaled back or eliminated from Covered Activities. Reduced impact on SBKR habitat from Covered Activities would not require the same level of conservation measures and mitigation to offset the impacts, such as purchase, restoration/rehabilitation, and conservation of occupied habitat.

### Alternative 1: No Project Alternative

An analysis of the No Project Alternative is required under State CEQA Guidelines § 15126.6(e). According to § 15126.6(e)(2) of the State CEQA Guidelines, the “no project” analysis must discuss “what is reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” The

No Project Alternative would include the future circumstances without the Proposed Project (HCP Preserve System for the Upper SAR HCP and Section 10 ITP issued jointly to the Permittees for future implementation of the proposed Covered Activities) and would also include predictable actions by persons or entities if the Proposed Project did not occur.

Under the No Project Alternative, Section 10 permit(s) would not be issued by USFWS for take of the proposed Covered Species through the Upper SAR HCP, and there would be no implementation of the watershed-scale, coordinated Conservation Strategy as is committed to by the Permittees for the Proposed Project. However, that is not to say that the individual water supply projects proposed by the various water agencies would not occur; rather, the Permittees would pursue project-by-project ITPs from USFWS and CDFW for the take of listed species pursuant to the Federal and State Endangered Species Acts associated with implementation of Covered Activities. Conservation would also be negotiated on a project-by-project basis with each Wildlife Agency in order to appropriately offset the impacts of each individual project. There would be no regional approach to developing holistic conservation measures that provide long-term species and ecosystem benefits. Covered Activities could be implemented individually, but without the proposed Upper SAR HCP ITP and the regulatory assurances that go along with it. Typical activities that would occur under the No Project Alternative, but on a project-by-project basis, are described in Section 2.2, *Elements of the Proposed Project*, and Section 2.2.5, *Covered Activities*, as they essentially include the same list of proposed future water infrastructure projects; however, a more difficult and lengthy permitting process would likely occur if conducted individually and without any assurances that permits would be granted for any Covered Activities.

Impacts on species could occur under the No Project Alternative, including construction or expansion of water infrastructure or water facilities, etc., if most or all Covered Activities were implemented. However, the Permittees would need to seek ITPs through single-project HCPs (Section 10 of the Federal Endangered Species Act) or through Section 7 consultation with USFWS. Due to the difficulty in securing permits for all Covered Activities individually, it is also possible that some Covered Activities would be too costly to permit and fewer Covered Activities would be implemented, resulting in less development under the No Project Alternative than would occur under the Proposed Project.

While the impacts could be less than those of the Proposed Project if Permittees are not able to obtain take permits individually, there would also be less strategic conservation and less assurances for coordinated implementation of conservation measures. These added uncertainties adversely affect the ability of the Permittees to achieve their public mission to capture and store local water supply, which then makes the region more reliant on imported water from Northern California.

Another potential consequence of the No Project Alternative is the loss of the Upper SAR HCP as a regulatory mechanism to provide ITP coverage for Santa Ana sucker translocation activities and other conservation measures, including the establishment of the HCP Preserve System. To date, no other mechanism has been identified that could provide long-term coverage to entities downstream of translocated populations, such as SCE. The translocations would occur on U.S. Forest Service lands, which are not eligible for special assurances from USFWS, such as a Safe Harbor Agreement. USFWS has stated that establishment of new populations in the upper watershed is a requirement for the recovery of Santa Ana sucker. The Upper SAR HCP has the unique ability to enable this effort by providing long-term regulatory assurances to parties who are concerned about increased regulatory burdens due to the reintroduction of a listed species near their facilities.

## Alternative 2: Phase 1 Covered Activities Only Alternative

This alternative would provide ITP coverage for only those high priority, near-term Covered Activities that are identified in Phase 1 (Years 0–5) of the Upper SAR HCP. Implementation of the Phase 1 Covered Activities would include construction and operation of fewer Covered Activities than are identified in Table 2-2 and fully described in Chapter 2 of the Upper SAR HCP.

This alternative would also only implement the Phase 1 Conservation Actions because mitigation is directly tied to impacts. While preservation and habitat improvement activities would occur during Phase 1, in proportion to Phase I impacts, the remainder of the proposed HCP Preserve System and Tributaries Restoration/Rehabilitation projects would not be implemented as part of the HCP regional Conservation Strategy. The full suite of mitigation lands and Conservation Actions is needed in order to attain a sustainable preserve system that incorporates the many habitat needs of species, including habitat for breeding, foraging, and connectivity. Potential impacts on biological resources could be substantially reduced if only Phase I projects are implemented; however, it is likely that future projects would be pursued individually by Permittees on a project-by-project basis because they are key to long-term reliability of the regional water supply. If pursued independently, future development of Covered Activities identified in Phases 2 through 4 of the Upper SAR HCP would likely result in a more difficult and lengthy permitting process. There would also be no assurances that permits would be issued for any of these Covered Activities. Conservation would also be negotiated on a project-by-project basis with each Wildlife Agency in order to appropriately offset the impacts of each individual project. Therefore, there would likely not be the regional approach to developing holistic conservation measures that provide long-term species and ecosystem benefits.

## Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative

This alternative would assume that water reuse and recycling projects that are most impactful to the Santa Ana sucker would not have permit coverage through the Upper SAR HCP, and this alternative would result in less baseflow reduction and reduced impacts on aquatic habitat in the Santa Ana River. Covered Activities that reduce baseflow have the most potential impact on Santa Ana sucker and other aquatic habitat, and therefore also require the greatest amount and diversity of conservation measures to offset their impacts. Covered Activities that reduce baseflow create the need for a more extensive Santa Ana sucker conservation measures, such as captive breeding and Tributaries Restoration/Rehabilitation, Translocation, microhabitat enhancements, or predator control program, in order to counterbalance the reduction of depth and velocity of flow in the Santa Ana River. Recycled water projects that would reduce baseflow would include water reuse projects like the San Bernardino Municipal Water Department Recycled Water Project (WD.1) and the Rialto Wastewater Diversion and Reuse Project (Rial.1). With this alternative, the Upper SAR HCP would not include these Covered Activities, and permit coverage for those water infrastructure projects would not be provided.

While the reduced impacts on base flow in this alternative could likely eliminate the need for the Santa Ana Sucker Translocation project, the Tributaries Restoration/Rehabilitation project, and many other enhancements in the Santa Ana River, there is an argument to be made that these measures to improve the long-term viability of the Santa Ana sucker population are needed now, regardless of Covered Activity implementation. Even with the current level of water in the Santa Ana River, the Santa Ana sucker population is under constant threat from rapid changes in instream flow, lack of high quality habitat, no redundancy of other populations centers in the river system, and therefore frequent threat of extirpation.

Conservation measures such as translocation is an integral part of the proposed Upper SAR HCP Conservation Strategy and the USFWS Recovery Plan for Santa Ana sucker. These measures provide long-term assurances to the Santa Ana sucker population, increase resiliency of the species, and distribute risk to its longevity by redistributing the currently limited population to areas where it has historically thrived, away from the stressors of the urbanized river system. Loss of a funding source and regulatory mechanism (as is provided by the full HCP) to provide long-term Conservation Actions would make the overall recovery of Santa Ana sucker more difficult if not impossible. Because this alternative would result in fewer projects and impacts on mainstem river and the Santa Ana sucker, it would also result in less conservation or mitigation obligations for Santa Ana sucker. With this alternative, it is likely that many Santa Ana sucker recovery goals would not be achieved or would not be implemented in a coordinated, watershed-scale manner.

#### **Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative**

Like the other alternatives proposed in this analysis, this alternative would involve implementation of fewer Covered Activities, specifically stormflow diversion projects, that are included in the Upper SAR HCP. This alternative would not include projects that divert storm flow into new or expanded recharge basins, nor would it include activities to operate and maintain new diversion structures or activities related to construction of new recharge basins and associated diversions. These projects could include Mill Creek Diversion Project (CD.1, Phase 1), Santa Ana Levee and Cuttle Weir Diversion (CD.2, Phase 1), and the Active Recharge Project (VD.2).

The elimination of these new stormflow diversion projects would eliminate the associated additional impacts on SBKR in the alluvial fan sage scrub where most of these projects are proposed. The anticipated impacts from these new water capture projects create the need for a SBKR habitat conservation, habitat improvement, and long-term protection as offsetting mitigation for these projects. Long-term conservation values that would be created through the conservation activities are far higher than the habitat values that would be affected. These Covered Activities are intentionally sited in locations where the SBKR habitat is degraded and likely occupied in low abundance, if at all. In exchange, the Permittees are committing to acquiring high-value, occupied habitat (or habitat that can be restored/rehabilitated to occupied) and restoring and rehabilitating habitat such that it provides breeding, foraging, and refugia values for SBKR. If these Covered Activities are eliminated from the HCP as a part of this alternative, then these conservation measures for SBKR would not be required as mitigation.

Without the proposed conservation measures for SBKR, USFWS recovery goals would likely not be achieved by the HCP, and further threats to the species would persist. Loss of a funding source and regulatory mechanism like the Upper SAR HCP to provide long-term Conservation Actions would make the overall recovery of SBKR more difficult, if not impossible. While this alternative would involve fewer Covered Activities, it would result in fewer impacts in low-quality SBKR habitat and, therefore, also result in reduced high-quality conservation measures for SBKR. Similar to the No Project Alternative, Permittees could still pursue many of the same future activities by seeking individual ITPs for each of these Covered Activities. However, future development associated with these Covered Activities would likely result in a more difficult and lengthy permitting process. There would also be no assurances that permits would be granted for any of these Covered Activities.

## 6.5 Alternatives Impact Analysis

### 6.5.1 Approach to Analyzing Alternatives

The impact analysis provided in Chapter 3 of this EIR for the Proposed Project provided a starting point for the alternatives to be evaluated for all the same environmental topics, including those provided in Appendix G of the State CEQA Guidelines. With the results of the impacts analysis completed for the Proposed Project, the alternatives are then reviewed against the impacts for the Proposed Project and compared. The following sections provide qualitative discussion of its comparative environmental impacts. As provided in § 15126.6(d) of the State CEQA Guidelines, the significant effects of these alternatives are identified in less detail than the analysis of the Proposed Project.

A summary of those anticipated impacts for each alternative and environmental topic is provided below and a more detailed description of the comparative impacts of the alternatives is provided in Section 6.5.2. Where an alternative would have the same significant impacts as the Proposed Project, the pertinent mitigation measure or measures identified for the Proposed Project would apply to the alternative as well.

### 6.5.2 Summary Comparison of Alternatives

Alternative 1 (No Project), Alternative 2 (Phase 1 Covered Activities Coverage Only) and Alternative 4 (Minimization of Impacts on San Bernardino Kangaroo Rat through Removal of Stormflow Diversion Covered Activities) could potentially reduce construction and operational impacts in comparison to the Proposed Project if not all Covered Activities are implemented; however, some of the benefits associated with the Conservation Strategy included with the Upper SAR HCP may not occur without the balance reached by the Upper SAR HCP Conservation Strategy. Furthermore, these alternatives would not fully meet all the project objectives, as some Covered Activities may not get coverage through the HCP. Those Covered Activities not included in these alternatives could still pursue approvals separately and the impacts would be similar, except for biological resource impacts without the coordinated permit strategy involved in the HCP. For all other environmental issue areas, there could be fewer impacts than under the Proposed Project, as less development could be proposed and the potential for impacts for construction and operation of Covered Activities could be less. Future development associated with Covered Activities within the Planning Area would result in a more difficult and lengthy permitting process that would likely be required for individual projects through the HCP. Also, there would also be no assurances that permits would be granted for any Covered Activities. Because of this, some Covered Activities may not occur and fewer projects in the Planning Area may be developed due to potential permitting restrictions. As a result, it is possible that fewer impacts on some environmental resources may occur in the Planning Area under these alternatives.

Table 6-3 provides a summary comparison of the Proposed Project and the alternatives.

**Table 6-3. Comparison of Alternatives Impacts**

<b>Environmental Issue Area</b>	<b>Proposed Project</b>	<b>Alternative 1: No Project</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 2: Phase 1 Covered Activities Only</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative</b> <i>Impact/Comparison to Proposed Project</i>
Aesthetics	LTS	LTS/GREATER	LTS/GREATER	LTS/GREATER	LTS/GREATER
Agriculture and Forestry Resources	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Air Quality	SU	LTS/REDUCED	SU/REDUCED	SU/REDUCED	SU/REDUCED
Biological Resources	SU	Significant with Conservation Measures but Reduced Impact Compared to the Proposed Project with Fewer Benefits	Significant with Conservation Measures but Reduced Impact Compared to the Proposed Project with Fewer Benefits	Less than Significant with Conservation Measures and Reduced Impact Specifically on Santa Ana Sucker Compared to the Proposed Project with Fewer Benefits	Significant with Conservation Measures and Reduced Impact Specifically on San Bernardino Kangaroo Rat Compared to the Proposed Project with Fewer Benefits
Cultural Resources	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Geology, Soils, and Paleontological Resources	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Greenhouse Gas Emissions/Energy	LTS	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED
Hazards and Hazardous Materials	LTS	LTS/REDUCED	LTS w/MM/GREATER	LTS w/MM/GREATER	LTS w/MM/GREATER
Hydrology and Water Quality	SU	LTS/GREATER	SU/GREATER	LTS/REDUCED	SU/GREATER
Land Use	NI	NI/SIMILAR	NI/SIMILAR	NI/SIMILAR	NI/SIMILAR
Mineral Resources	LTS	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED
Noise and Vibration	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Population and Housing	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Public Services	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Recreation	LTS	LTS/GREATER	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR

<b>Environmental Issue Area</b>	<b>Proposed Project</b>	<b>Alternative 1: No Project</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 2: Phase 1 Covered Activities Only</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative</b> <i>Impact/Comparison to Proposed Project</i>	<b>Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative</b> <i>Impact/Comparison to Proposed Project</i>
Transportation	LTS	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED	LTS/REDUCED
Tribal Cultural Resources	LTS w/MM	LTS/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED	LTS w/MM/REDUCED
Utilities and Service Systems	LTS	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR	LTS/SIMILAR
Wildfire	LTS	LT/SIMILAR	LTS/GREATER	LTS/GREATER	LTS/GREATER
Cumulative Impacts	SU	LTS/REDUCED	SU/REDUCED	SU/REDUCED	SU/REDUCED

NI = No Impact; LTS = Less than Significant; LTS w/MM = Less than Significant with Mitigation; SU = Significant and Unavoidable



### 6.5.3 Alternative 1: No Project

#### Aesthetics

Under Alternative 1, No Project, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species would likely occur without the Upper SAR HCP. Also, less open space would be preserved and the HCP Preserve System would not be established with Alternative 1. Without the Upper SAR HCP, some benefits may not occur, like restoring/rehabilitating degrading riparian habitat and improving site conditions as compared to the existing setting in the removal of trash and nonnative invasive species. Because the Proposed Project would not result in any significant impacts related to aesthetics, Alternative 1 may result in a greater impact than under the Proposed Project.

#### Agriculture/Forestry Resources

As described in Section 3.2, *Agriculture and Forestry Resources*, the Proposed Project would affect less than an acre of Important Farmland. Within the HCP Preserve System, the majority of designated farmland is considered Grazing Land. The No Project Alternative would not result in any Important Farmland being acquired or used for habitat improvement. Like the Proposed Project, the No Project Alternative would not have significant effects on Important Farmlands.

As described in Section 3.2, *Agriculture and Forestry Resources*, implementation of the Proposed Project could result in the conservation of forest land, and no conversion of forest land to non-forest use would occur. The No Project Alternative would not result in forest land being acquired and conserved. Like the Proposed Project, the No Project Alternative would not have significant effects on forestry resources, but would not have the conservation benefits of the Proposed Project.

#### Air Quality

Under Alternative 1, No Project Alternative, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP may not occur, and any air emissions associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to air quality would be avoided under the No Project Alternative.

#### Biological Resources

The Proposed Project would result in significant impacts on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species during implementation of the permit and the Conservation Strategy. Under Alternative 1, there would be fewer habitat improvements, conservation, and other onsite improvements, and if these activities did take place it would be without the coordinated permitting effort for an overall Conservation Strategy. Potentially additional impacts would occur on sensitive habitats or special-status plant and wildlife species during the short term, although project-specific mitigation would reduce any project-specific impacts caused by future projects considered as Covered Activities. Without the Proposed Project, there would be no long-term commitment to native resources by agreeing to the establishment of the HCP Preserve System to conserve, monitor, and manage Covered Species and their habitats in perpetuity. Also, there would be no assurances that USFWS would not require additional land,

water, or other natural resources beyond the level agreed upon in the HCP. Alternative 1 could also involve fewer mitigation and conservation measures at the watershed level, with only project-specific mitigation required to reduce any potential impacts. Alternative 1 would not meet all of the project objectives, such as the creation of new or improved aquatic habitat for Covered and non-covered aquatic species through a Mitigation Reserve Program, which may not occur without the HCP. Without the Proposed Project, implementation of site improvements to create and enhance sustaining native fish habitat; education of the public on responsible use and value of the natural resources on site; long-term maintenance of the restored sites; and creation of mitigation for future improvements to the sites may not likely occur. Impacts on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species under Alternative 1 are assumed to be significant, and future projects may require project-specific mitigation to reduce the impacts to less-than-significant levels. However, without the establishment of the Preserve System, the overall impacts on biological resources would be greater under Alternative 1 than for the Proposed Project.

For Group 3 Covered species (including the listed Santa Ana sucker), as with the Proposed Project, the implementation of Alternative 1 could result in direct effects on waters that serve as suitable and occupied habitat for special-status fish species, resulting in the loss of essential foraging, sheltering, and spawning areas for these species. Projects implemented under Alternative 1 could alter aquatic habitat structure, hydrology, and function (including reduction in flow and coarse sediment transport). Individual special-status fish species could be injured or killed by operation and crossing of heavy equipment in active channels, impact pile driving, placement of habitat structures during habitat improvement activities, during management of nonnative invasive species, during stream channel dewatering or diversion, or by exposure to toxic substances. The implementation of Alternative 1, like the Proposed Project, also has the potential for temporary direct effects on special-status fish species and their suitable habitat from a possible decrease in water quality due to erosion and road runoff, turbidity, or sedimentation. Direct and indirect exposure to construction-related stressors (e.g., noise, ground vibrations, visual disturbances) could lead to behavioral modifications and negative physiological stressors, potentially resulting in lowered reproductive performance, increased susceptibility to diseases and predation, and mortality of individual special-status fish species, as well as deterring fish from utilizing the area. If available, the incorporation of relevant AMMs would protect aquatic habitat and enhance Group 3 Covered species habitat. However, these measures would not be a requirement to any coordinated Conservation Strategy and there may not be any assurances that any Covered Activity directly affecting the Group 3 species will be approved by the resource agencies. Therefore, impacts on Group 3 Covered species, including the listed Santa Ana sucker, resulting from the implementation of Alternative 1 are conservatively determined to be significant and unavoidable.

The permanent loss and temporary removal and/or disturbance of riparian and wetland communities associated with Alternative 1 would be a significant impact without implementation of the Upper SAR HCP. However, the implementation of project-specific AMMs, general best management practices (BMPs), and mitigation, as well as compliance with regulatory permitting requirements for riparian habitats and protected wetlands and other waters, which typically require no net loss of riverine and wetland/waters functions and services, would likely reduce the impacts of Alternative 1 to a less-than-significant level with project-specific mitigation.

The permanent loss and temporary removal and/or disturbance of other natural communities, including shrublands, grasslands, woodlands, and rock outcrops, associated with Alternative 1, in the absence of a coordinated conservation effort, would be a significant impact without implementation of the Upper SAR HCP.

Implementation of future projects could result in permanent and temporary impacts on potentially jurisdictional wetlands and other waters in the Planning Area through the development of water facilities and infrastructure, including water reuse projects, diversions, recharge basins, flood control, solar energy facilities, and wells and water infrastructure without conservation strategies in place to balance impacts. Permanent development adjacent to wetlands and other waters could result in alterations in local ground and surface waters and the introduction of pollutants that could adversely affect the functions and values of wetlands and waters. Furthermore, these activities could result in the inadvertent introduction of nonnative invasive plant species, the accidental release of chemical pollutants into wetlands and waters, and sedimentation resulting from ground-disturbing activities that could adversely affect the functions and values of wetlands and waters. Potential impacts from construction and O&M activities of future projects under Alternative 1 would be similar to those described below for the Proposed Project; however, with the implementation of project-specific AMMs, general BMPs, and mitigation, impacts on jurisdictional wetlands and other waters would be considered less than significant.

Under Alternative 1, the development of many of the same future projects would be expected to occur under Alternative 1 as would occur under the Proposed Project. For this reason, potential interference with the movement of native fish and wildlife, migratory wildlife corridors, and nursery sites from construction of future projects under Alternative 1 would be the same as those described below for the Proposed Project. However, without the benefits of the implementation of the Upper SAR HCP and the Preserve System, impacts from construction of future projects would be potentially significant. Impacts on wildlife movement and corridors from O&M activities under Alternative 1 would be limited and would be the same as those described below for the Proposed Project. Impacts would be short-term in nature and would consist of temporary disturbances (e.g., noise, ground vibrations, increased human presence). No permanent impacts on wildlife movement and corridors from O&M activities would occur. With the implementation of project-specific AMMs and general BMPs, impacts from O&M activities on wildlife movement and corridors would be less than significant.

Implementation of future projects under Alternative 1 could conflict with the provisions of other HCPs or joint HCP/Natural Community Conservation Plans (NCCPs) within the Plan Area, including the Wash Plan HCP, Lake Mathews Multiple Species Habitat Conservation Plan (MSHCP), Stephens' Kangaroo Rat Habitat Conservation Plan (SKR HCP), Western Riverside County Multiple Species Habitat Conservation Plan (WRC MSHCP) (joint HCP/NCCP), and West Valley HCP. Each future project would require a separate analysis and additional mitigation for its effects on other HCPs within the Planning Area, and may be subject to additional approvals by cities, counties, USFWS, and CDFW. Potential impacts on other HCPs from construction of future projects under Alternative 1 would be similar to those described below for the Proposed Project and could constitute a potentially significant impact.

## Cultural Resources

Under Alternative 1, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, and cultural resource impacts associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to cultural resources impacts would be avoided under the No Project Alternative.

## Geology, Soils, and Seismicity and Paleontological Resources

Under Alternative 1, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, and therefore Project-related impacts on paleontological resources would be avoided.

## Greenhouse Gas Emissions and Energy

Under Alternative 1, No Project, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, and any GHG emissions or energy use associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to greenhouse gas (GHG) emissions and energy would be avoided under the No Project Alternative.

## Hazards and Hazardous Materials

Under Alternative 1, No Project, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP. Also, less open space would be preserved, and the HCP Preserve System would not be established with Alternative 1. Activities that could result in disturbance or produce hazardous materials associated with the Proposed Project would not occur under the No Project alternative. For these reasons, the impacts of the Proposed Project related to hazardous materials would be avoided under the No Project Alternative.

Without implementation of the Conservation Strategy established by the Upper SAR HCP, wildfires could continue to occur in the Santa Ana River watershed from natural causes, arson, and unintended incidents without installation of additional water sources, fuel modification, or prevention monitoring planned as part of the HCP Conservation Strategy with the intended benefit of reducing fire risks. With less conservation and protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, Alternative 1 could result in potentially more incidents of wildfire than under the Proposed Project.

## Hydrology and Water Resources

Under Alternative 1, No Project, construction and operations associated with future development projects considered as Covered Activities would not occur as planned under the Proposed Project due to lengthier permitting requirements, thus reducing the number of projects constructed and habitat improvement and O&M activities conducted. It is expected that at least some Covered Activities would be developed in the Permit Area under Alternative 1, and fewer impacts on hydrology and water quality may occur. However, fewer water resource projects may be implemented without the coordinated permitting strategy that would have an overall benefit on the watershed and water quality. It is also possible that fewer recharge basin, wells, and other water infrastructure project activities would occur under Alternative 1 than would occur under the Proposed Project. As such, less water is likely to be captured and recharged into the basins to increase local groundwater supplies.

In addition, habitat improvement activities that benefit the health of the watershed and result in incidental groundwater recharge activities are also less likely to occur, resulting in a decrease of recharge to the groundwater basin in comparison to the Proposed Project. Alternative 1 would also

not result in a positive effect of reducing erosion in tributaries and would not provide additional flood protection capacity in some locations currently subject to flooding. Other future projects considered as Covered Activities within the Permit Area could result in a net increase in impervious surfaces, resulting in increased rates or amounts of surface water runoff. Consequently, erosion or localized flooding may increase, runoff could exceed the capacity of existing or planned stormwater drainage systems, or flood flows may be impeded or redirected. Furthermore, it is possible that fewer water resource projects would be implemented that would have an overall benefit on the groundwater and could result in conflicts with a sustainable groundwater management plan in the future under this alternative.

Goals related to hydrology and water quality would not be implemented, including restoring quantity, quality, and function of vulnerable habitats; implementing habitat improvement and monitoring; constructing new water treatment facilities, groundwater recharge basins, or flood control structures; or providing standardized AMM requirements. Mitigation measures at the project level would not be as beneficial as a region-wide approach where conservation are needed for conservation of species.

Some portions of the Permit Area, specifically along and adjacent to the Santa Ana River and other rivers, streams, and waterways, are within the Federal Emergency Management Agency (FEMA) 100-year floodplain, are subject to flooding, and present a possible flood risk. However, the majority of the Permit Area is outside of the FEMA 100-year floodplain and not within a special flood hazard area. Seiches occur in an enclosed or partially enclosed body of water, such as a lake or reservoir, and are caused by wind, earthquakes, or changes in atmospheric pressure. However, there is no record of seiches occurring in the Planning Area. Furthermore, due to the geographic location approximately 20 miles northeast of the Pacific Ocean, there is a low risk of flooding associated with tsunamis in the Planning Area.

Inundation in a flood hazard zone and associated risk of release of pollutants in the Planning Area varies over the geography. With implementation of Alternative 1, it is possible that fewer activities could result in lessened impact of release of pollutants in the event of inundation. However, the majority of Covered Activities are not considered industrial projects that would result in a substantial risk of release of pollutants due to inundation. However, future projects by other local jurisdictions, particularly industrial type projects, could result in the risk of release of pollutants due to inundation.

While other local jurisdiction future projects within the Permit Area could result in the degradation of water quality or violations of water quality standards, future projects would be required to comply with CEQA and Federal and State requirements as well as local stormwater management, stormwater runoff, and flood control policies on an individual basis to avoid or minimize impacts on water quality to the extent feasible.

## Land Use

Under Alternative 1, No Project, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species would likely occur without the Upper SAR HCP. Also, less open space would be preserved, and the HCP Preserve System would not be established with Alternative 1, and the existing and planned land uses for the areas that would be conserved or restored with the Proposed Project would remain as they currently exist. Alternative 1 could result in reduced

conservation and less or different forms of mitigation that would be required, and other development could occur without the agreements and easements placed on land for future mitigation in accordance with the Upper SAR HCP. The sites identified for conservation under the Proposed Project would largely remain as undeveloped, natural, open space. Covered Activities could be implemented individually, but without the proposed Upper SAR HCP ITP and the regulatory assurances that go along with it. Similar to the Proposed Project, no physical separation of a community or any conflict with any local land use plans or policies are anticipated with implementation of Alternative 1. With no specific changes to land uses under Alternative 1, adherence to local land use plans, policies, and regulations would occur under the jurisdiction of those agencies.

## Minerals

Under Alternative 1, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP. Also, less open space would be conserved and the HCP Preserve System would not be established with Alternative 1. With less conservation, there would also be fewer construction and operational activities, thus reducing the potential for disturbance to any mineral resources to be encountered during construction in comparison to the Proposed Project. Similar to the Proposed Project, Alternative 1 is not expected to result in acquisition of land that could create a conflicting land use with mining operations on other lands due to any conservation that could occur. Under Alternative 1, the Proposed Project areas would remain as undeveloped, natural, open spaces with only minimal other development, and no loss of available or designated locally important mining recovery sites are expected to occur.

## Noise

Under Alternative 1, No Project Alternative, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP may not occur, and any noise generation associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to air quality would be avoided under the No Project Alternative.

## Population and Housing

Under Alternative 1, No Project Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP. Also, less open space would be preserved and the HCP Preserve System would not be established with Alternative 1. Similar to the Proposed Project, Alternative 1 would not result in any development such as residential or commercial developments that would directly increase population growth by providing new housing and access in the Permit Area. Covered Activities included in the Proposed Project could be implemented individually under Alternative 1, and any associated change in population and housing impacts would be less than significant and less than those of the Proposed Project. Alternative 1 would not induce substantial unplanned population growth, either directly or indirectly, or displace a substantial number of existing people or housing.

## Public Services

Under Alternative 1, No Project Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP. Demand for public services associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to public services would be avoided under the No Project Alternative.

## Recreation

Under Alternative 1, No Project Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, including fewer benefits to existing recreational resources already in use, which are proposed to be improved with the implementation of many of the habitat improvement projects. Also, less open space would be preserved and the HCP Preserve System would not be established with Alternative 1. Similar to the Proposed Project, Alternative 1 is not expected to increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Additionally, it is not anticipated that adverse impacts on the environment associated with recreation facility expansion would occur with this alternative.

## Transportation

Under Alternative 1, No Project Alternative, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP may not occur, and any increases in vehicle miles traveled (VMT) associated with those activities would not occur. Covered Activities may be implemented independently under Alternative 1, and some construction and operations vehicle trips could occur from these activities. With less construction under Alternative 1 than under the Proposed Project, there could be less localized traffic and less interference with bike paths and emergency vehicle traffic. For these reasons, the impacts of the Proposed Project related to transportation would be avoided under the No Project Alternative.

## Tribal Cultural Resources

Under Alternative 1, conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, and tribal cultural resource impacts associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to tribal cultural resources impacts would be avoided under the No Project Alternative.

## Utilities and Service Systems

Under Alternative 1, No Project Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP. Demand for utilities associated with those activities would not occur. For these reasons, the impacts of the Proposed Project related to utilities and service systems would be avoided under the No Project Alternative.

## Wildfire

Under Alternative 1, No Project Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP. Also, less open space would be preserved and the HCP Preserve System would not be established with Alternative 1. Similar to the Proposed Project, Covered Activities may be implemented independently under Alternative 1 and could result in impacts on emergency response or impacts related to wildfire risks to people and structures and exposure of populations to resulting increased pollutants from a wildfire, although to a lesser degree. Compliance with applicable regulations, policies, and guidelines would reduce impacts related to any interference with emergency response and evacuation plans. Without implementation of the Conservation Strategy established by the Upper SAR HCP, there is the potential that wildfires continue to occur in the Santa Ana River watershed from natural causes, arson, and unintended incidents without installation of additional water sources, fuel modification, or the maintenance and management activities to decrease wildfire risk planned as part of the HCP Conservation Strategy with the intended benefit of reducing fire risks. With less conservation and protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, Alternative 1 could result in potentially more incidents of wildfire than under the Proposed Project. Implementation of similar mitigation measures required for the Proposed Project could reduce potential impacts related to exposure to pollutant concentrations from wildfire, exacerbation of wildfire risks, and post-fire slope instability, if implemented on a case-by-case basis for any Covered Activities that could occur independently.

### 6.5.4 Alternative 2: Phase 1 Covered Activities Only Alternative

#### Aesthetics

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including fewer benefits to existing open space areas, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 2. Without the Upper SAR HCP, some benefits may not occur like restoring/enhancing degrading riparian habitat and improving site conditions as compared to the existing setting in the removal of trash and nonnative invasive species. Because the Proposed Project would not result in any significant impacts related to aesthetics, Alternative 2 may result in a greater impact than that of the Proposed Project.

#### Agriculture/Forestry Resources

As described in Section 3.2, *Agriculture and Forestry Resources*, the Proposed Project would affect less than an acre of Important Farmland. Within the HCP Preserve System, the majority of designated farmland is considered Grazing Land. Alternative 2 may result in less conservation, but, like the Proposed Project, the No Project Alternative would not have significant effects on Important Farmlands.



As described in Section 3.2, *Agriculture and Forestry Resources*, implementation of the Proposed Project could result in the conservation of forest land and no conversion of forest land to non-forest use would occur. Alternative 2 may result in less conservation, but, like the Proposed Project, the No Project Alternative would not have significant effects on forestry resources but would not have the conservation benefits of the Proposed Project.

## Air Quality

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Similar to the Proposed Project, air quality emissions could be generated for habitat improvement maintenance, and management activities that would result with implementation of Alternative 2, although to a lesser degree as less conservation and less construction of preserve sites would be anticipated. Construction and management and maintenance activities that could be implemented under Alternative 2 could result in air quality emissions exceeding adopted thresholds requiring implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3 required for the Proposed Project.

## Biological Resources

Under Alternative 2, Phase 1 Covered Activities Only Alternative, only Phase 1 Covered Activities would be implemented, thus reducing the number of projects constructed with permit coverage, as well as the habitat improvement and O&M activities conducted. Because significantly fewer Covered Activities would be developed in the Permit Area, impacts on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species resulting from project construction would be reduced if projects proposed in Phases 2 through 4 are not also implemented individually. In addition, routine O&M activities proposed in Phases 2 through 4 would also not occur under this alternative, further reducing impacts. Habitat improvement projects proposed in Phases 2 through 4 would also not be implemented; the overall impacts on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species would be greater than those of the Proposed Project with this alternative because this Alternative 2 would only implement the Phase 1 Conservation Actions. While 906.8 acres of preserve would be acquired and subject to habitat improvement activities (including restoration and/or rehabilitation) during Phase 1, the remainder of the proposed HCP Preserve System (approximately 442 acres) would not be acquired or subject to habitat improvement activities. Conservation Areas and habitat improvement activities would not occur at portions of Hidden Valley Creek (Conserv.1), Hidden Valley Ponds (Conserv.2), Drainage A Woolly-star (Conserv.14), and City Creek (Conserv.20). Consequently, impacts under Alternative 2 would be less than significant with implementation of applicable Conservation Strategy AMMs, though Alternative 2 would not be as beneficial to Group 1 Covered Species, Group 2 Covered species, and non-covered special-status species as the Proposed Project, which offers greater conservation value.

For Group 3 Covered Species (including the listed Santa Ana sucker), as with the Proposed Project, the implementation of Alternative 2 would result in direct effects on waters that serve as suitable and occupied habitat for special-status fish species, resulting in the loss of essential foraging, sheltering, and spawning areas for these species. Implementation of the Alternative 2 within and surrounding aquatic habitats could alter aquatic habitat structure, hydrology, and function (including reduction in flow and coarse sediment transport). Individual special-status fish species could be injured or killed by operation and crossing of heavy equipment in active channels, impact

pile driving, placement of habitat structures during habitat improvement activities, during management of nonnative invasive species, during stream channel dewatering or diversion, or by exposure to toxic substances. The implementation of Alternative 2, like the Proposed Project, also has the potential for temporary direct effects on Group 3 Covered species and their suitable habitat from a possible decrease in water quality due to erosion and road runoff, turbidity, or sedimentation. Direct and indirect exposure to construction-related stressors (e.g., noise, ground vibrations, visual disturbances) could lead to behavioral modifications and negative physiological stressors, potentially resulting in lowered reproductive performance and increased susceptibility to diseases and predation and mortality of individual Group 3 Covered species, as well as deterring fish from utilizing the area. The incorporation of relevant AMMs and the Conservation Strategy would protect open water habitat and enhance the majority of Group 3 Covered Species habitat (all species except Santa Ana sucker). However, even though the mitigation would benefit aquatic habitat compared to existing conditions for the Group 3 Covered Species, Santa Ana sucker, through quality enhancements, increased amount and distribution of suitable habitat throughout the watershed, and long-term management of the habitat, reduction in flow and coarse sediment transport could be considered a contribution to increased stress on this species. Consequently, impacts on the Group 3 Covered Species, Santa Ana sucker, in the mainstem of the Santa Ana River resulting from the implementation of Alternative 2 are conservatively determined to be significant and unavoidable.

Similar to the Proposed Project, construction and operation of Phase 1 Covered Activities would have permanent and temporary direct and indirect impacts on riparian habitats. Implemented activities under Alternative 2 would permanently remove and temporarily disturb native vegetation within riparian woodland. Temporary indirect impacts would occur on native habitat (e.g., introduction of nonnative invasive species, dust, increased fire risk, chemical spills, sedimentation, altered hydrology, erosion and road runoff), potentially degrading habitat and leading to alteration of plant community structure and suitability to support special-status plant and wildlife species. In the absence of relevant AMMs and Conservation Actions, this would constitute a significant impact on sensitive natural communities. However, implementation of relevant AMMs from the Upper SAR HCP's Conservation Strategy would ensure impacts on riparian woodland from Phase 1 Covered Activities would be less than significant.

For aquatic resources (i.e., wetlands and other waters), as with the Proposed Project, the implementation of Alternative 2 would result in the permanent loss and temporary removal and/or disturbance of wetlands and other waters, alterations in local ground and surface waters, and introduction of pollutants. Implementation of Phase 1 Covered Activities could also adversely affect the functions and values of wetlands and waters. The permanent loss and/or disturbance of aquatic habitats that could contain or be considered protected wetlands and other waters would constitute a potentially significant impact. However, regulatory permitting requirements for protected wetlands and waters require no net loss of wetland/waters functions and values. Additionally, relevant AMMs, and general BMPs will be implemented for each Covered Activity, and a Stormwater Pollution Prevention Plan (SWPPP) and erosion control plan will be developed for each Covered Activity. In addition, the Phase 1 Conservation Actions would protect and enhance wetlands. Consequently, impacts from Alternative 2 on wetlands and waters would be less than significant.

Similar to the Proposed Project, Alternative 2 would have limited impacts on wildlife movement and corridors. The preservation of approximately 910 acres and associated habitat improvement of these acres during Phase 1 would be a beneficial effect on wildlife movement.

Some of the proposed Phase 1 Covered Activities that would occur under Alternative 2 occur within conservation lands under other HCPs that occur within the Planning Area, including the Wash Plan HCP, Lake Mathews MSHCP, SKR HCP, WRC MSHCP, and West Valley HCP. As such, Covered Activities have the potential to conflict with the provisions outlined in these HCPs, including the loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in each affected HCP. Any conflict with the provisions outlined in these HCPs, including the permanent loss and/or temporary disturbance of conservation lands, would constitute a potentially significant impact. Implementation of AMMs under the Conservation Strategy as well as Mitigation Measures BIO-6 and BIO-7 would reduce the impacts to less-than-significant levels with mitigation.

## **Cultural Resources**

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP may not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. However, those actions that will occur in locations similar to the Proposed Project. For this reason, Mitigation Measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, and CUL-6 would be required for this alternative to ensure impacts related to cultural resources would be less than significant.

## **Geology, Soils, and Seismicity and Paleontological Resources**

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. A lower level of habitat improvement activities could reduce potential impacts on paleontological resources compared to the Proposed Project, although Mitigation Measure GEO-1 would be required for this alternative to ensure impacts related to paleontological resources would be less than significant.

## **Greenhouse Gas Emissions and Energy**

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. GHG emissions could be generated for habitat improvement, maintenance, and management activities that would result with implementation of Alternative 2, although to a lesser degree as less conservation would be required and less construction would be anticipated. Impacts under Alternative 2, as for the Proposed Project, would be less than significant. Similarly, Alternative 2, like the Proposed Project, is not expected to result in wasteful, inefficient, or unnecessary consumption of energy in compliance with local general plan policies and plans.

## **Hazards and Hazardous Materials**

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 Covered Activities Only

implementation. Similar to the Proposed Project, hazardous materials could be generated for any habitat improvement, maintenance, and management activity that could result with implementation of Alternative 2, although to a lesser degree. Alternative 2 is not expected to result in the release of a substantial amount of hazardous materials and wastes with the implementation of Mitigation Measures HAZ-1 and HAZ-2, which ensures listed sites with historical contamination would be screened and potential contamination discovered on site during construction or maintenance activities would be properly and safely managed to prevent the exposure of contamination. Also, Alternative 2 is not expected to result in conflicts with existing emergency response plans and air safety hazards, similar to the Proposed Project.

Without full implementation of the Conservation Strategy established by the Upper SAR HCP for future phases, there is the potential that wildfire prevention activities planned as a part of the HCP, specifically installation of additional water sources, fuel modification or prevention monitoring, would not occur at the same level as with the Proposed Project. With less conservation and protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, Alternative 2 could result in potentially more incidents of wildfire than under the Proposed Project.

## Hydrology and Water Resources

Under Alternative 2, Phase 1 Covered Activities Only Alternative, only Phase 1 Covered Activities would be implemented, thus reducing the number of projects constructed and O&M activities conducted through the HCP permitting process. As with the Proposed Project, Alternative 2 Covered Activities would be developed in the Planning Area, and fewer impacts on hydrology and water quality would occur. However, fewer water resource projects would be implemented that would have an overall benefit on the watershed and water quality under this alternative. It is also possible that fewer recharge basin, wells, and other water infrastructure project activities would occur under Alternative 2 than would occur under the Proposed Project, and less water is likely to be captured and recharged into the basins to increase local groundwater supplies.

In addition, fewer habitat improvement activities that benefit the health of the watershed and result in incidental groundwater recharge activities are also likely to occur, resulting in a decrease of recharge to the groundwater basin in the Proposed Project. Alternative 2 would result in a limited positive effect of reducing erosion in tributaries and would not provide additional flood protection capacity in some locations currently subject to flooding. Other future projects within the Planning Area could result in a net increase in impervious surfaces, resulting in increased rates or amounts of surface water runoff. Consequently, erosion or localized flooding may increase, runoff could exceed the capacity of existing or planned stormwater drainage systems, or flood flows may be impeded or redirected. Furthermore, it is possible that fewer water resource projects would be implemented that would have an overall benefit on the groundwater and could result in conflicts with a sustainable groundwater management plan in the future under this alternative.

Some portions of the Planning Area, specifically along and adjacent to the Santa Ana River and other rivers, streams, and waterways, are within the FEMA 100-year floodplain, are subject to flooding and present a possible flood risk. However, the majority of the Permit Area is outside of the FEMA 100-year floodplain and not within a special flood hazard area. Seiches occur in an enclosed or partially enclosed body of water, such as a lake or reservoir, and are caused by wind, earthquakes, or changes in atmospheric pressure. However, there is no record of seiches occurring in the Planning Area. Furthermore, due to the geographic location approximately 20 miles northeast of the Pacific Ocean, there is a low risk of flooding associated with tsunamis in the Planning Area.

Inundation in a flood hazard zone and associated risk of release of pollutants in the Planning Area varies over the geography. As a result of Alternative 2, it is possible that fewer activities could result in lessened impact of release of pollutants in the event of inundation. However, the majority of Covered Activities are not considered industrial projects that would result in a substantial risk of release of pollutants due to inundation. However, future projects by other local jurisdictions, particularly industrial type projects, could result in the risk of release of pollutants due to inundation.

While other local jurisdiction future projects within the Planning Area could result in the degradation of water quality or violations of water quality standards, Covered Activities would be required to comply with CEQA and Federal and State requirements as well as local stormwater management, stormwater runoff, and flood control policies on an individual basis to avoid or minimize impacts on water quality to the extent feasible.

## Land Use

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including fewer benefits to existing open space areas, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and restored without the implementation of Phases 2 through 4 Covered Activities, as fewer agreements and easements would be placed on land within the Permit Area for future mitigation. Similar to the Proposed Project, the sites would remain as undeveloped, natural, open spaces with only minimal other development that would support the habitat improvement, mitigation, and recreation functions similar to the Proposed Project. Also similar to the Proposed Project, no new urban development is proposed and no physical separation of a community or any conflict with any local land use plans or policies is anticipated with implementation of Alternative 2.

## Minerals

Under Alternative 2, some conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP as mitigation requirements would be less for Phase 1 only Covered Activities implementation. With less conservation, there would also be fewer construction and operational activities, thus reducing the potential for disturbance to any mineral resources to be encountered during construction in comparison to the Proposed Project. Similar to the Proposed Project, Alternative 2 is not expected to result in acquisition of land that could create a conflicting land use with mining operations on other lands due to any conservation that could occur. Under Alternative 2, any conservation sites would remain as undeveloped, natural, open spaces with only minimal other development and would not be expected to result in the loss of available or designated locally important mining recovery sites.

## Noise

Under Alternative 2, Phase 1 Covered Activities Only Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Similar to the Proposed Project, noise would be generated when construction equipment is needed for habitat improvement, maintenance, and management that would result with the implementation of Alternative 2 Phase I Covered Activities. Temporary noise levels generated by Alternative 2 could affect sensitive land uses in the Permit Area, although in fewer locations than under the Proposed Project. Implementation of Alternative 2 is not expected to result in noise exceeding ambient noise levels and would be in compliance with applicable local noise standards with the implementation of Mitigation Measure NOI-1 to reduce noise from heavy and/or construction equipment. Additionally, Alternative 2 is not expected to result in damage-related vibration impacts or exposure of people living or working in or near the Permit Area to excessive airport-related noise, similar to the Proposed Project.

## Population and Housing

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation, less open space would likely be conserved, and the HCP Preserve System would be smaller with Alternative 2. Similar to the Proposed Project, Alternative 2 would not include any projects such as residential development or roadways that would directly increase population growth by providing new housing and access. For these reasons, Alternative 2 would not induce substantial unplanned population growth either directly or indirectly or displace a substantial number of existing people or housing.

## Public Services

Under Alternative 2, Phase 1 Covered Activities Only Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less demand for public services during construction of some Conservation Areas and operation of the HCP Preserve System. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 2. Similar to the Proposed Project, Alternative 2 would not result in any development such as residential or commercial uses requiring the physical construction of new public facilities that would result in impacts on the environment.

## Recreation

Under Alternative 2, Phase 1 Covered Activities Only Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including fewer benefits to existing recreational resources already in use, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 2. Similar to the Proposed Project, Alternative 2 is not expected to create additional increases in the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Also, adverse impacts on the environment associated with recreation facility expansion are not anticipated to occur with this alternative.

## Transportation

Under Alternative 2, Phase 1 Covered Activities Only Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy. Additionally, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 2. Similar to the Proposed Project, Alternative 2 is not expected to generate substantial additional VMT or significantly affect the traffic levels of the surrounding areas or cause congestion, although some construction and operation vehicle trips would still occur. Alternative 2 would result in less VMT during construction and operation phases compared to the Proposed Project.

## Tribal Cultural Resources

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. For these reasons, impacts on tribal cultural resources would be reduced under Alternative 2. However, ground-disturbing activities associated with Alternative 2 would still substantially affect tribal cultural resources, as assessed for the Proposed Project.

## Utilities and Service Systems

Under Alternative 2, Phase 1 Covered Activities Only Alternative, some conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less demand for utilities or service systems during construction of some Conservation Areas. Similar to the Proposed Project, Alternative 2 would not result in any

development such as residential or commercial uses that would require relocation of utility facilities or create new demand for utilities or service systems.

## Wildfire

Under Alternative 2, Phase 1 Covered Activities Only Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP may not occur, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for Phase 1 only Covered Activities implementation. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, like fuel modification. The HCP Preserve System would likely be smaller with Alternative 2. Similar to the Proposed Project, Alternative 2 would not result in conflicts with existing emergency response plans in compliance with applicable regulations, policies, and guidelines or exacerbate wildfire risks. Impacts under Alternative 2 would be less than significant and less than those of the Proposed Project, as fewer construction and operational activities are located in high fire hazard areas that could expose people or structures to significant risks, although this alternative would result in fewer benefits related to fewer wildfire prevention activities.

### 6.5.5 Alternative 3: Reduced Impacts on Santa Ana Sucker Alternative

#### Aesthetics

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP would not occur as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including fewer benefits to existing open space areas, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 3. Without the Upper SAR HCP, some benefits would not occur, like restoring/enhancing degrading riparian habitat and improving site conditions as compared to the existing setting in the removal of trash and nonnative invasive species. Because the Proposed Project would not result in any significant impacts related to Aesthetics, Alternative 3 may result in a greater impact than that of the Proposed Project.

#### Agriculture/Forestry Resources

As described in Section 3.2, *Agriculture and Forestry Resources*, the Proposed Project would affect less than an acre of Important Farmland. Within the HCP Preserve System, the majority of designated farmland is considered Grazing Land. Alternative 3 may result in less conservation, but, like the Proposed Project, the No Project Alternative would not have significant effects on Important Farmlands.



As described in Section 3.2, *Agriculture and Forestry Resources*, implementation of the Proposed Project could result in the conservation of forest land and no conversion of forest land to non-forest use would occur. Alternative 3 may result in less conservation, but, like the Proposed Project, the No Project Alternative would not have significant effects on forestry resources but would not have the conservation benefits of the Proposed Project.

## Air Quality

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Similar to the Proposed Project, air quality emissions could be generated for habitat improvement, maintenance, and management activities that would result with implementation of Alternative 3, although to a lesser degree as less conservation and less construction of conservation sites would be anticipated. Construction and management and maintenance activities that could be implemented under Alternative 3 could result in air quality emissions exceeding adopted thresholds, requiring implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3 required for the Proposed Project.

## Biological Resources

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, many of the same Covered Activities as the Proposed Project could still be developed; however, Covered Activities including water reuse and recycling projects that are most impactful to Santa Ana sucker would not be implemented. Although fewer Covered Activities would be developed in the Permit Area, impacts on biological resources would remain similar to the Proposed Project, with the exception of Santa Ana sucker.

Impacts on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species would be similar under Alternative 3 to those of the Proposed Project. The protection and habitat improvement activities implemented under the Conservation Strategy would ensure that impacts from Covered Activities under Alternative 3 would be compensated for, and preserved and restored/rehabilitated habitat would be managed in perpetuity similar to the Proposed Project. Therefore Alternative 3 effects on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species would be less than significant.

Because there are no water recycling projects proposed under Alternative 3, impacts on Group 3 Covered species (including the listed Santa Ana sucker) would be less than those of the Proposed Project. The implementation of Alternative 3 would result in less baseflow reduction and reduced impacts on the mainstem Santa Ana River compared to the Proposed Project. Consequently, because Alternative 3 would result in fewer projects there would be less impacts on the mainstem river and Santa Ana sucker. However, with fewer impacts, less mitigation would be required for Santa Ana sucker, and the recovery goals proposed for implementation under the HCP for this species would not be implemented, including the Santa Ana Sucker Translocation Project (Covered Activity: Santa Ana Sucker Translocation [Conserv.21]). As a result, issuance of an ITP for SCE to cover O&M impacts of hydroelectric diversion structures on translocated Santa Ana suckers would not be needed. Because implementation of Alternative 3 would result in less baseflow reduction with reduced impacts on the mainstem river, and project-specific AMMs and general BMPs, as well as non-translocation Conservation Actions and conditions from the HCP, would be implemented to

ensure that impacts from Covered Activities under Alternative 3 would be compensated for, effects on Group 3 Covered species, including Santa Ana sucker, would be less than significant.

The implementation of Alternative 3 would result in the loss and temporary removal of riparian habitat, although loss of riparian habitat would likely be less than under the Proposed Project because water recycling projects would not be covered. Impacts associated with implementation of the Conservation Strategy, similar to those under the Proposed Project, would likely also occur. However, the net effect of Alternative 3 would be an overall beneficial effect on riparian habitats because of the establishment of the HCP Preserve System. Together, the preservation and habitat improvement activities within riparian woodlands and implementation of Conservation Strategy AMMs would reduce these impacts to less-than-significant levels.

For aquatic resources (i.e., wetlands and other waters), as with the Proposed Project, the implementation of Alternative 3 would result in the permanent loss and temporary removal and/or disturbance of wetlands and other waters, although impacts would likely be less than those of the Proposed Project because water recycling projects would not be implemented. Alternative 3 could also result in alterations in local ground and surface waters and introduction of pollutants to aquatic resources. Implementation of Covered Activities under Alternative 3 could also adversely affect the functions and values of wetlands and waters. The permanent loss and/or disturbance of aquatic habitats that could contain or be considered protected wetlands and other waters would constitute a potentially significant impact. However, regulatory permitting requirements for protected wetlands and waters require no net loss of wetland/waters functions and values. Additionally, relevant AMMs, and general BMPs will be implemented for each Covered Activity, and a SWPPP and erosion control plan will be developed for each Covered Activity. In addition, the Phase 1 Conservation Actions would protect and enhance wetlands. In addition, the Conservation Actions under Alternative 3 would protect and enhance aquatic habitats. Consequently, impacts from Alternative 3 on wetlands and other waters would be less than significant.

Implementation of Covered Activities under Alternative 3 would occur within conservation lands under other HCPs within the Plan Area, including the Wash Plan HCP, Lake Mathews MSHCP, SKR HCP, WRC MSHCP, and West Valley HCP. As such, Covered Activities have the potential to conflict with the provisions outlined in these HCPs, including the loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in each affected HCP. Any conflict with the provisions outlined in these HCPs, including the permanent loss and/or temporary disturbance of conservation lands, would constitute a potentially significant impact. Implementation of AMMs under the Conservation Strategy as well as Mitigation Measures BIO-6 and BIO-7 would reduce the impacts to less-than-significant levels with mitigation.

## Cultural Resources

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. However, those actions that will occur in locations similar to the Proposed Project. For this reason, Mitigation Measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, and CUL-6 would be required for this alternative to ensure that impacts related to cultural resources would be less than significant.

## Geology, Soils, and Seismicity and Paleontological Resources

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. A lower level of habitat improvement activities could reduce potential impacts on paleontological resources compared to the Proposed Project, although Mitigation Measure GEO-1 would be required for this alternative to ensure that impacts related to paleontological resources would be less than significant.

## Greenhouse Gas Emissions and Energy

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. GHG emissions could be generated for habitat improvement, maintenance, and management activities that would result with implementation of Alternative 3, although to a lesser degree as less conservation would be required and less construction would be anticipated. Impacts under Alternative 3, as for the Proposed Project, would be less than significant. Similarly, Alternative 3, like the Proposed Project, is not expected to result in wasteful, inefficient, or unnecessary consumption of energy in compliance with local general plan policies and plans.

## Hazards and Hazardous Materials

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for the Reduced Impacts on Santa Ana Sucker Alternative implementation. Similar to the Proposed Project, hazardous materials could be generated for any habitat improvement, maintenance, and management activity that could result with implementation of Alternative 3, although to a lesser degree. Alternative 3 is not expected to result in the release of a substantial amount of hazardous materials and wastes with implementation of Mitigation Measures HAZ-1 and HAZ-2 to ensure listed sites with historical contamination would be screened, and potential contamination discovered on site during construction or maintenance activities would be properly and safely managed to prevent the exposure of contamination. Also, Alternative 3 is not expected to result in conflicts with existing emergency response plans and air safety hazards, similar to the Proposed Project.

Without full implementation of the Conservation Strategy established by the Upper SAR HCP for future phases, there is the potential that wildfire prevention activities planned as a part of the HCP, specifically installation of additional water sources, fuel modification, or prevention monitoring, would not occur at the same level as with the Proposed Project. With less conservation and protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, Alternative 3 could result in potentially more incidents of wildfire than under the Proposed Project.

## Hydrology and Water Resources

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, many of the same Covered Activities as the Proposed Project would be implemented; however, Covered Activities like water reuse projects would not have permit coverage under the HCP, thus reducing the number of projects constructed and habitat improvement and O&M activities conducted. As with the Proposed Project, Alternative 3 would be developed in the Planning Area, and fewer impacts on hydrology and water quality would occur. However, fewer water resource projects would be implemented that would have an overall benefit on the watershed and water quality under this alternative. It is also possible that fewer water reuse projects and other water recycling infrastructure project activities would occur under Alternative 3 than would occur under the Proposed Project. As such, less water is likely to be captured and recharged into the basins to increase local groundwater supplies.

In addition, fewer habitat improvement activities that benefit the health of the watershed may occur with fewer impacts on the Santa Ana sucker and fewer incidental groundwater recharge activities are also likely to occur, resulting a decrease of recharge to the groundwater basin in the Proposed Project. Alternative 3 would result in a limited positive effect of reducing erosion in tributaries and would not provide additional flood protection capacity in some locations currently subject to flooding. Other future projects within the Planning Area could result in a net increase in impervious surfaces, resulting in increased rates or amounts of surface water runoff. Consequently, erosion or localized flooding may increase, runoff could exceed the capacity of existing or planned stormwater drainage systems, or flood flows may be impeded or redirected. Furthermore, it is possible that fewer water resource projects would be implemented that would have an overall benefit on the groundwater and could result in conflicts with a sustainable groundwater management plan in the future under this alternative.

Some portions of the Planning Area, specifically along and adjacent to the Santa Ana River and other rivers, streams, and waterways, are within the FEMA 100-year floodplain, are subject to flooding, and present a possible flood risk. However, the majority of the Permit Area is outside of the FEMA 100-year floodplain and not within a special flood hazard area. Seiches occur in an enclosed or partially enclosed body of water, such as a lake or reservoir, and are caused by wind, earthquakes, or changes in atmospheric pressure. The Planning Area is located in one of the most seismically active areas of the United States. However, there is no record of seiches occurring in the Planning Area. Furthermore, due to the geographic location approximately 20 miles northeast of the Pacific Ocean, there is a low risk of flooding associated with tsunamis in the Planning Area.

Inundation in a flood hazard zone and associated risk of release of pollutants in the Planning Area varies over the geography. As a result of Alternative 3, it is possible that fewer activities could result in lessened impact of release of pollutants in the event of inundation. However, the majority of Covered Activities are not considered industrial projects that would result in a substantial risk of release of pollutants due to inundation. However, future projects by other local jurisdictions, particularly industrial type projects, could result in the risk of release of pollutants due to inundation.

While other local jurisdiction future projects within the Planning Area could result in the degradation of water quality or violations of water quality standards, Covered Activities would be required to comply with CEQA and Federal and State requirements as well as local stormwater management, stormwater runoff, and flood control policies on an individual basis to avoid or minimize impacts on water quality to the extent feasible.

## Land Use

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Under Alternative 3, less open space would be conserved and restored and less mitigation would be required without implementation of water reuse projects with fewer agreements and easements placed on land within the Permit Area for future mitigation. Similar to the Proposed Project, the sites would remain as undeveloped, natural, open spaces with only minimal other development that would support the habitat improvement, mitigation, and recreation functions similar to the Proposed Project. Also similar to the Proposed Project, no new urban development is proposed and no physical separation of a community or any conflict with any local land use plans or policies is anticipated with implementation of Alternative 3.

## Minerals

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. With less conservation, there would also be fewer construction and operational activities, thus reducing the potential for disturbance to any mineral resources to be encountered during construction in comparison to the Proposed Project. Similar to the Proposed Project, Alternative 3 is not expected to result in acquisition of land that could create a conflicting land use with mining operations on other lands due to any conservation that could occur. Also, any conservation sites under Alternative 3 would remain as undeveloped, natural, open spaces with only minimal other development, and loss of availability of a locally important mining recovery site, as designated by a local land use plan, is not expected to occur.

## Noise

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Similar to the Proposed Project, noise would be generated when construction equipment is needed for habitat improvement, maintenance, and management that could result with implementation of Alternative 3, and temporary noise levels to be generated could affect sensitive land uses in the Permit Area, although in slightly fewer locations. Alternative 3 is not expected to exceed ambient noise levels in compliance with applicable local noise standards and with implementation of Mitigation Measure NOI-1 to reduce noise from heavy and/or construction equipment. Also, Alternative 3 is not expected to result in damage-related vibration impacts or exposure of people living or working in or near the Permit Area to excessive airport-related noise, similar to the Proposed Project.

## Population and Housing

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, and less open space would likely be conserved, and the HCP Preserve System would be smaller with Alternative 3. Similar to the Proposed Project, Alternative 3 would not include any projects such as residential development or roadways that would directly increase population growth by providing new housing and access. For these reasons, Alternative 3 would not induce substantial unplanned population growth, either directly or indirectly, or displace a substantial number of existing people or housing.

## Public Services

Under Alternative, 3 Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less demand for public services during construction of some Conservation Areas and operation of the HCP Preserve System. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 3. Similar to the Proposed Project, Alternative 3 would not result in any development such as residential or commercial uses that would require the physical construction of new public facilities that would result in impacts on the environment.

## Recreation

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur (although less impacts on Santa Ana sucker would occur) with a less robust Conservation Strategy, including fewer benefits to existing recreational resources already in use, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 3. Similar to the Proposed Project, Alternative 3 is not expected to create additional increases in the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Also, it is not anticipated that adverse impacts on the environment associated with recreation facility expansion would occur with this alternative.

## Transportation

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including a lower level of VMT during construction of some Conservation Areas and operation of the HCP Preserve System. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 3. Similar to the Proposed Project, Alternative 3 is not expected to generate additional VMT or significantly affect the traffic levels of the surrounding areas or cause congestion, although some construction and operations vehicle trips would still occur. Alternative 3 would result in less VMT during construction and operation phases compared to the Proposed Project.

## Tribal Cultural Resources

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. For these reasons, impacts on tribal cultural resources would be reduced under Alternative 3. However, ground-disturbing activities associated with Alternative 3 would still substantially affect tribal cultural resources, as assessed for the Proposed Project.

## Utilities and Service Systems

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less demand for utilities or service systems during construction of some Conservation Areas. Similar to the Proposed Project, Alternative 3 would not result in any development such as residential or commercial uses that would require relocation of utility facilities or create new demand for utilities or service systems.

## Wildfire

Under Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the Santa Ana sucker, such as water reuse projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, like fuel modification. The HCP Preserve System would likely be

smaller with Alternative 3. Similar to the Proposed Project, Alternative 3 would not result in conflicts with existing emergency response plans in compliance with applicable regulations, policies, and guidelines or exacerbate wildfire risks. Impacts under Alternative 3 would be less than significant and less than those of the Proposed Project, as fewer construction and operational activities are located in high fire hazard areas that could expose people or structures to significant risks, although this alternative would result in fewer benefits related to fewer wildfire prevention activities.

## 6.5.6 Alternative 4: Reduced Impacts on San Bernardino Kangaroo Rat Alternative

### Aesthetics

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, conservation actions as part of the HCP Preserve System to implement the Conservation Strategy for the Upper SAR HCP would not occur, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including fewer benefits to existing open space areas, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 4. Without the Upper SAR HCP, some benefits would not occur, like restoring degrading alluvial fan sage scrub habitat and improving site conditions as compared to the existing setting in the removal of trash and nonnative invasive species. Because the Proposed Project would not result in any significant impacts related to Aesthetics, Alternative 4 may result in a greater impact than under the Proposed Project.

### Agriculture/Forestry Resources

As described in Section 3.2, *Agriculture and Forestry Resources*, the Proposed Project would affect less than an acre of Important Farmland. Within the HCP Preserve System, the majority of designated farmland is considered Grazing Land. Alternative 4 may result in less conservation, but, like the Proposed Project, the No Project Alternative would not have significant effects on Important Farmlands.

As described in Section 3.2, *Agriculture and Forestry Resources*, implementation of the Proposed Project could result in the conservation of forest land, and no conversion of forest land to non-forest use would occur. Alternative 4 may result in less conservation, but, like the Proposed Project, the No Project Alternative would not have significant effects on forestry resources but would not have the conservation benefits of the Proposed Project.

### Air Quality

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Similar to the Proposed Project, air quality emissions could be generated for habitat improvement, maintenance, and management activities that would result with implementation of Alternative 3, although to a lesser degree as less conservation and less construction of conservation sites would be anticipated. Construction and



management and maintenance activities that could be implemented under Alternative 4 could result in air quality emissions exceeding adopted thresholds, requiring implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3 required for the Proposed Project.

## Biological Resources

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, many of the same Covered Activities as the Proposed Project could still be developed; however, Covered Activities including stormflow diversion projects and many routine O&M activities would not have permit coverage under the HCP. Although fewer Covered Activities could be developed in the Permit Area, impacts on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species would remain similar to the Proposed Project, with the exception of SBKR. The protection and habitat improvement activities implemented under the Conservation Strategy would ensure that impacts from Covered Activities under Alternative 3 would be compensated for, and preserved and restored/rehabilitated habitat would be managed in perpetuity, similar to the Proposed Project. Therefore Alternative 4 effects on Group 1 Covered species, Group 2 Covered species, and non-covered special-status species would be less than significant.

Because there would be no stormwater diversion projects and implementation of routine O&M activities would be reduced under Alternative 4, impacts on SBKR would be less than those of the Proposed Project. Alternative 4 would not include projects that divert stream or channel flow, activities that would operate and maintain existing and new diversion structures, nor activities related to construction of new recharge basins and associated diversions. The majority of the stormwater diversion projects are located within alluvial fan habitats; as such, there would be fewer impacts on SBKR and, therefore, less mitigation would be required. Consequently, the recovery goals under the HCP for SBKR would not be implemented. Because implementation of Alternative 4 would result in fewer impacts on SBKR and its modeled suitable habitat, and project-specific AMMs and general BMPs would be implemented, impacts from Covered Activities under Alternative 4 would be compensated for, and effects on SBKR would be less than significant. However, implementation of Alternative 4 would also result in less Conservation Actions for the SBKR. Although Alternative 4 would involve fewer Covered Activities within suitable alluvial fan habitats for SBKR, further threats to this species would still persist and this alternative would offer a reduced conservation benefit for the species. Conservation actions for SBKR under the HCP include permanently conserving and managing suitable habitat for the species within the HCP Preserve System in a configuration that provides long-term conservation benefits; and expanding the distribution of the species by increasing habitat quality within the HCP Preserve System and increasing connectivity between areas of occupied or highly suitable habitat. With the loss of these Conservation Actions, the overall improvements to SBKR from the HCP Conservation Strategy would not occur, resulting in reduced benefits to region-wide conservation of the species.

Implementation of Alternative 4 would have the same effects on Group 3 Covered Species (including the listed Santa Ana sucker) as with the Proposed Project. The incorporation of relevant AMMs and the Conservation Strategy would protect aquatic habitat and enhance Group 3 Covered species habitat. However, even though the mitigation would benefit aquatic habitat compared to existing conditions for Group 3 Covered species through quality enhancements, increased amount and distribution of suitable habitat throughout the watershed, and long-term management of the habitat, reduction in flow and coarse sediment transport could be considered a contribution to increased stress on those species. Therefore, impacts on Group 3 Covered species (including the listed Santa

Ana sucker) in the mainstem of the Santa Ana River, resulting from the implementation of Alternative 2, are conservatively determined to be significant and unavoidable.

Similar to the Proposed Project, implementation of Covered Activities under Alternative 4 would have permanent and temporary direct and indirect impacts on riparian habitat. Implemented activities under Alternative 2 would permanently remove and temporarily disturb native vegetation within riparian woodland. Temporary indirect impacts would occur on native habitat (e.g., introduction of nonnative invasive species, dust, increased fire risk, chemical spills, sedimentation, altered hydrology, erosion and road runoff), potentially degrading habitat and leading to alteration of plant community structure and suitability to support special-status plant and wildlife species. In the absence of relevant AMMs and Conservation Actions, this would constitute a significant impact on sensitive natural communities. However, implementation of relevant AMMs from the Upper SAR HCP Conservation Strategy would ensure that impacts on riparian woodland from Alternative 4 would be less than significant.

For aquatic resources (i.e., wetlands and other waters), as with the Proposed Project, the implementation of Alternative 4 would result in the permanent loss and temporary removal and/or disturbance of wetlands and other waters, although impacts would likely be less than those of the Proposed Project because stormflow diversion projects would not be covered. Alternative 4 could also result in alterations in local ground and surface waters and introduction of pollutants to aquatic resources. Implementation of Covered Activities under Alternative 4 could also adversely affect the functions and values of wetlands and waters. The permanent loss and/or disturbance of aquatic habitats that could contain or be considered protected wetlands and other waters would constitute a potentially significant impact. However, regulatory permitting requirements for protected wetlands and waters requires no net loss of wetland/waters functions and values and project-specific avoidance, and minimization measures, general BMPs, and a SWPPP and erosion control plan would be implemented for each project. In addition, the Conservation Actions under Alternative 4 would protect and enhance aquatic habitats. Consequently, impacts from Alternative 4 on wetlands and other waters would be less than significant.

The Planning Area overlaps with five other HCPs (Wash Plan HCP, Lake Mathews MSHCP, SKR HCP, WRC MSHCP, and West Valley HCP), and some of the proposed Covered Activities under Alternative 4 occur within lands under these other plans. As such, Covered Activities have the potential to conflict with the provisions outlined in these HCPs, including the loss of lands that are needed to fulfill the biological goals and Conservation Strategy described in each affected HCP. Any conflict with the provisions outlined in these HCPs, including the permanent loss and/or temporary disturbance of conservation lands, would constitute a potentially significant impact. Implementation of AMMs under the Conservation Strategy as well as Mitigation Measures BIO-6 and BIO-7 would reduce the impacts to less-than-significant levels with mitigation.

## Cultural Resources

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. However, those actions that will occur in locations similar to the Proposed Project. For this reason, Mitigation Measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, and CUL-6 would

be required for this alternative to ensure that impacts related to cultural resources would be less than significant.

## **Geology, Soils, and Seismicity and Paleontological Resources**

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. A lower level of habitat improvement activities could reduce potential impacts on paleontological resources compared to the Proposed Project, although Mitigation Measure GEO-1 would be required for this alternative to ensure that impacts related to paleontological resources would be less than significant.

## **Greenhouse Gas Emissions and Energy**

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. GHG emissions could be generated for habitat improvement, maintenance, and management activities that would result with implementation of Alternative 4, although to a lesser degree as less conservation would be required and less construction would be anticipated. Impacts under Alternative 4, as for the Proposed Project, would be less than significant. Similarly, Alternative 4, like the Proposed Project, is not expected to result in wasteful, inefficient, or unnecessary consumption of energy in compliance with local general plan policies and plans.

## **Hazards and Hazardous Materials**

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less for the Reduced Impacts on San Bernardino Kangaroo Rat Alternative implementation. Similar to the Proposed Project, hazardous materials could be generated for any habitat improvement, maintenance, and management activity that could result with implementation of Alternative 4, although to a lesser degree. Alternative 4 is not expected to result in the release a substantial amount of hazardous materials and wastes with implementation of Mitigation Measures HAZ-1 and HAZ-2 to ensure listed sites with historical contamination would be screened, and potential contamination discovered on site during construction or maintenance activities would be properly and safely managed to prevent the exposure of contamination. Also, Alternative 4 is not expected to result in conflicts with existing emergency response plans and air safety hazards, similar to the Proposed Project.

Without full implementation of the Conservation Strategy established by the Upper SAR HCP for future phases, there is the potential that wildfire prevention activities planned as a part of the HCP, specifically installation of additional water sources, fuel modification, or prevention monitoring, would not occur at the same level as with the Proposed Project. With less conservation and protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, Alternative 4 could result in potentially more incidents of wildfire than under the Proposed Project.

## Hydrology and Water Resources

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, many of the same Covered Activities as the Proposed Project would be implemented. However, Covered Activities like stormflow diversion projects would not have permit coverage under the HCP, and thus would reduce the number of projects constructed and O&M activities conducted. As with the Proposed Project, implementation of Alternative 4 would be developed in the Planning Area, and fewer impacts on hydrology and water quality would occur. However, fewer water resource projects would be implemented that would have an overall benefit on the watershed and water quality under this alternative. It is also possible that fewer stormflow diversion projects and other water infrastructure project activities would occur under Alternative 4 than would occur under the Proposed Project. As such, less water is likely to be captured and recharged into the basins to increase local groundwater supplies.

In addition, fewer habitat improvement activities that benefit the health of the watershed and result in incidental groundwater recharge activities are also likely to occur, resulting in a decrease of recharge to the groundwater basin in the Proposed Project. Alternative 4 would result in a limited positive effect of reducing erosion in tributaries and would not provide additional flood protection capacity in some locations currently subject to flooding. Other future projects within the Planning Area could result in a net increase in impervious surfaces, resulting in increased rates or amounts of surface water runoff. Consequently, erosion or localized flooding may increase, runoff could exceed the capacity of existing or planned stormwater drainage systems, or flood flows may be impeded or redirected. Furthermore, it is possible that fewer water resource projects would be implemented that would have an overall benefit on the groundwater and could result in conflicts with a sustainable groundwater management plan in the future under this alternative.

Some portions of the Planning Area, specifically along and adjacent to the Santa Ana River and other rivers, streams, and waterways, are within the FEMA 100-year floodplain, are subject to flooding, and present a possible flood risk. However, the majority of the Permit Area is outside of the FEMA 100-year floodplain and not within a special flood hazard area. Seiches occur in an enclosed or partially enclosed body of water, such as a lake or reservoir, and are caused by wind, earthquakes, or changes in atmospheric pressure. However, there is no record of seiches occurring in the Planning Area. Furthermore, due to the geographic location approximately 20 miles northeast of the Pacific Ocean, there is a low risk of flooding associated with tsunamis in the Planning Area.

Inundation in a flood hazard zone and associated risk of release of pollutants in the Planning Area varies over the geography. As a result of Alternative 4, it is possible that fewer activities could result in lessened impact of release of pollutants in the event of inundation. However, the majority of Covered Activities are not considered industrial projects that would result in a substantial risk of release of pollutants due to inundation. However, future projects by other local jurisdictions, particularly industrial type projects, could result in the risk of release of pollutants due to inundation.

While other local jurisdiction future projects within the Planning Area could result in the degradation of water quality or violations of water quality standards, Covered Activities would be required to comply with CEQA and Federal and State requirements as well as local stormwater management, stormwater runoff, and flood control policies on an individual basis to avoid or minimize impacts on water quality to the extent feasible.

## Land Use

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Under Alternative 4, less open space would be conserved and restored and less mitigation would be required without implementation of stormflow diversion projects with fewer agreements and easements placed on land within the Permit Area for future mitigation. Similar to the Proposed Project, the sites would remain as undeveloped, natural, open spaces with only minimal other development that would support the habitat improvement, mitigation, and recreation functions similar to the Proposed Project. Also similar to the Proposed Project, no new urban development is proposed and no physical separation of a community or any conflict with any local land use plans or policies is anticipated with implementation of Alternative 4.

## Minerals

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. With less conservation, there would also be fewer construction and operational activities, thus reducing the potential for disturbance to any mineral resources to be encountered during construction in comparison to the Proposed Project. Similar to the Proposed Project, Alternative 4 is not expected to result in acquisition of land that could create a conflicting land use with mining operations on other lands due to any conservation that could occur. Also any Conservation Areas under Alternative 4 would remain as undeveloped, natural, open spaces with only minimal other development, and loss of availability of a locally important mining recovery site as designated by a local land use plan is not expected to occur.

## Noise

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Similar to the Proposed Project, noise would be generated when construction equipment is needed for habitat improvement, maintenance, and management that could result with implementation of Alternative 4, and temporary noise levels to be generated could affect sensitive land uses in the Permit Area, although in slightly fewer locations. Alternative 4 is not expected to exceed ambient noise levels in compliance with applicable local noise standards and with implementation of Mitigation Measure NOI-1 to reduce noise from heavy and/or construction equipment. Also, Alternative 4 is not expected to result in damage-related vibration impacts or exposure of people living or working in or near the Permit Area to excessive airport-related noise, similar to the Proposed Project.

## Population and Housing

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, and less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 4. Similar to the Proposed Project, Alternative 4 would not include any projects such as residential development or roadways that would directly increase population growth by providing new housing and access. For these reasons, Alternative 4 would not induce substantial unplanned population growth, either directly or indirectly, or displace a substantial number of existing people or housing.

## Public Services

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less demand for public services during construction of some Conservation Areas and operation of the HCP Preserve System. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 4. Similar to the Proposed Project, Alternative 4 would not result in any development such as residential or commercial uses that would require the physical construction of new public facilities that would result in impacts on the environment.

## Recreation

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur (although less impacts on SBKR would occur) with a less robust Conservation Strategy, including fewer benefits to existing recreational resources already in use, which are proposed to be improved with implementation of many of the habitat improvement projects. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 4. Similar to the Proposed Project, Alternative 4 is not expected to create additional increases in the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated. Also, it is not anticipated that adverse impacts on the environment associated with recreation facility expansion would occur with this alternative.

## Transportation

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including a lower level of VMT during construction of some Conservation Areas and operation of the HCP Preserve System. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 4. Similar to the Proposed Project, Alternative 4 would result in less VMT during construction and operation phases compared to the Proposed Project.

## Tribal Cultural Resources

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. For these reasons, impacts on tribal cultural resources would be reduced under Alternative 4. However, ground-disturbing activities associated with Alternative 4 would still substantially affect tribal cultural resources, as assessed for the Proposed Project.

## Utilities and Service Systems

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less demand for utilities or service systems during construction of some Conservation Areas. Also, less open space would likely be conserved and the HCP Preserve System would be smaller with Alternative 4. Similar to the Proposed Project, Alternative 4 would not result in any development such as residential or commercial uses that would require relocation of utility facilities or create new demand for utilities or service systems.

## Wildfire

Under Alternative 4, Reduced Impacts on San Bernardino Kangaroo Rat Alternative, some conservation actions within the HCP Preserve System area proposed as part of the Conservation Strategy for the Upper SAR HCP would not occur. Less conservation and fewer benefits to the Covered Species could occur without the Upper SAR HCP, as mitigation requirements would be less without implementation of Covered Activities that could affect the SBKR, such as stormflow diversion projects. Less conservation and fewer benefits to the Covered Species could occur with a less robust Conservation Strategy, including less protection of natural areas within the HCP Preserve System and fewer wildfire prevention activities, like fuel modification. The HCP Preserve System would likely be smaller with Alternative 4. Similar to the Proposed Project, Alternative 4 would not

result in conflicts with existing emergency response plans with compliance with applicable regulations, policies, and guidelines or exacerbate wildfire risks. Impacts under Alternative 4 would be less than significant and less than those of the Proposed Project, as fewer construction and operational activities are located in high fire hazard areas that could expose people or structures to significant risks, although this alternative would result in fewer benefits related to fewer wildfire prevention activities.

## 6.6 Environmentally Superior Alternative

CEQA requires an EIR to examine a range of feasible alternatives to the project. State CEQA Guidelines § 15126.6(e)(2) requires that the EIR identify which of those alternatives is the environmentally superior alternative. If the No-Project Alternative is the environmentally superior alternative, then CEQA requires an EIR to identify which of the other alternatives is the environmental superior. Based on the analysis presented in this Draft EIR, the environmentally superior alternative is Alternative 3, Reduced Impacts on Santa Ana Sucker Alternative, although not all project objectives would be met with this alternative. Because implementation of Alternative 3 would result in less baseflow reduction with reduced impacts on the mainstem river, project-specific AMMs and general BMPs, as well as non-translocation Conservation Actions and conditions from the HCP, would be implemented to ensure that impacts from Covered Activities under Alternative 3 would be compensated for, and effects on special-status fish species, including Santa Ana sucker, would be less than significant. For the Proposed Project and for all other alternatives evaluated in this analysis, impacts on the Santa Ana sucker would be significant and unavoidable. Therefore, Alternative 3 is determined to be environmentally superior, as it reduces an impact on the Santa Ana sucker for the Proposed Project from significant and unavoidable to a less-than-significant level.



## **7.1 Lead Agency**

### **7.1.1 San Bernardino Valley Municipal Water District**

Heather Dyer—Executive Director

Chris Jones—Project Manager

Joanna Gibson—Senior Project Manager

Kai Palenscar—Project Manager

## **7.2 Consultants**

### **7.2.1 ICF – Environmental Impact Report**

Sally Lyn Zeff, AICP—Project Manager

Zac Cornejo—Deputy Project Manager

Debra Einstein Leight—CEQA

Brad Stein—Lead GIS Analyst

Jen Ban—Lead Author (Aesthetics)

Meagan Flacy—Lead Author (Agriculture/Cumulative Impacts/Growth)

Laura Yoon—Lead Author (Air Quality/Greenhouse Gases)

Sandy Lin—Contributing Author (Air Quality)

Will Kohn, Jr.—Lead Author (Biology and Aquatic Resources/Wildlife)

Greg Hoisington—Author (Biology and Aquatic Resources/Wildlife)

Colleen Martin—Contributing Author (Biology and Aquatic Resources/Wildlife)

Andrew Belcourt—Lead Author (Cultural/Tribal Cultural Resources/Minerals)

Karen Crawford, M.A., RPA—Contributing Author (Cultural/Tribal Cultural Resources)

Diana Roberts—Lead Author (Geology/Wildland Fires)

Emily Seklecki—Lead Author (Hazards/Utilities)/Contributing Author (Recreation)

Katrina Sukola—Lead Author (Hydrology)

Marissa Mathia—Lead Author (Land Use/Population and Housing)

Jonathan Higginson—Lead Author (Noise)

Jakob Rzeszutko—Contributing Author (Noise)

Misbah Rashid—Lead Author (Recreation/Transportation)

Liane Chen—Contributing Author (CEQA)

Ken Cherry—Lead Editor

Kristen Lundstrom—Editor

Saadia Byram—Editor

## **7.2.2 Cox, Castle & Nicholson LLP**

Michael H. Zischke—Legal Review

Ashley F. Weinstein-Carnes—Legal Review

Clark Morrison—Legal Review

Scott Birkey—Legal Review

## 8.1 Executive Summary

Society of Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Available: [http://vertpaleo.org/Membership/Member-Ethics/SVP\\_Impact\\_Mitigation\\_Guidelines.aspx](http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx). Accessed: February 12, 2019.

## 8.2 Chapter 1, Introduction

U.S. Fish and Wildlife Service (USFWS) and U.S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). 2016. *Habitat Conservation Planning and Incidental Take Permit Processing Handbook*. Available: [https://www.fws.gov/endangered/what-we-do/hcp\\_handbook-chapters.html](https://www.fws.gov/endangered/what-we-do/hcp_handbook-chapters.html).

## 8.3 Chapter 2, Project Description

None.

## 8.4 Chapter 3, Environmental Setting, Impacts, and Mitigation Measures

### 8.4.1 Section 3.1, Aesthetics

California Department of Transportation (Caltrans). 2008. *Scenic Highway Guidelines*. October. Landscape Architecture Program, Division of Design. Sacramento, CA.

———. 2019. *List of Eligible and Officially Designated State Scenic Highways*. Available: [https://dot.ca.gov/-/media/dot-media/programs/design/documents/desig-and-eligible-aug2019\\_a11y.xlsx](https://dot.ca.gov/-/media/dot-media/programs/design/documents/desig-and-eligible-aug2019_a11y.xlsx). Accessed: August 5, 2020.

City of Jurupa Valley. 2017. *City of Jurupa Valley, California 2017 General Plan*. September. Available: <http://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF>. Accessed: August 28, 2019.

City of Riverside. 2007. *General Plan 2025*. November. Available: <https://www.riversideca.gov/planning/gp2025program/general-plan.asp>. Accessed: August 28, 2019.

- County of Riverside. 2011. *County of Riverside General Plan – Jurupa Area Plan*. October. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_plan\\_2013/2%20Area%20Plan%20Volume%201/Jurupa%20AP.pdf](https://planning.rctlma.org/Portals/0/genplan/general_plan_2013/2%20Area%20Plan%20Volume%201/Jurupa%20AP.pdf). Accessed: August 28, 2019.
- . 2015. *County of Riverside General Plan*. Amended: December 8, 2015. Riverside, CA.
- County of San Bernardino. 2007. *General Plan*. Amended April 24, 2014. Prepared by URS Corporation, Santa Ana, CA. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed August 27, 2019.
- Federal Highway Administration (FHWA). 1981. *Visual Impact Assessment for Highway Projects*. (FHWA-HI-88-054.) U.S. Department of Transportation.
- National Park Service. 2018. The National Trails System Act. Available: <https://www.nps.gov/subjects/nationaltrailssystem/index.htm>. Last updated: June 5, 2018. Accessed: February 20, 2019.
- U.S. Department of the Interior, Bureau of Land Management (BLM). 1978. *BLM Handbook H-8410-1, Visual Resource Inventory*. Available: [https://www.blm.gov/sites/blm.gov/files/program\\_recreation\\_visual%20resource%20management\\_quick%20link\\_%20BLM%20Handbook%20H-8410-1%2C%20Visual%20Resource%20Inventory.pdf](https://www.blm.gov/sites/blm.gov/files/program_recreation_visual%20resource%20management_quick%20link_%20BLM%20Handbook%20H-8410-1%2C%20Visual%20Resource%20Inventory.pdf). Accessed: August 28, 2019.

## 8.4.2 Section 3.2, Agricultural and Forestry Resources

- California Department of Conservation. 2016. *The California Land Conservation Act of 1965 2016 Status Report*. Available: [https://www.conservation.ca.gov/dlrp/wa/Documents/stats\\_reports/2016%20LCA%20Status%20Report.pdf](https://www.conservation.ca.gov/dlrp/wa/Documents/stats_reports/2016%20LCA%20Status%20Report.pdf). Accessed August 23, 2019.
- . 2017. *Farmland Mapping and Monitoring Program*. Available: <https://www.conservation.ca.gov/dlrp/fmmp>. Accessed: June 30, 2019.
- California Department of Fish and Wildlife. 2019. *Sycamore Canyon Ecological Reserve*. Available: <https://www.wildlife.ca.gov/Lands/Places-to-Visit/Sycamore-Canyon-ER>. Last revised: August 6, 2019. Accessed: August 26, 2019.
- California Protected Areas Database. 2019. CPAD. Available: <https://www.calands.org/>.
- County of Riverside. 2015. *General Plan, Multipurpose Open Space Element*. December 8. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_Plan\\_2017/elements/OCT17/Ch05\\_M\\_OSE\\_120815.pdf?ver=2017-10-11-102103-833](https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_M_OSE_120815.pdf?ver=2017-10-11-102103-833). Accessed: August 27, 2019.
- . 2019. *General Plan, Land Use Element*. April 16. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03\\_Land%20Use\\_041619.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03_Land%20Use_041619.pdf). Accessed August 27, 2019.
- County of San Bernardino. 2007. *General Plan: Land Use Element, Conservation Element, and Open Space Element*. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed August 27, 2019.
- Riverside County Agricultural Commissioner. 2017. *Riverside County Agricultural Production Report*. Available: <http://www.rivcoawm.org/Portals/0/2017%20crop%20report%20preview.pdf?ver=2018-06-26-113123-757>. Accessed: June 30, 2019.

- Riverside County Habitat Conservation Agency. 2019. *Lake Mathews / Estelle Mountain Reserve*. Available: <https://www.rchca.us/159/Reserves>. Accessed: December 18, 2020.
- Santa Ana Watershed Project Authority (SAWPA). 2018. *Forest First*. Available: <http://www.sawpa.org/task-forces/forest-first/#background>. Accessed: June 30, 2019.
- U.S. Department of Agriculture (USDA). 2019. *San Bernardino National Forest*. Available: <https://www.fs.usda.gov/sbnf/>. Accessed August 23, 2019.
- U.S. Department of the Interior, Bureau of Land Management. No date. *How We Manage*. Available: <https://www.blm.gov/about/how-we-manage>. Accessed: August 29, 2019.
- U.S. Forest Service. No date 1. *Cleveland National Forest. About the Forest*. Available: <https://www.fs.usda.gov/main/cleveland/about-forest>. Accessed: August 29, 2019.
- . No date 2. *Cleveland National Forest. Resource Management*. Available: <https://www.fs.usda.gov/detail/cleveland/landmanagement/resourcemanagement/?cid=stelprdb5207817>. Accessed: August 29, 2019.
- . No date 3. *Angeles National Forest. About the Forest*. Available: <https://www.fs.usda.gov/main/angeles/about-forest>. Accessed: August 29, 2019.
- . No date 4. *San Bernardino National Forest. About the Forest*. Available: <https://www.fs.usda.gov/main/sbnf/about-forest>. Accessed: August 29, 2019.
- . No date 5. *San Bernardino National Forest. Special Places*. Available: <https://www.fs.usda.gov/attmain/sbnf/specialplaces>. Accessed: August 29, 2019.
- University of California Natural Reserve System. 2019. *Box Springs Reserve*. Available: <https://ucnrs.org/reserves/box-springs-reserve/>. Accessed: August 27, 2019.
- Western Riverside County Regional Conservation Authority. No date. *Reserves*. Available: <https://www.wrc-rca.org/habitat-conservation/reserves/>. Accessed: August 29, 2019.

### 8.4.3 Section 3.3, Air Quality

- California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April. Available: <https://www.arb.ca.gov/ch/handbook.pdf>. Accessed: February 6, 2019.
- . 2016. *Ambient Air Quality Standards*. May. Available: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed: January 15, 2019.
- . 2019a. *What is Carbon Monoxide?* Available: <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed: February 11, 2019.
- . 2019b. *Summaries of Historical Area Designations for State Standards*. July. Available: <https://ww2.arb.ca.gov/our-work/programs/state-and-federal-area-designations/state-area-designations/summary-tables>. Accessed: June 9, 2020.
- . 2020. *Top 4 Summary*. Available: <https://arb.ca.gov/adam/topfour/topfourdisplay.php>. Accessed: June 11, 2020.

- California Department of Conservation. 2000. *General Location guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. Open File Report 2000-19. August 2000.
- County of Riverside. 2015. *County of Riverside General Plan (Air Quality Element)*. Revised December 8. Available: [https://planning.rctlma.org/Portals/0/genplan/general Plan 2017/elements/OCT17/Ch09 AQ%20Element 120815.pdf?ver=2017-10-11-102104-270](https://planning.rctlma.org/Portals/0/genplan/general%20Plan%202017/elements/OCT17/Ch09%20AQ%20Element%20120815.pdf?ver=2017-10-11-102104-270). Accessed: February 25, 2019.
- County of San Bernardino. 2014. *General Plan*. March 13, 2007. Amended April 24, 2014. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: February 25, 2019.
- . 2019. *San Bernardino Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- Mojave Desert Air Quality Management District (MDAQMD). 2016. *CEQA and Conformity Guidelines*. August. Available: <http://mdaqmd.ca.gov/home/showdocument?id=192>. Accessed: February 6, 2019.
- South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. April.
- . 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. May. Available: <https://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf?sfvrsn=4>. Accessed: February 6, 2019.
- . 2009. *Local Significance Thresholds* (Appendix C). Available: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>. Accessed: February 6, 2019.
- . 2015. *SCAQMD Air Quality Significance Thresholds*. March. Available: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed: February 2, 2019.
- U.S. Environmental Protection Agency (EPA). 2018. *Monitoring Values Report*. Updated July 31. Available: <https://www.epa.gov/outdoor-air-quality-data/monitor-values-reports>. Accessed: January 15, 2019 and June 11, 2020.
- . 2019a. *Health Effects of Ozone Pollution*. Available: <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed: February 11, 2019.
- . 2019b. *Health Effects of Ozone in the General Population*. Available: <https://www.epa.gov/ozone-pollution-and-your-patients-health/health-effects-ozone-general-population>. Accessed: February 11, 2019.
- . 2019c. *Health and Environmental Effects of Particulate Matter (PM)*. Available: <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>. Accessed: March 27, 2019.
- . 2019d. *What Are the Harmful Effects of SO<sub>2</sub>?* Available: [https://www.epa.gov/SO<sub>2</sub>-pollution/sulfur-dioxide-basics#effects](https://www.epa.gov/SO2-pollution/sulfur-dioxide-basics#effects). Accessed: February 11, 2019.

- . 2020. *Greenbook*. Updated December 31. Available: <https://www.epa.gov/green-book>. Accessed: December 14, 2020.
- U.S. Geological Survey (USGS). 2016. *California Water Science Center - Santa Ana Basin, National Water Quality Assessment Program – Study Unit Description*. Available: [https://ca.water.usgs.gov/projects/sana\\_nawqa/env\\_set.html](https://ca.water.usgs.gov/projects/sana_nawqa/env_set.html). Accessed: May 9, 2017.
- Western Regional Climate Center. 2018. *Prevailing Wind Direction (Riverside Municipal Airport)*. Available: [https://wrcc.dri.edu/Climate/comp\\_table\\_show.php?stype=wind\\_dir\\_avg](https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg). Accessed: February 6, 2019.

#### 8.4.4 Section 3.4, Biological Resources

- Beier and Loe. 1992. A Checklist for Evaluating Impacts to Wildlife Movement Corridors. *Wildlife Society Bulletin* 20:434-440.
- Bovee, K. D., B. L. Lamb, H. M. Bartholow, C. B. Stalnaker, and J. Taylor. 1998. *Stream Habitat Analysis Using the Instream Flow Incremental Methodology*. Geological Survey, Biological Resources Division, Reston, VA.
- California Department of Conservation. 2014. *Farmland Mapping and Monitoring Program*. Division of Land Resource Protection. Available: [http://www.conservation.ca.gov/dlrp/fmmp/Pages/county\\_info.aspx](http://www.conservation.ca.gov/dlrp/fmmp/Pages/county_info.aspx). Accessed: May 30, 2017.
- California Department of Fish and Wildlife (CDFW). 2019. *California Natural Diversity Database*. Sacramento, CA. Wildlife and Habitat Data Analysis Branch. Element reports for Planning Area USGS 7.5-minute quadrangle maps. Data date: February 2019.
- California Department of Water Resources (DWR). 1959. *Bulleting No. 15: Santa Ana River Investigation*. State of California. February.
- California Native Plant Society (CNPS). 2019. *Inventory of Rare and Endangered Plants (online edition, v7-11)*. Sacramento, CA: California Native Plant Society. Available: <http://www.cnps.org/inventory>. Accessed: February 2019.
- California State Board of Forestry and Fire Protection and California Department of Forestry and Fire Protection (CAL FIRE). 2018. *2018 Strategic Fire Plan for California*. Available: [https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08\\_22\\_18.pdf](https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf). Accessed: August 23, 2019.
- County of Riverside. 2015. *County of Riverside General Plan*. Planning Department, Riverside County. December 2015.
- . 2016. *Riverside County Spatial Data*. Riverside County Open Data. Online: <http://data-countyofriverside.opendata.arcgis.com/>.
- County of San Bernardino. 2007. *County of San Bernardino 2007 General Plan*. Land Use Services Division, County of San Bernardino. March 2007.
- Kratzer, C., R. H. Kent, D. K. Saleh, D. L. Knifong, P. D. Dileanis, and J. L. Orlando. 2011. *Trends in Nutrient Concentrations, Loads, and Yields in Streams in the Sacramento, San Joaquin, and Santa Ana Basins, California, 1975–2004*. U.S. Geological Survey Scientific Investigations Report 2010-5228. 112 p.



- Metropolitan Water District of Southern California and Riverside County Habitat Conservation Agency (MWD/RCHCA). 1995. *Lake Mathews Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan*. Vol. 1–3.
- Milhous, R. T. and T. J. Waddle. 2012. Physical Habitat Simulation (PHABSIM) Software for Windows (v. 1.5. 1). Fort Collins, CO: USGS Fort Collins Science Center.
- Natural Resources Conservation Service (NRCS). 2017. *STATSGO2 Database – Digital General Soil Map of the United States*. Soil Survey Staff. U.S. Department of Agriculture. Available: [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2\\_053629](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053629). Accessed: May 30, 2017.
- RBF Consulting (RBF). 2014. West Valley Habitat Conservation Plan for the Issuance of an Incidental Take Permit Under Section 10(A)(1)(B) of the Endangered Species Act for the Federally Endangered Delhi Sands Flower-loving Fly Projects within Colton, California of San Bernardino County. Prepared for the City of Colton. June 2014.
- Riverside County Habitat Conservation Agency (RCHCA). 1996. *Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California*. Volume 1. March 1996.
- San Bernardino Valley Municipal Water District (Valley District) and Western Municipal Water District. 2004. *Santa Ana River Water Right Applications for Supplemental Water Supply Draft Environmental Impact Report Appendix A: Surface Water Hydrology*. October.
- San Bernardino Valley Municipal Water District (Valley District). 2015. *Sterling Natural Resource Center Draft Environmental Impact Report*. December. Available: [http://www.sbcounty.gov/uploads/lafco/Proposals/3226/3226\\_SNRC\\_DEIR.pdf](http://www.sbcounty.gov/uploads/lafco/Proposals/3226/3226_SNRC_DEIR.pdf). Accessed: February 8, 2019.
- San Bernardino Valley Water Conservation District. 2018. *Upper Santa Ana River Wash Habitat Conservation Plan*. Public Review Draft. Redlands, CA. Prepared ICF. January. Available: <https://www.sbvxcd.org/docman-wash-plan/hcp/5218-january-2018-public-review-draft-wash-plan-hcp/file.html>. Accessed: August 28, 2019.
- Soil Science Society of America (SSSA). 2017. *Soil Types*. Available: <https://www.soils.org/discover-soils/soil-basics/soil-types>. Accessed: May 30, 2017.
- Spencer W. D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highway Association. Available: <http://www.dfg.ca.gov/habcon/connectivity/>.
- State of California. 2007. *Southern California Wetlands Inventory*. Available: [http://resources.ca.gov/wetlands/geo\\_info/so\\_cal.html](http://resources.ca.gov/wetlands/geo_info/so_cal.html). Accessed: May 30, 2017.
- University of Idaho. 2017. *The Twelve Soil Orders – Alfisols*. College of Agricultural and Life Sciences. Soil and Land Resources Division. Available: <http://www.cals.uidaho.edu/soilorders/alfisols.htm>. Accessed: May 30, 2017.
- U.S. Fish and Wildlife Service (USFWS). 2017. *National Wetlands Inventory*. Available: <https://www.fws.gov/wetlands/Data/Data-Download.html>. Accessed: May 30, 2017.



- . 2020. Carlsbad Field Office List of Proposed, Threatened, and Endangered Species, and Critical Habitats for Upper Santa Ana River Habitat Conservation Plan. 08ECAR00-2019-SLI-0403. March 30, 2020.
- U.S. Geological Survey (USGS). 1998.
- . 2007. *Preliminary Integrated Geologic Map Databases for the United States. Western States: California, Nevada, Arizona, Washington, Oregon, Idaho, and Utah*. Version 1.3. Updated December 2007. Open-File Report (2005-1305). Available: <https://pubs.usgs.gov/of/2005/1305/#CA>. Accessed: May 30, 2017).
- . 2016. *California Water Science Center - Santa Ana Basin, National Water Quality Assessment Program – Study Unit Description*. Available: [https://ca.water.usgs.gov/projects/sana\\_nawqa/env\\_set.html](https://ca.water.usgs.gov/projects/sana_nawqa/env_set.html). Accessed: May 9, 2017.
- Western Riverside County Regional Conservation Authority (WRCRCA). 2003. *Final MSHCP, Volume 1*. Approved June 2003.
- . 2018. *MSHCP Data Downloads*. Online: <http://data-wrcrca.opendata.arcgis.com/>.

## 8.4.5 Section 3.5, Cultural Resources

- Altschul, Jeffrey H., Martin R. Rose, and Michael K. Lerch. 1984. *Man and Settlement in the Upper Santa Ana River Drainage: A Cultural Resources Overview*. Statistical Research Technical Series 1. Statistical Research, Inc., Tucson, AZ.
- Anonymous (Myra L. Frank & Associates). 1994. *Historical Assessment: Atchison, Topeka & Santa Fe Railway Maintenance Yards at San Bernardino, California*. Los Angeles, CA. July 28.
- Bancroft, H. 1886. *History of California*. Volume 1. A.L. Company, San Francisco, CA.
- Bean, Lowell J. 1972. *Mukat's People: The Cahuilla Indians of Southern California*. University of California Press, Berkeley.
- . 1978. Cahuilla. In *Handbook of North American Indians, Vol. 8, California*, R. F. Heizer (ed.), pp. 575-587. Smithsonian Institution, Washington, DC.
- Bean, Lowell John, and Charles R. Smith. 1978. Serrano. In *California*, edited by Robert F. Heizer, pp. 570-574. *Handbook of North American Indians, Volume 8*, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Bean, Lowell J., and Lisa Bourgeault. 1989. The Cahuilla. In *Indians of North America*, Frank W. Porter III, general editor. Chelsea House Publishers, New York.
- Bean, Lowell J., and K. S. Saubel. 1972. *Temalpakh: Cahuilla Indian Knowledge and Use of Plants*. Malki Museum Press, Banning, CA.
- Bean, L. J., and F. C. Shipek. 1978. Luiseño. In *Handbook of North American Indians, Vol. 8, California*, R. F. Heizer (ed.), pp. 550-563. Smithsonian Institution, Washington, DC.
- Bean, Lowell J., and Charles R. Smith. 1978. Gabrielino. In *California*, edited by Robert F. Heizer, pp. 538-549. *Handbook of North American Indians, Vol. 8*, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

- Bean, Lowell J., and S. Vane. 1995. Ethnography and Ethnohistory. In *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California*. Prepared by Cultural Systems Research, Inc., Menlo Park, CA.
- Beattie, George W., and Helen P. Beattie. 1939. *Heritage of the Valley: San Bernardino's First Century*. Biobooks: Oakland.
- Benedict, Ruth Fulton. 1924. A Brief Sketch of Serrano Culture. In *American Anthropologist* 26(3):366–392.
- Boscana, Gerónimo, O.F.M. 1933. Hanna, Phil Townsend (ed.). *Chinigchinich: A Revised and Annotated Version of Alfred Robinson's Translation of Father Gerónimo Boscana's Historical Account of the Belief, Usages, Customs and Extravagancies of the Indians of this Mission of San Juan Capistrano Called the Acagchemen Tribe*. Santa Ana, CA: Fine Arts Press.
- Brown, John, and James Boyd. 1922. *History of San Bernardino and Riverside Counties*.
- Caballeria, J. 1902. *History of San Bernardino Valley, San Bernardino*. The Western Historical Association.
- City of San Bernardino. 2010. *History of San Bernardino*. Available: [http://www.ci.sanbernardino.ca.us/about/history/history\\_of\\_san\\_bernardino\\_\(short\\_version\).asp](http://www.ci.sanbernardino.ca.us/about/history/history_of_san_bernardino_(short_version).asp). Accessed: February 4, 2017.
- Cleland, Robert G. 1941. *The Cattle on a Thousand Hills: Southern California, 1850-1870*. Huntington Library, San Marino, California.
- Cook, Sherburne. 1955. *The Aboriginal Population for the San Joaquin Valley, California*. University of California Anthropological Records 16(2):31–80.
- Cottrell, Marie and Kathleen Del Chario. 1981. *Archaeological Investigations of the Tomato Springs Sites*. Manuscript on file, South Central Coastal Information Center, California State University, Fullerton.
- County of Riverside. 2010. *Riverside County History*. Available: <http://www.countyofriverside.us/visiting/aboutriverside/riversidecounty.html>. Accessed: September 20, 2011.
- . 2015. *County of Riverside Volume 1: Draft Program EIR No. 521 State Clearinghouse No. 2009041065 Part 1 of 2*. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_plan\\_2015/DEIR%20521/DEIR%20No.%20521.pdf](https://planning.rctlma.org/Portals/14/genplan/general_plan_2015/DEIR%20521/DEIR%20No.%20521.pdf).
- County of San Bernardino. 2007. County of San Bernardino 2006 General Plan Program Final Environmental Impact Report and Appendices. Available: [www.sbcounty.gov/Uploads/lus/GeneralPlan/FinalEIR2007.pdf](http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FinalEIR2007.pdf).
- Dallas, S. F. 1955. *The Hide and Tallow Trade in Alta California, 1822–1848*. Ph.D. dissertation, Indiana University.
- de Barros, Philip. 1996. *San Joaquin Hills Transportation Corridor: Results of Testing and Data Recovery at CA-ORA-1357*. Report on file, South Central Coastal Information Center, California State University, Fullerton.

- Erlandson, Jon M. 1991. Early Maritime Adaptations on the Northern Channel Islands. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by J. M. Erlandson and R. Colten. *Perspectives in California Archaeology*, Vol. 1. Institute of Archaeology, University of California, Los Angeles.
- Glassow, Michael A, L. Wilcoxon, and J. M. Erlandson. 1988. Cultural and Environmental Change during the Early Period of Santa Barbara Channel Prehistory. In *The Archaeology of Prehistoric Coastlines*, edited by G. Bailey and J. Parkington pp. 64–77. Cambridge University Press, Cambridge, England.
- Grumprecht, B. 1999. *The Los Angeles River: Its Life, Death, and Possible Rebirth*. Johns Hopkins University Press.
- Guinn, James Miller. 1915. *A History of California and an Extended History of Los Angeles and Environs*. Historic Record Company, Los Angeles, Volume 1 (of 3).
- Gunther, Jane Davies. 1984. *Riverside County Place Names*. Rubidoux Printing, Riverside, CA.
- Harrington, M. R. 1934. A Camel-Hunter's Camp in Nevada. *Master Key*, Vol. 8, No. 1, pp. 22-24.
- ICF. 2012. *Cultural Resources Inventory Report for the Proposed Circle City Substation and Mira Loma-Jefferson Subtransmission Line Project, Riverside and San Bernardino Counties, California*. February. (ICF 00647.11.) San Diego, CA. Prepared for Southern California Edison, Monrovia, CA.
- Ingersoll, L.A. 1904. *Ingersoll's Century Annals of San Bernardino County, 1769 to 1904*. No publisher. Los Angeles, CA.
- Johnson, J. R., T. W. Stafford, Jr., H. O. Ajie, and D. P. Morris. 2002. Arlington Springs Revisited. In *Proceedings of the Fifth California Islands Symposium*, edited by D. Browne, K. Mitchell, and H. Chaney, pp. 541–545. USDI Minerals Management Service and the Santa Barbara Museum of Natural History, Santa Barbara, California.
- Koerper, Henry C., and Christopher E. Drover. 1983. Chronology Building for Coastal Orange County: The Case from CA-ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.
- Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. Complexity, Demography, and Change in Late Holocene Orange County. In *Catalysts to Complexity, Late Holocene Societies of the California Coast*, edited by John M. Erlandson and Terry L. Johnes, pp. 63–81. *Perspectives in California Archaeology* Vol. 6. Costen Institute of Archaeology, University of California, Los Angeles.
- Kowta, Makoto. 1969. *The Sayles Complex, A Late Milling Stone Assemblage from the Cajon Pass and the Ecological Implications of its Scrapper Planes*. University of California Publications in Anthropology 6:35–69. Berkeley, California.
- Kroeber, Alfred. 1925. *Handbook of the Indians of California*. Bulletin 78, American Bureau of Ethnology. Reprinted in 1976. Dover Publications, Inc., NY.
- Langum, David J. 1987. *Law and Community on the Mexican California Frontier: Anglo-American Expatriates and the Clash of Legal Traditions, 1821-1846*. Norman: University of Oklahoma Press.
- Lech, Steve. 2012. *The Pioneers of Riverside County: The Spanish, Mexican, and Early American Periods*. The History Press, Charleston SC.

- March Air Reserve Base. No date. *March Air Reserve Base*. Available: <http://www.march.afrc.af.mil>. Accessed: September 20, 2011.
- Mason, Roger D., Henry C. Koerper, and Paul E. Langenwaller II. 1997. Middle Holocene Adaptations on the Newport Coast of Orange County. In *Archaeology of the California Coast during the Middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow, pp. 35–60. Institute of Archaeology, University of California, Los Angeles.
- McCawley, William. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press, Morongo Indian Reservation, Banning CA.
- Mithun, Marianne. 2004. *The Languages of Native North America*. Cambridge University Press, Cambridge, Massachusetts. Originally published 1999.
- Moratto, Michael J. 1984. *California Archaeology*. Academic Press, Orlando Fla.
- . 2004. *California Archaeology*. 2<sup>nd</sup> ed. Coyote Press, Salinas, CA.
- Oxendine, J. 1983. The Luiseno Village During the Late Prehistoric Era. Ph.D. dissertation. University of California, Riverside.
- Patterson, Tom. 1971. *A Colony for California: Riverside's First Hundred Years*. Press-Enterprise, Riverside, CA.
- Reinman, Fred M. 1964. Maritime Adaptations on San Nicolas Island, California. University of California *Archaeological Survey Annual Report 1963–1964*:47–80.
- Rick, Torben C., Jon M. Erlandson, and René Vellanoweth. 2001. Paleocoastal Marine Fishing on the Pacific Coast of the Americas: Perspectives from Daisy Cave, California. *American Antiquity* 66:595–613.
- Smith, G., L. B. Belden, and A. M. Haenszel. 1969. *San Bernardino County Registered State Historical Landmarks*.
- Smith, Francesca, Caprice (Kip) Harper, Lillian Makeda, John Dietler, and Carrie Chasteen. 2008. *Cultural Resources Technical Report, SBX E Street Corridor BRT Project, Cities of San Bernardino and Loma Linda, San Bernardino County, California*. On file at the San Bernardino Archaeological Information Center, San Bernardino County Museum, Redlands, CA.
- State of California Resources Agency. 1973. *Historical Resources Evaluation Report: Interstate 10 Corridor Project*.
- True, Delbert L. 1993. Bedrock Milling Elements as Indicators of Subsistence and Settlement Patterns in Northern San Diego County, California. *Pacific Coast Archaeological Society Quarterly* 29(2):1–26.
- Wallace, William. 1955. Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214–230.
- . 1978. Post-Pleistocene Archaeology, 9000 to 2000 B.C. In California, edited by R. F. Heizer, pp. 25–36. *Handbook of North American Indians*, Vol. 8, W. C. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

- Warren, Claude N. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, pp. 1–14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.
- White, R.C. 1963. Luiseño social Organization. *University of California Publications in American Archaeology and Ethnology* 48(2): 1–194.

## 8.4.6 Section 3.6, Geology, Soils, and Paleontological Resources

- Bortugno, E. J. and T. E. Spittler. 1986. Geologic Map of the San Bernardino Quadrangle, 1:250,000. Available: [ftp://ftp.consrv.ca.gov/pub/dmg/pubs/rgm/RGM\\_003A/RGM\\_003A\\_SanBernardino\\_1986\\_Sheet1of5.pdf](ftp://ftp.consrv.ca.gov/pub/dmg/pubs/rgm/RGM_003A/RGM_003A_SanBernardino_1986_Sheet1of5.pdf). Accessed: January 31, 2019.
- Bryant, William A., Ross Martin, Perry Wong, Dinah Maldonado, Jerry Wampole, and David Dixon. 2002. GIS files of official Alquist-Priolo Earthquake Fault Zones, Southern Region. California Department of Conservation, California Geological Survey, Sacramento, CA.
- California Geological Survey. 2002. *California Geomorphic Provinces. (Note 36.)* Available: [https://www.conservation.ca.gov/cgs/Documents/Publications/Note\\_36.pdf](https://www.conservation.ca.gov/cgs/Documents/Publications/Note_36.pdf). Accessed: February 8, 2019.
- . 2008. *Guidelines for Evaluating and Mitigating Seismic Hazards in California.* (Special Publication 117a.) Available: <http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/sp117.pdf>. Accessed: October 23, 2018.
- . 2010. *2010 Fault Activity Map of California.* Available: [https://www.conservation.ca.gov/cgs/Pages/Program-RGMP/2010\\_faultmap.aspx](https://www.conservation.ca.gov/cgs/Pages/Program-RGMP/2010_faultmap.aspx). Accessed: January 29, 2019.
- . 2018. *Earthquake Fault Zones: A Guide for Government Agencies, Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California.* (Special Publication 42.) Available: <ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sp/Sp42.pdf>. Accessed: February 6, 2019.
- Campbell, Russell H., Thane H. McCulloh, and John G. Vedder. 2007. *The Miocene Topanga Group of Southern California—A 100-Year History of Changes in Stratigraphic Nomenclature.* (U.S. Geological Survey Open-File Report 2007-1385, Version 1.1, revised 2009.) Available: <https://pubs.usgs.gov/of/2007/1385/of2007-1385.pdf>. Accessed: February 13, 2019.
- County of Riverside. 2014. *General Plan Update Project, General Plan Amendment No. 960. Environmental Impact Report No. 521. Volume 1, Part 1 of 2: Draft EIR No. 521.* March. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_plan\\_2014/EnvironmentalImpactReport/00\\_DEIR521\\_CoverAndTOC\\_Vol1\\_Part1\\_2014-04-23.pdf](https://planning.rctlma.org/Portals/0/genplan/general_plan_2014/EnvironmentalImpactReport/00_DEIR521_CoverAndTOC_Vol1_Part1_2014-04-23.pdf). Accessed: February 5, 2019.
- . 2015. *County of Riverside General Plan, Multipurpose Open Space Element.* Revised: December 8, 2015. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_Plan\\_2017/elements/OCT17/Ch05\\_MOSE\\_120815.pdf?ver=2017-10-11-102103-833](https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833). Accessed: January 28, 2019.
- . 2016. *County of Riverside General Plan, Safety Element.* Revised: December 6, 2016. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_Plan\\_2017/elements/OCT17/Ch06\\_Safety\\_DEC2016.pdf?ver=2017-10-06-093651-757](https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch06_Safety_DEC2016.pdf?ver=2017-10-06-093651-757). Accessed: January 28, 2019.

- . 2018. *County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan*. July. Available: [https://www.rivcoemd.org/Portals/0/FINAL%20PUBLIC%20VERSION%20Riv\\_Co\\_%202018%20Multi%20Jurisdictional%20Local%20Hazard%20Mitigation%20Plan.pdf](https://www.rivcoemd.org/Portals/0/FINAL%20PUBLIC%20VERSION%20Riv_Co_%202018%20Multi%20Jurisdictional%20Local%20Hazard%20Mitigation%20Plan.pdf). Accessed: February 6, 2019.
- County of San Bernardino. 2007a. *County of San Bernardino 2007 General Plan*. Amended April 24, 2014. Prepared by URS Corporation, Santa Ana, CA. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: January 28, 2019.
- . 2007b. *County of San Bernardino 2006 General Plan Program Final Environmental Impact Report and Appendices*. February. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FinalEIR2007.pdf>. Accessed: February 6, 2019.
- . 2009a. *San Bernardino County Land Use Plan, General Plan, Geologic Hazard Overlays*. EHFHC C: Victorville/San Bernardino. Available: [http://www.sbcounty.gov/Uploads/lus/GeoHazMaps/EHFHC\\_20100309new.pdf](http://www.sbcounty.gov/Uploads/lus/GeoHazMaps/EHFHC_20100309new.pdf). Accessed: January 31, 2019.
- . 2009b. *San Bernardino County Land Use Plan, General Plan, Geologic Hazard Overlays*. EIFI C: Newberry Springs/Big Bear Lake. Available: [http://www.sbcounty.gov/Uploads/lus/GeoHazMaps/EIFIC\\_20100309.pdf](http://www.sbcounty.gov/Uploads/lus/GeoHazMaps/EIFIC_20100309.pdf). Accessed: January 31, 2019.
- . 2017. *San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan*. FEMA Approved July 13, 2017. Available: [http://cms.sbcounty.gov/portals/58/Documents/Emergency\\_Services/Hazard-Mitigation-Plan.pdf](http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf). Accessed: January 28, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Hazard Maps. Public Review Draft. Available: [http://countywideplan.com/wp-content/uploads/2019/05/HazardsPolicyMaps\\_20190522.pdf](http://countywideplan.com/wp-content/uploads/2019/05/HazardsPolicyMaps_20190522.pdf). Accessed: August 16, 2019.
- International Code Council. 2015. 2015 International Building Code. Available: <https://codes.iccsafe.org/content/IBC2015>. Accessed: December 16, 2020.
- Natural Resources Conservation Service. 2016. Gridded Soil Survey Geographic (gSSURGO) Database. December. U.S. Department of Agriculture. Washington, D.C. Available: <https://gdg.sc.egov.usda.gov/>.
- Rogers, Thomas H. 1965. Geologic Map of California, Santa Ana Sheet. Available: [ftp://ftp.consrv.ca.gov/pub/dmg/pubs/gam/GAM\\_019\\_Santa\\_Ana/GAM\\_019\\_Map\\_1965.pdf](ftp://ftp.consrv.ca.gov/pub/dmg/pubs/gam/GAM_019_Santa_Ana/GAM_019_Map_1965.pdf). Accessed: January 31, 2019.
- Society of Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Available: [http://vertpaleo.org/Membership/Member-Ethics/SVP\\_Impact\\_Mitigation\\_Guidelines.aspx](http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx). Accessed: February 12, 2019.
- Southern California Association of Governments. 2016. *The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*. Adopted April 2016. Available: <http://scagrtppscs.net/Pages/FINAL2016RTPSCS.aspx>. Accessed: February 6, 2019.



U.S. Geological Survey. 2015. *UCERF3: A New Earthquake Forecast for California's Complex System*. (Fact Sheet 2015-3009). March. Available: <https://pubs.usgs.gov/fs/2015/3009/pdf/fs2015-3009.pdf>. Accessed: August 16, 2019.

———. 2018. *Areas of Land Subsidence in California*. Available: <https://ca.water.usgs.gov/land-subsidence/california-subsidence-areas.html>. Accessed: January 31, 2019.

University of California Museum of Paleontology. 2019. UCMP Advanced Specimen Search. Available: <https://ucmpdb.berkeley.edu/advanced.html>. Accessed: February 6, 2019.

## 8.4.7 Section 3.7, Greenhouse Gas Emissions and Energy

Blasing, T. J. 2016. *Recent Greenhouse Gas Concentrations*. DOI: 10.3334/CDIAC/atg.032. Updated April. Available: [https://cdiac.ess-dive.lbl.gov/pns/current\\_ghg.html](https://cdiac.ess-dive.lbl.gov/pns/current_ghg.html). Accessed: January 15, 2019.

California Air Resources Board (CARB). 2018. *Global Warming Potentials*. Last Reviewed June 22. Available: <https://www.arb.ca.gov/cc/inventory/background/gwp.htm#transition>. Accessed: January 15, 2019.

———. 2020. *California Greenhouse Gas Emission Inventory – 2019 for 2000-2017*. Available: <https://ww2.arb.ca.gov/ghg-inventory-data>. Accessed: June 18, 2020.

California Energy Commission. 2019. *Gas Consumption by County*. Available: <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

———. 2020. *Electricity Consumption by County*. Available: <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

California Natural Resources Agency. 2018. *California's Fourth Climate Change Assessment Statewide Summary Report*. Available: <http://www.climateassessment.ca.gov/state/docs/20190116-StatewideSummary.pdf>. Accessed: January 28, 2019.

City of Corona. 2012. *Corona Climate Action Plan*. January. Available: <https://www.coronaca.gov/home/showdocument?id=1186>. Accessed: January 15, 2019.

City of Riverside. 2014. *Climate Action Plan* (Administrative Draft). October. Available: [https://riversideca.gov/planning/rrg/RRG-CAP\\_GAP%20Draft\\_100214.pdf/](https://riversideca.gov/planning/rrg/RRG-CAP_GAP%20Draft_100214.pdf/). Accessed: January 15, 2019.

County of Riverside. 2015. *County of Riverside General Plan (Air Quality Element)*. Revised December 8. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_Plan\\_2017/elements/OCT17/Ch09\\_AQ%20%20Element\\_120815.pdf?ver=2017-10-11-102104-270](https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch09_AQ%20%20Element_120815.pdf?ver=2017-10-11-102104-270). Accessed: February 25, 2019.

———. 2018. *Climate Action Plan*. July. Available: [https://planning.rctlma.org/Portals/0/CAP/CAP\\_071717.pdf](https://planning.rctlma.org/Portals/0/CAP/CAP_071717.pdf). Accessed: January 15, 2019.

County of San Bernardino. 2011. *Greenhouse Gas Inventories for the County of San Bernardino*. May. Available: <http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGFull.pdf>. Accessed: January 16, 2019.

- . 2014. *General Plan*. March 13, 2007; amended April 24, 2014. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: February 25, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- Governor's Office of Planning and Research, et al. 2018. *California's Fourth Climate Change Assessment* (Summary Brochure). Available: <http://www.climateassessment.ca.gov/state/docs/20180827-SummaryBrochure.pdf>. Accessed: March 29, 2019.
- Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Available: [https://www.ipcc.ch/site/assets/uploads/2018/05/ar4\\_wg1\\_full\\_report-1.pdf](https://www.ipcc.ch/site/assets/uploads/2018/05/ar4_wg1_full_report-1.pdf). Accessed: January 15, 2019.
- . 2013. *Climate Change 2013: The Physical Science Basis*. Available: [https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_all\\_final.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf). Accessed: January 15, 2019.
- . 2014. *Climate Change Synthesis Report*. Available: [https://www.ipcc.ch/site/assets/uploads/2018/02/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf). Accessed: January 15, 2019.
- . 2018. *Global Warming of 1.5°C. Contribution of Working Group I, II, and III*. Available: <https://www.ipcc.ch/sr15/>. Accessed: February 11, 2019.
- Mojave Desert Air Quality Management District (MDAQMD). 2016. *CEQA and Conformity Guidelines*. August. Available: <http://mdaqmd.ca.gov/home/showdocument?id=192>. Accessed: January 17, 2019.
- San Bernardino Associated Governments. 2014. *San Bernardino County Regional Greenhouse Gas Reduction Plan*. March. Available: <https://www.gosbcta.com/plans-projects/plans/greenhouse-gas/SBC-RegionalGreenHouseGasReduction-Final.pdf>. Accessed: January 15, 2019.
- South Coast Air Quality Management District (SCAQMD). 2008. *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*. December. Available: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2). Accessed: February 7, 2019.
- U.S. Environmental Protection Agency (EPA). 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks*. Available: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>. Accessed: June 18, 2020.

## 8.4.8 Section 3.8, Hazards and Hazardous Materials

- California Office of Emergency Services (OES). 2016. *California Accidental Release Prevention*. Available: <https://www.caloes.ca.gov/cal-oes-divisions/fire-rescue/hazardous-materials/california-accidental-release-prevention>. Accessed: July 31, 2020.
- County of Riverside. 2012. *County of Riverside Multi-Jurisdictional Hazard Mitigation Plan*. June 2012. Available: <https://www.riversideca.gov/fire/oem/pdf/Completed-MJHMP-7-18-12.pdf>. Accessed: February 12, 2019.



- . 2019. *Department of Environmental Health; Hazardous Materials*. Available: <https://www.rivcoeh.org/HazMat>. Accessed: February 26, 2019.
- County of San Bernardino. 2007. *County of San Bernardino 2007 General Plan*. Adopted March 13, 2007. Amended April 24, 2014. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed January 30, 2019.
- . 2017. *Multi-Jurisdictional Hazard Mitigation Plan*. Available: [http://cms.sbcounty.gov/portals/58/Documents/Emergency\\_Services/Hazard-Mitigation-Plan.pdf](http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf). Accessed March 27, 2019.
- . 2018. *San Bernardino County Emergency Operations Plan*. Revised: January/February 2018. Available: [https://www.sbcounty.gov/Portals/58/Documents/Emergency\\_Services/Final%202017-2018%20EOP%20Update.pdf?ver=2018-02-06-125224-430](https://www.sbcounty.gov/Portals/58/Documents/Emergency_Services/Final%202017-2018%20EOP%20Update.pdf?ver=2018-02-06-125224-430). Accessed: August 29, 2019.
- . 2019a. Fire Department Household Hazardous Waste Division. *About HHW*. Available: <https://www.sbcounty.gov/ofm/hhw/HouseholdHazardousWaste.aspx>. Accessed: February 6, 2019.
- . 2019b. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- Riverside County Office of Education. 2019. *School District Listing*. Available: <https://www.rcoe.us/school-districts/>. Accessed: February 13, 2019.
- San Bernardino County Superintendent of Schools. No date. *District Sites and Information*. Available: <https://www.sbcss.k12.ca.us/index.php/2011-10-26-18-00-0>. Accessed: August 26, 2019.
- San Bernardino Valley Municipal Water District (Valley District). 2019. *Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program Final Environmental Impact Report*. Section 3.7, *Hazards and Hazardous Materials*.

## 8.4.9 Section 3.9, Hydrology and Water Quality

- California Department of Water Resources (DWR). 2004. *California's Groundwater Bulletin 118, Upper Santa Ana Valley Groundwater Basin, Bunker Hill Subbasin*. February 27.
- . 2006. *California's Groundwater Bulletin 118, Upper Santa Ana Valley Groundwater Basin, Chino Subbasin*. January 20. Available: [https://water.ca.gov/LegacyFiles/pubs/groundwater/bulletin\\_118/basindescriptions/8-2.01.pdf](https://water.ca.gov/LegacyFiles/pubs/groundwater/bulletin_118/basindescriptions/8-2.01.pdf). Accessed: February 2, 2019.
- County of Riverside. 2015. *County of Riverside General Plan, Multipurpose Open Space Element*. Revised: December 8, 2015. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_Plan\\_2017/elements/OCT17/Ch05\\_MOSE\\_120815.pdf?ver=2017-10-11-102103-833](https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833). Accessed: January 29, 2019.
- . 2016. *County of Riverside General Plan, Safety Element*. Revised: December 6, 2016. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_Plan\\_2017/elements/OCT17/Ch06\\_Safety\\_DEC2016.pdf?ver=2017-10-06-093651-757](https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch06_Safety_DEC2016.pdf?ver=2017-10-06-093651-757). Accessed: January 29, 2019.
- County of San Bernardino. 2007. *County of San Bernardino 2007 General Plan*. Prepared by URS Corporation, Santa Ana, CA. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: January 29, 2019.

- . 2017. *San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan*. FEMA Approved July 13, 2017. Available: [http://cms.sbcounty.gov/portals/58/Documents/Emergency\\_Services/Hazard-Mitigation-Plan.pdf](http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf). Accessed: January 29, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- Federal Emergency Management Agency (FEMA). 2016. *National Flood Hazard Layer*.
- San Bernardino Valley Municipal Water District (Valley District). 2019. *Draft Upper Santa Ana River Habitat Conservation Plan*.
- Santa Ana Regional Water Quality Control Board (RWQCB). 2019. *Water Quality Control Plan for the Santa Ana River Basin*. June. Available: [https://www.waterboards.ca.gov/santaana/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/). Accessed: August 9, 2019.
- State Water Resources Control Board (SWRCB). 2018. 2014/2016 *Integrated Report (Clean Water Act Section 303(d) List/305(b) Report)*. Last updated: 2018. Available: [https://www.waterboards.ca.gov/water\\_issues/programs/tmdl/integrated2014\\_2016.shtml](https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml). Accessed: February 1, 2019.
- U.S. Climate Data. 2017a. *Climate Data for San Bernardino County California*. Available: <http://www.usclimatedata.com/climate/san-bernardino/california/united-states/usca0978>. Accessed: May 30, 2017.
- . 2017b. *Climate Data for Riverside County California*. Available: <http://www.usclimatedata.com/climate/riverside/california/united-states/usca1695>. Accessed: May 30, 2017.
- U.S. Geological Survey (USGS). 2009. *Ground-Water Quality Data in the Upper Santa Ana Watershed Study Unit, November 2006-March 2007: Results from the California GAMA Program*. Data Series 404.
- . 2012. *Groundwater Quality in the Upper Santa Ana Watershed Study Unit, California*. Fact Sheet 2012-3037.
- . 2016. *California Water Science Center - Santa Ana Basin, National Water Quality Assessment Program – Study Unit Description*. Available: [https://ca.water.usgs.gov/projects/sana\\_nawqa/env\\_set.html](https://ca.water.usgs.gov/projects/sana_nawqa/env_set.html). Accessed: May 9, 2017.

#### 8.4.10 Section 3.10, Land Use

- County of Riverside. 2016. *County of Riverside General Plan*. Available: <https://planning.rctlma.org/ZoningInformation/GeneralPlan.aspx>. Accessed: January 28, 2019
- County of San Bernardino. 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- San Bernardino Valley Municipal Water District (Valley District). 2019. *Draft Upper Santa Ana River Habitat Conservation Plan*.

### 8.4.11 Section 3.11, Minerals

California Department of Conservation. 1996. *Update of Mineral Land Classification Map. Aggregate Materials in San Bernardino County*. (Open-File Report 94-09.) Available: [ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR\\_94-08/](ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-08/). Accessed: April 24, 2019.

California Geological Survey. 2018. California Geological Survey. 2018. Map Sheet 52- Aggregate Sustainability in California, *Fifty-Year Aggregate Demand Compared to Permitted Aggregate Reserves*. Available: [https://www.calcima.org/files/MS52\\_California\\_Aggregates\\_Map\\_201807.pdf](https://www.calcima.org/files/MS52_California_Aggregates_Map_201807.pdf). Accessed: May 13, 2021.

County of Riverside. 2015. *County of Riverside General Plan, Multipurpose Open Space Element*. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_Plan\\_2017/elements/OCT17/Ch05\\_MOSE\\_120815.pdf?ver=2017-10-11-102103-833](https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833). Accessed: April 22, 2019.

———. 2019. *County of Riverside General Plan, Land Use Element*. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03\\_Land%20Use\\_041619.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03_Land%20Use_041619.pdf). Accessed: August 22, 2019.

County of San Bernardino. 2007. *General Plan*. Amended April 24, 2014. Prepared by URS Corporation, Santa Ana, CA. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: January 28, 2019.

———. 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.

The Diggings. 2019. Mining in Riverside and San Bernardino Counties. Available: <https://thediggings.com/usa/california/riverside-ca065/map> and <https://thediggings.com/usa/california/san-bernardino-ca071>. Accessed: April 24, 2019.

### 8.4.12 Section 3.12, Noise

California Department of Transportation (Caltrans). 2013a. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September. Sacramento, CA. Available: [http://www.dot.ca.gov/hq/env/noise/pub/TeNS\\_Sept\\_2013B.pdf](http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf).

———. 2013b. *Transportation and Construction Vibration Guidance Manual*. September. Sacramento, CA. Available: [http://www.dot.ca.gov/hq/env/noise/pub/TCVGM\\_Sep13\\_FINAL.pdf](http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf).

County of Riverside. 2015. *County of Riverside General Plan, Noise Element*. Revised December 8. Available: [https://planning.rctlma.org/Portals/0/genplan/general\\_Plan\\_2017/elements/OCT17/Ch07\\_Noise\\_120815.pdf?ver=2017-10-11-102104-080](https://planning.rctlma.org/Portals/0/genplan/general_Plan_2017/elements/OCT17/Ch07_Noise_120815.pdf?ver=2017-10-11-102104-080).

County of San Bernardino. 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide*. January. Washington, DC. Available: [http://www.fhwa.dot.gov/environment/noise/construction\\_noise/rcnm/rcnm.pdf](http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf).

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*. September. Available: [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf).

Hoover and Keith, Inc. 2000. *Noise Control for Buildings and Manufacturing Plants*. Houston, TX.

### 8.4.13 Section 3.13, Population and Housing

California Department of Housing and Community Development. 2019. *Regional Housing Needs Allocation and Housing Elements*. Available: <http://www.hcd.ca.gov/community-development/housing-element/index.shtml>.

California State Board of Equalization. 2016. *Site Assessment Manual*. Available: [https://www.boe.ca.gov/proptaxes/pdf/SAM\\_2016.pdf](https://www.boe.ca.gov/proptaxes/pdf/SAM_2016.pdf). Accessed December 7, 2020.

County of Riverside. 2017. *County of Riverside General Plan, Housing Element*. Adopted October 3. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_Plan\\_2017/elements/OCT17/Ch08\\_Housing\\_100317.pdf?ver=2017-10-23-162929-533](https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch08_Housing_100317.pdf?ver=2017-10-23-162929-533). Accessed: January 28, 2019.

County of Riverside Department of Public Social Services. 2019. *2019 Point-In-Time Homeless Count Data Report Summary*. Available: <http://dpss.co.riverside.ca.us/files/pit/pit-count-report-final.pdf>. Accessed August 12, 2019.

County of San Bernardino. 2014. *2013–2021 Housing Element*. Available: [http://www.sbcounty.gov/uploads/lus/GeneralPlan/Adopted\\_5th\\_Cycle\\_Housing\\_Element\\_County\\_of\\_San\\_Bernardino2013-2021.pdf](http://www.sbcounty.gov/uploads/lus/GeneralPlan/Adopted_5th_Cycle_Housing_Element_County_of_San_Bernardino2013-2021.pdf). Accessed: January 28, 2019.

———. 2018. *2018 Homeless County and Subpopulation Survey Final Report, March 2018*. Available: <http://wp.sbcounty.gov/dbh/sbchp/wp-content/uploads/sites/2/2018/04/sbc-2018-homeless-count-final-report.pdf>.

———. 2019a. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 27, 2019.

———. 2019b. *2019 San Bernardino County Homeless County and Subpopulation Survey Final Report, April 2019*. Available: <http://wp.sbcounty.gov/dbh/sbchp/wp-content/uploads/sites/2/2019/05/2019-homeless-count-and-survey-report.pdf>.

mynewsLA.com. 2018. *Effort to Remove Riverside Homeless Encampments Underway*. January 10. Available: <https://mynewsLA.com/crime/2018/01/10/effort-remove-riverside-homeless-encampments-underway/>.

*Press-Enterprise*. 2017. Santa Ana Riverbed Fire in Riverside Prompts Evacuation of Homeless Encampment. May 9. Available: <https://www.pe.com/2017/05/09/santa-ana-riverbed-fire-in-riverside-prompts-evacuation-of-homeless-encampment/>.

San Bernardino Valley Municipal Water District (Valley District). 2020. *Draft Upper Santa Ana River Habitat Conservation Plan*.

Santa Ana Watershed Association (SAWA). 2012. *SAWA 2012 Annual Report*. Available: [www.sawatershed.org/2012SAWAReport.pdf](http://www.sawatershed.org/2012SAWAReport.pdf).

- Santa Ana Watershed Project Authority. 2019. *Map of Homeless Encampments Along the Santa Ana River and Tributaries*. Available: <http://sawpanews.org/wp-content/uploads/2017/08/Watershed-Homelessness.jpg>. Accessed: August 12, 2019.
- Southern California Association of Governments (SCAG). 2012. *Adopted 2012 Regional Transportation Plan Growth Forecast*. Available: <http://gisdata.scag.ca.gov/Pages/SocioEconomicLibrary.aspx?keyword=Forecasting>. Accessed: February 1, 2019.
- U.S. Census Bureau. 2010. *Age and Sex 2010: ACS: 1-Year Estimates Subject Table*. <https://data.census.gov/cedsci/table?t=Populations%20and%20People&g=0500000US06071&tid=ACSST1Y2010.S0101&hidePreview=false>. Accessed: December 7, 2020.
- . 2017. *ACS Demographic and Housing Estimates*. Available: [https://data.census.gov/cedsci/table?g=0400000US06\\_0500000US06065&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2017.DP05](https://data.census.gov/cedsci/table?g=0400000US06_0500000US06065&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2017.DP05). Accessed December 7, 2020.
- . 2020. *ACS Demographic and Housing Estimates*. Available: [https://data.census.gov/cedsci/map?g=0100000US.04000.001&hidePreview=false&tid=ACSDP1Y2018.DP05&vintage=2018&cid=DP05\\_0001E&layer=VT\\_2018\\_040\\_00\\_PP\\_D1](https://data.census.gov/cedsci/map?g=0100000US.04000.001&hidePreview=false&tid=ACSDP1Y2018.DP05&vintage=2018&cid=DP05_0001E&layer=VT_2018_040_00_PP_D1). Accessed: July 15, 2020.

#### 8.4.14 Section 3.14, Public Services

- City of Beaumont. 2007. *City of Beaumont General Plan*. March. Available: <http://www.beaumontca.gov/DocumentCenter/View/63/General-Plan?bidId=>. Accessed: August 26, 2019.
- City of Calimesa. No date. *Calimesa Fire Services History*. Available: <http://www.cityofcalimesa.net/Forms/Fire%20Services%20Pamphlet.pdf>. Accessed: August 26, 2019.
- City of Chino. 2018. *Police*. Available: <https://www.cityofchino.org/cms/One.aspx?portalId=10382662&pageId=11471198>. Accessed: August 26, 2019.
- City of Colton Police. No date. *History*. Available: <https://www.coltonpd.org/141/History>. Accessed: August 26, 2019.
- City of Corona. No date 1. *Fire Department: Programs and Services*. Available: <https://www.coronaca.gov/government/departments-divisions/fire-department/programs-and-services>. Accessed: August 26, 2019.
- City of Corona. No date 2. *Police Department*. Available: <https://www.coronaca.gov/government/departments/police-department>. Accessed: February 21, 2019.
- City of Fontana. 2018. *Fontana General Plan, Public and Community Services Element*. Available: <https://www.fontana.org/DocumentCenter/View/26747/Chapter-8---Public-and-Community-Services>. Accessed: August 26, 2019.
- City of Highland. 2006. *City of Highland General Plan, Public Services and Facilities Element*. March. Available: [http://www.ci.highland.ca.us/GeneralPlan/PDFs/04-Public Services & Facilities Element.pdf](http://www.ci.highland.ca.us/GeneralPlan/PDFs/04-Public%20Services%20&%20Facilities%20Element.pdf). Accessed: August 26, 2019.



- City of Loma Linda. 2009. *City of Loma Linda General Plan, Public Services and Facilities Element*. Available: [http://www.lomalinda-ca.gov/UserFiles/Servers/Server\\_7279443/File/Our%20City/General%20Plan/Chapter%208%20-%20Public%20Services%20&%20Facilities%20Element.pdf](http://www.lomalinda-ca.gov/UserFiles/Servers/Server_7279443/File/Our%20City/General%20Plan/Chapter%208%20-%20Public%20Services%20&%20Facilities%20Element.pdf). Accessed: August 26, 2019.
- City of Montclair. 2019a. *Fire Suppression*. Available: <https://www.cityofmontclair.org/city-government/fire-department/fire-suppression>. Accessed: August 26, 2019.
- . 2019b. *Montclair Police Department*. Available: <https://www.cityofmontclair.org/city-government/police-department>. Accessed: August 26, 2019.
- City of Ontario. No date 1. *Fire Department*. Available: <https://www.ontarioca.gov/fire>. Accessed: August 26, 2019.
- . No date 2. *Police*. Available: <https://www.ontarioca.gov/police>. Accessed: August 26, 2019.
- City of Rancho Cucamonga. 2010. *Ranch Cucamonga General Plan*. Adopted May 19. Available: [https://www.dropbox.com/sh/jq8ppqh277lswqq/AABgaDSgPfg8T9CC5\\_V3Ybbla/General%20Plan?dl=0&preview=2010+General+Plan.pdf&subfolder\\_nav\\_tracking=1](https://www.dropbox.com/sh/jq8ppqh277lswqq/AABgaDSgPfg8T9CC5_V3Ybbla/General%20Plan?dl=0&preview=2010+General+Plan.pdf&subfolder_nav_tracking=1). Accessed: August 23, 2019.
- City of Redlands. 2017. *General Plan 2035*. Adopted December 5. Available: <https://www.cityofredlands.org/sites/main/files/file-attachments/gp2035.pdf>. Accessed: August 26, 2019.
- . 2019. *Department Organization*. Available: <https://www.cityofredlands.org/post/departments-organization>. Accessed: August 26, 2019.
- City of Rialto. 2010. *Rialto General Plan*. December. Available: <http://yourrialto.com/wp-content/uploads/2016/08/General-Plan-Update-2010.pdf>. Accessed: August 26, 2019.
- City of Rialto Police Department. 2019. *Our Department*. Available: <https://www.rialtopd.com/about/departments>. Accessed: August 26, 2019.
- City of Riverside. No date. *Fire Department, Operations Division*. Available: <https://www.riversideca.gov/fire/divisions/operations>. Accessed: August 26, 2019.
- . 2015. *Riverside Police Department, Field Operations Division*. Available: <https://www.riversideca.gov/rpd/fieldops/fieldops.asp>. Accessed: August 26, 2019.
- City of Riverside Fire Department. 2017. *City of Riverside Fire Department Strategic Plan 2017-2022*. Available: <https://riversideca.gov/fire/forms-resources>. Accessed May 13, 2021.
- City of San Bernardino. 2019. *Police Department*. Available: [https://www.ci.san-bernardino.ca.us/cityhall/police\\_department](https://www.ci.san-bernardino.ca.us/cityhall/police_department). Accessed: August 26, 2019.
- City of Upland. No date. *Department Rank Structure*. Available: [https://www.ci.upland.ca.us/#Department\\_Rank\\_Structure](https://www.ci.upland.ca.us/#Department_Rank_Structure). Accessed: August 26, 2019.
- City of Yucaipa. 2016. *Yucaipa General Plan*. April. Available: [http://www.yucaipa.org/wp-content/uploads/dev\\_svcs/general\\_plan/Yucaipa\\_General\\_Plan.pdf](http://www.yucaipa.org/wp-content/uploads/dev_svcs/general_plan/Yucaipa_General_Plan.pdf). Accessed: August 26, 2019.

- County of Riverside. 2017. *County of Riverside General Plan, Circulation Element*. December. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04\\_Circulation\\_121217.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04_Circulation_121217.pdf). Accessed: August 26, 2019.
- . 2019. *County of Riverside General Plan, Land Use Element*. April. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03\\_Land%20Use\\_041619.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03_Land%20Use_041619.pdf). Accessed: August 26, 2019.
- County of San Bernardino. 2007. *2007 General Plan*. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: August 26, 2019.
- . 2019. *Draft Countywide Plan—Policy Plan*. May. Available: [http://countywideplan.com/wp-content/uploads/2019/05/CWP\\_PolicyPlan\\_PubReviewDraft\\_20190515.pdf](http://countywideplan.com/wp-content/uploads/2019/05/CWP_PolicyPlan_PubReviewDraft_20190515.pdf). Accessed: August 26, 2019.
- Riverside County Fire Department. No date. *Riverside County Fire Department Service Area*. Available: <http://www.rvcfire.org/ourDepartment/ServiceArea/Pages/default.aspx>. Accessed: August 26, 2019.
- Riverside County Office of Education. 2019. *School District Listing*. Available: <https://www.rcoe.us/school-districts/>. Accessed: February 6, 2019.
- Riverside County Sheriff's Department. No date. *About Us*. Available: <https://www.riversidesheriff.org/27/About-Us>. Accessed: August 26, 2019.
- San Bernardino County Fire. 2019. *About the San Bernardino County Fire Protection District*. Available: <https://www.sbcfire.org/about/AboutSBCFire.aspx>. Accessed: August 26, 2019.
- San Bernardino County Sheriff's Department. 2017. *2017 Patrol Workload Statistics*. Available: <http://wp.sbcounty.gov/sheriff/wp-content/uploads/sites/17/2007-2017-patrol-workload-statistics-opt-72.pdf>. Accessed: August 29, 2019.
- . 2019. *About Us*. Available: <http://wp.sbcounty.gov/sheriff/about-us/>. Accessed: August 29, 2019.
- San Bernardino County Superintendent of Schools. No date. *District Sites and Information*. Available: <https://www.sbcss.k12.ca.us/index.php/2011-10-26-18-00-05>. Accessed: August 26, 2019.

## 8.4.15 Section 3.15, Recreation

- California Department of Parks and Recreation. 2017. "Wildwood Canyon." Available: <https://www.parks.ca.gov/pages/22883/files/WildwoodCanyonFinalWebLayout082117.pdf>. Accessed: August 26, 2019.
- . 2019. "San Timoteo Canyon Park Property." Available: [https://www.parks.ca.gov/?page\\_id=22882](https://www.parks.ca.gov/?page_id=22882). Accessed: August 26, 2019.
- County of Riverside. 2015a. *County of Riverside General Plan, Multipurpose Open Space Element*. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_Plan\\_2017/elements/OCT17/Ch05\\_MOSE\\_120815.pdf?ver=2017-10-11-102103-833](https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833). Accessed: August 27, 2019.

- . 2015b. *County of Riverside General Plan, Healthy Communities Element*. December. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_Plan\\_2017/elements/OCT17/Ch10\\_HCE\\_120815.pdf?ver=2017-10-11-102105-050](https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch10_HCE_120815.pdf?ver=2017-10-11-102105-050). Accessed: August 27, 2019.
- County of San Bernardino. 2007. *County of San Bernardino 2007 General Plan*. Amended April 24, 2014. Prepared by URS Corporation, Santa Ana, CA. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed August 27, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- National Park Service. 2018. The National Trails System Act. Available: <https://www.nps.gov/subjects/nationaltrailssystem/index.htm>. Last updated: June 5, 2018. Accessed: February 20, 2019.
- TrailLink. No date. *Santa Ana River Trail*. Available: <https://www.traillink.com/trail/santa-ana-river-trail/>. Accessed: February 2019.
- U.S. Forest Service. 2019a. *San Bernardino National Forest*. Available: <https://www.fs.usda.gov/sbnf/>. Accessed: August 26, 2019.
- . 2019b. *Cleveland National Forest*. Available: <https://www.fs.usda.gov/cleveland/>. Accessed: August 26, 2019.
- . 2021. *Angeles National Forest: About the Forest*. Available: <https://www.fs.usda.gov/main/angeles/about-forest>. Accessed: May 13, 2021.

## 8.4.16 Section 3.16, Transportation

- County of Riverside. 2017. *County of Riverside General Plan, Circulation Element*. December. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04\\_Circulation\\_121217.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04_Circulation_121217.pdf). Accessed: August 23, 2019.
- County of San Bernardino. 2007. *San Bernardino County General Plan, Circulation and Infrastructure Element*. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: August 23, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- County of San Bernardino Economic Development Agency. 2019. *Highway Systems*. Available: <http://www.sbcountyadvantage.com/For-Site-Selectors/Transportation-Infrastructure/Highway-System.aspx>. Accessed: August 23, 2019.
- San Bernardino Association of Governments (SANBAG). 2015. *Final San Bernardino Countywide Transportation Plan*. October. Available: <http://www.gosbcta.com/sbcta/plans-projects/CTP/CTP-Final-2015.pdf>. Accessed: August 23, 2019.
- Southern California Association of Governments (SCAG). 2016. *Final 2016 RTP/SCS*. Available: <http://scagrtpscsc.net/Pages/FINAL2016RTPSCS.aspx>. Accessed: August 23, 2019.
- TrailLink. No date. *Santa Ana River Trail*. Available: <https://www.traillink.com/trail/santa-ana-river-trail/>. Accessed: February 2019.



### 8.4.17 Section 3.17, Tribal Cultural Resources

None.

### 8.4.18 Section 3.18, Utilities and Service Systems

California Department of Resources Recycling and Recovery (CalRecycle). 2019a. *SWIS Facility Detail, San Timoteo Sanitary Landfill (36-AA-0087)*. Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/36-AA-0087>. Accessed: February 18, 2019.

———. 2019b. *SWIS Facility Detail, Mid-Valley Sanitary Landfill (36-AA-0055)*. Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/36-AA-0055>. Accessed: February 18, 2019.

———. 2019c. *SWIS Facility Detail, Pennsylvania Street Inert Landfill (36-AA-0313)*. Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/36-AA-0313>. Accessed: February 18, 2019.

———. 2019d. *SWIS Facility Detail, Agua Manda Landfill (36-AA-0019)*. Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/36-AA-0019>. Accessed: February 18, 2019.

———. 2019e. *SWIS Facility Detail, El Sobrante Landfill (33-AA-0217)*. Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/33-AA-0217>. Accessed: February 18, 2019.

City of Colton. 2019. *Electric Utility Information*. Available: <http://www.coltononline.com/index.aspx?NID=316>. Accessed: January 31, 2019.

City of Corona. 2019. *Electric Services & Rates*. Available: <https://www.coronaca.gov/government/departments-divisions/departament-of-water-and-power/businesses/electric-services-rates>. Accessed: February 1, 2019.

City of Rancho Cucamonga. 2019. *Rancho Cucamonga Municipal Utility*. Available: <https://www.cityofrc.us/cityhall/engineering/rcmu/default.asp>. Accessed: February 1, 2019.

County of Riverside. 1996. *Countywide Integrated Waste Management Plan*. September. Available: <https://www.rcwaste.org/business/planning/ciwmp>. Accessed: August 30, 2019.

———. 2017. *County of Riverside General Plan, Circulation Element*. December. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04\\_Circulation\\_121217.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch04_Circulation_121217.pdf). Accessed: August 30, 2019.

———. 2019a. *County of Riverside General Plan, Land Use Element*. April. Available: [https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03\\_Land%20Use\\_041619.pdf](https://planning.rctlma.org/Portals/14/genplan/2019/elements/Ch03_Land%20Use_041619.pdf). Accessed August 31, 2019.

———. 2019b. *Riverside County Department of Waste Resources*. Available: <https://www.rcwaste.org/About/departament>. Accessed: February 20, 2019.

County of San Bernardino. 2007. *General Plan*. Amended April 24, 2014. Prepared by URS Corporation, Santa Ana, CA. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed August 27, 2019.

- . 2015. *Master Plans of Drainage and Comprehensive Storm Drain Plans*. Available: <https://cms.sbcounty.gov/dpw/FloodControl/Planning/MPD.aspx>. Accessed: August 30, 2019.
- . 2018. *Countywide Integrated Waste Management Plan. Countywide Summary Plan*. Available: <http://cms.sbcounty.gov/Portals/50/solidwaste/SWAT/Engineering/SB-County-Final-Draft-Summary-Plan-SP-for-SWAT-07-2018r.pdf?ver=2018-07-10-135812-593>. Accessed: February 20, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- East Valley Water District (East Valley). 2014. *Sewer Collection System Overflow Emergency Response Plan (OERP)*. June 2014. Available: <https://www.eastvalley.org/DocumentCenter/View/418/Section-12---Sewer-Collection-System?bidId=>. Accessed: January 31, 2019.
- Riverside Public Utilities (RPU). 2015. *RPU 101*. Available: [https://www.riversideca.gov/utilities/PDF/RPU\\_101\\_Web\\_2015.pdf](https://www.riversideca.gov/utilities/PDF/RPU_101_Web_2015.pdf). Accessed: February 4, 2019.
- San Bernardino Valley Municipal Water District (Valley District). 2015. *Upper Santa Ana River Watershed Integrated Regional Water Management Plan*. <http://www.sbvwd.org/docman-projects/upper-santa-ana-integrated-regional-water-management-plan/3802-usarw-irwmp-2015-ch1-9-final/file.html>. Accessed February 19, 2019.
- . 2018. *San Bernardino Valley Regional Urban Water Management Plan*. Available: <https://www.sbvmd.com/home/showdocument?id=4196>. Accessed: February 19, 2019.
- Southern California Edison (SCE). 2007. *Service Territory Map*. Available: <https://www.scemaintenance.com/about-us/who-we-are/leadership/our-service-territory>. Accessed: January 31, 2019.
- Southern California Gas Company. 2011. *List of Cities and Communities Served*. Available: <https://www.socalgas.com/regulatory/tariffs/tm2/pdf/CITIES.pdf>. Accessed: August 30, 2019.

## 8.4.19 Section 3.19, Wildfire

- California Department of Forestry and Fire Protection (CAL FIRE). 2007a. *SW San Bernardino County Very High Fire Hazard Severity Zones in SRA*. November 7. Available: [http://frap.fire.ca.gov/webdata/maps/san\\_bernardino\\_sw/fhszs\\_map.62.pdf](http://frap.fire.ca.gov/webdata/maps/san_bernardino_sw/fhszs_map.62.pdf). Accessed: March 1, 2019.
- . 2007b. *Western Riverside County Very High Fire Hazard Severity Zones in SRA*. November 7. Available: [http://frap.fire.ca.gov/webdata/maps/riverside\\_west/fhszs\\_map.60.pdf](http://frap.fire.ca.gov/webdata/maps/riverside_west/fhszs_map.60.pdf). Accessed: March 1, 2019.
- . 2008. *SW San Bernardino County Very High Fire Hazard Severity Zones in LRA*. November 13. Available: [http://frap.fire.ca.gov/webdata/maps/san\\_bernardino\\_sw/fhszl\\_map.62.pdf](http://frap.fire.ca.gov/webdata/maps/san_bernardino_sw/fhszl_map.62.pdf). Accessed: February 12, 2019.
- . 2009. *Western Riverside County Very High Fire Hazard Severity Zones in LRA*. December 24. Available: [http://frap.fire.ca.gov/webdata/maps/riverside\\_west/fhszl\\_map.60.pdf](http://frap.fire.ca.gov/webdata/maps/riverside_west/fhszl_map.60.pdf). Accessed: February 5, 2019.
- . 2016. *2016 Wildfire Activity Statistics*. Available: [http://calfire.ca.gov/downloads/redbooks/2016\\_Redbook/2016\\_Redbook\\_FINAL.PDF](http://calfire.ca.gov/downloads/redbooks/2016_Redbook/2016_Redbook_FINAL.PDF). Accessed: April 19, 2019.

- . 2019. *Esperanza Fire Incident Information*. Available: [http://cdfdata.fire.ca.gov/incidents/incidents\\_details\\_info?incident\\_id=161](http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=161). Accessed: April 4, 2019.
- California State Board of Forestry and Fire Protection and California Department of Forestry and Fire Protection (CAL FIRE). 2018. *2018 Strategic Fire Plan for California*. Available: [https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08\\_22\\_18.pdf](https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf). Accessed: August 23, 2019.
- County of Riverside. 2014. *County of Riverside Environmental Impact Report No. 521 – Section 4.13, Hazardous Materials and Safety*. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_plan\\_2014/EnvironmentalImpactReport/04-13\\_HazMatAndSafety\\_2014-04-07.pdf](https://planning.rctlma.org/Portals/14/genplan/general_plan_2014/EnvironmentalImpactReport/04-13_HazMatAndSafety_2014-04-07.pdf). Accessed: April 26, 2019.
- . 2016. *County of Riverside General Plan Safety Element*. Available: [https://planning.rctlma.org/Portals/14/genplan/general\\_Plan\\_2017/elements/OCT17/Ch06\\_Safety\\_DEC2016.pdf?ver=2017-10-06-093651-757](https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch06_Safety_DEC2016.pdf?ver=2017-10-06-093651-757). Accessed: January 30, 2019.
- . 2018. *County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan*. July. Available: [https://www.rivcoemd.org/Portals/0/FINAL%20PUBLIC%20VERSION%20Riv\\_Co\\_%202018%20Multi%20Jurisdictional%20Local%20Hazard%20Mitigation%20Plan.pdf](https://www.rivcoemd.org/Portals/0/FINAL%20PUBLIC%20VERSION%20Riv_Co_%202018%20Multi%20Jurisdictional%20Local%20Hazard%20Mitigation%20Plan.pdf). Accessed: August 23, 2019.
- County of San Bernardino. 2007a. *County of San Bernardino General Plan*. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: February 20, 2019.
- . 2007b. *County of San Bernardino General Plan Program Final EIR*. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FinalEIR2007.pdf>. Accessed: March 27, 2019.
- . 2017. *Multi-Jurisdictional Hazard Mitigation Plan*. Available: [http://cms.sbcounty.gov/portals/58/Documents/Emergency\\_Services/Hazard-Mitigation-Plan.pdf](http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf). Accessed: March 27, 2019.
- . 2018. *Emergency Operations Plan*. Available: [https://www.sbcfire.org/Portals/58/Documents/Emergency\\_Services/Final%202017-2018%20EOP%20Update.pdf?ver=2018-02-06-125224-430](https://www.sbcfire.org/Portals/58/Documents/Emergency_Services/Final%202017-2018%20EOP%20Update.pdf?ver=2018-02-06-125224-430). Accessed: March 22, 2019.
- . 2019. *San Bernardino County Countywide Plan*. Policy Document. Public Review Draft. Available: <http://countywideplan.com/policy-plan/>. Accessed: August 16, 2019.
- Federal Emergency Management Agency (FEMA). 2017. *Fact Sheet: Flood After Fire: the Increased Risk*. October. Available: [https://www.fema.gov/media-library-data/1509629241846-93a30888b273ae9c8751381cae84dbb5/Flood\\_After\\_Fire\\_ENGLISH-508-FINAL.pdf](https://www.fema.gov/media-library-data/1509629241846-93a30888b273ae9c8751381cae84dbb5/Flood_After_Fire_ENGLISH-508-FINAL.pdf). Accessed: August 23, 2019.
- Hubbert, K. R., and V. Oriol. 2005. Temporal Fluctuations in Soil Water Repellency Following Wildfire in Chaparral Steeplands, Southern California. *International Journal of Wildland Fire* 14:439–447. Available: [https://www.fs.fed.us/psw/publications/4403/psw\\_2005\\_oriol001\\_hubbert.pdf](https://www.fs.fed.us/psw/publications/4403/psw_2005_oriol001_hubbert.pdf). Accessed: August 23, 2019.
- International Code Council. 2018. 2018 International Building Code (ICC IBC-2018).

- mynewsLA.com. 2018. *Effort to Remove Riverside Homeless Encampments Underway*. January 10. Available: <https://mynewsLA.com/crime/2018/01/10/effort-remove-riverside-homeless-encampments-underway/>.
- Press-Enterprise*. 2017. Santa Ana Riverbed Fire in Riverside Prompts Evacuation of Homeless Encampment. May 9. Available: <https://www.pe.com/2017/05/09/santa-ana-riverbed-fire-in-riverside-prompts-evacuation-of-homeless-encampment/>.
- San Bernardino Valley Water Conservation District. 2015. *Integrated Regional Water Management Plan*. <https://www.sbvwd.org/docman-projects/upper-santa-ana-integrated-regional-water-management-plan/3802-usarw-irwmp-2015-ch1-9-final/file.html>. Accessed: March 22, 2019.
- U.S. Census Bureau. 2017. *American Fact Finder; Community Facts*. Available: [https://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml?src=bkml](https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml?src=bkml). Accessed: February 6, 2019.
- U.S. Geological Survey (USGS). No date. *Emergency Assessment of Post-Fire Debris-Flow Hazards*. Available: [https://www.usgs.gov/natural-hazards/landslide-hazards/science/emergency-assessment-post-fire-debris-flow-hazards?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/natural-hazards/landslide-hazards/science/emergency-assessment-post-fire-debris-flow-hazards?qt-science_center_objects=0#qt-science_center_objects) and [https://landslides.usgs.gov/hazards/postfire\\_debrisflow/](https://landslides.usgs.gov/hazards/postfire_debrisflow/). Accessed: August 23, 2019.
- University of California Division of Agriculture and Natural Resources (UCANR). 2017. *Recovering from Wildfire: A Guide for California's Forest Landowners*. ANR Publication 8386, July 2017. Available: <https://anrcatalog.ucanr.edu/pdf/8386.pdf>. Accessed: August 23, 2019.

## 8.5 Chapter 4, Cumulative Impacts

- California Department of Fish and Wildlife. 2019. Sycamore Canyon Ecological Reserve. Available: <https://www.wildlife.ca.gov/Lands/Places-to-Visit/Sycamore-Canyon-ER>. Last revised: August 6, 2019. Accessed: August 26, 2019.
- California Department of Parks and Recreation. 2002. Chino Hill State Park. Park brochure. (Rev. 2018.) Available: <https://www.parks.ca.gov/pages/648/files/ChinoHillsFinalWebLayout2018.pdf>. Accessed: August 26, 2019.
- . 2003. California Citrus State Historic Park. Park brochure. (Rev. 2016.) Available: <https://www.parks.ca.gov/pages/649/files/CalCitrusSHPFinalWebLayout093016.pdf>. Accessed: August 26, 2019.
- . 2010. Wildwood Canyon. Park brochure. (Rev. 2017.) Available: <https://www.parks.ca.gov/pages/22883/files/WildwoodCanyonFinalWebLayout082117.pdf>. Accessed: August 26, 2019.
- . 2019a. California Citrus State Historic Park. Available: [http://www.parks.ca.gov/?page\\_id=649](http://www.parks.ca.gov/?page_id=649). Accessed: August 26, 2019.
- . 2019b. San Timoteo Canyon. Park Property. Available: [https://www.parks.ca.gov/?page\\_id=22882](https://www.parks.ca.gov/?page_id=22882). Accessed: August 26, 2019.

- . 2019c. Wildwood Canyon. Park Property. Available: [https://www.parks.ca.gov/?page\\_id=22883](https://www.parks.ca.gov/?page_id=22883). Accessed: August 26, 2019.
- California Office of Environmental Health Hazard Assessment and California Department of Environmental Protection. 2018. Indicators of Climate Change in California. Report Summary. Available: <https://oehha.ca.gov/media/downloads/climate-change/report/2018indicatorssummary.pdf>. Accessed: August 29, 2019.
- California Protected Areas Database. 2019. CPAD. Available: <https://www.calands.org/>.
- City of Chino. 2018. Capital Improvement Program. Public Works Engineering Division. Available: [https://www.cityofchino.org/city\\_hall/departments/publicworks/capital\\_improvement\\_projects](https://www.cityofchino.org/city_hall/departments/publicworks/capital_improvement_projects). Accessed: August 27, 2019.
- City of Chino Hills. No date. "Capital Improvements." Available: <https://www.chinohills.org/312/Capital-Improvements>. Accessed: May 13, 2021.
- City of Colton. No date. *City of Colton Public Works Department-Engineering Division Capital Improvement Program (CIP) Project List for FY 19/20–FY 24/25*. Available: <https://www.ci.colton.ca.us/DocumentCenter/View/6679/CIP-PROJECTS-FY-19-20-to-FY-23-24?bidId=>. Accessed: May 13, 2021.
- City of Fontana. 2020. *City of Fontana Adopted Capital Improvement Program Seven-Year Budget, Fiscal Years 2020/2021–2026/2027*. Available: <https://www.fontana.org/DocumentCenter/View/30238/2019--2020---2025--2026-Capital-Improvement-Program->. Accessed: May 13, 2021.
- City of Grand Terrace. 2019. Capital Improvement Plan. Public Works. Available: [https://www.grandterrace-ca.gov/departments/public\\_works/capital\\_improvement\\_plan](https://www.grandterrace-ca.gov/departments/public_works/capital_improvement_plan). Accessed: August 27, 2019.
- City of Montclair. 2019. Capital Improvement Projects. Available: <https://www.cityofmontclair.org/city-government/public-works/engineering-division/cip>. Accessed: August 27, 2019.
- City of Ontario. 2016. *City of Ontario: Reaching New Heights, 2016–2017 Adopted Annual Operating Budget Capital Improvement Program*. Available: [https://www.ontarioca.gov/sites/default/files/Ontario-Files/Administrative-Services/Annual-Operating-Budgets/2016-2017/2016-2017\\_adopted\\_cip\\_0.pdf](https://www.ontarioca.gov/sites/default/files/Ontario-Files/Administrative-Services/Annual-Operating-Budgets/2016-2017/2016-2017_adopted_cip_0.pdf). Accessed: May 13, 2021.
- City of Rancho Cucamonga. No date. *Fiscal Year 2019–20 Capital Improvement Program*. Available: [https://www.cityofrc.us/sites/default/files/2019-09/ENG%20-%20FY2019-20%20CIP%20FINAL\\_0.pdf](https://www.cityofrc.us/sites/default/files/2019-09/ENG%20-%20FY2019-20%20CIP%20FINAL_0.pdf). Accessed: May 13, 2021.
- City of Redlands. No date. "Capital Improvement Program." Available: <https://www.cityofredlands.org/post/capital-improvement-program>. Accessed: May 13, 2021.
- City of Rialto. 2018. *Fiscal Year 2019–2023 Capital Improvement Program*. Available: <https://rialto.legistar.com/LegislationDetail.aspx?ID=3642446&GUID=4D35590E-DF10-4B68-90CD-9450676D011E&Options=&Search=>. Accessed: May 13, 2021.
- City of Riverside. 2018. Capital Improvement Program: Fiscal Year 2018/19–2022/23. Available: <https://riversideca.gov/finance/PDF/2018/Proposed%20CIP20Budget.pdf>. Accessed: August 23, 2019.



- City of San Bernardino. 2018. "Capital Improvement Program (CIP)." Available: [http://www.sbcity.org/cityhall/publicworks/engineering\\_division/capital\\_improvement\\_program\\_\(cip\)/default.asp](http://www.sbcity.org/cityhall/publicworks/engineering_division/capital_improvement_program_(cip)/default.asp). Accessed: May 13, 2021.
- City of Upland. 2019. Five Year Capital Improvement Plan, Fiscal Years 2019/20–2023/24.
- City of Yucaipa. 2018. *City of Yucaipa Annual Budget 2018–2019*. Available: <http://64.183.66.118/weblink/0/edoc/373993/20182019%20FISCAL%20YEAR.pdf>. Accessed: May 13, 2021.
- County of Riverside Transportation and Land Management Agency and U.S. Fish and Wildlife Service. 2003. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP): Final EIR/EIS. June 17. Available: <http://www.wrc-rca.org/about-rca/multiple-species-habitat-conservation-plan/mshcp-volume-four-final-eir-eis/>. Accessed: August 23, 2019.
- County of San Bernardino. 2007. *County of San Bernardino General Plan*. Available: <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf>. Accessed: February 20, 2019.
- . 2019. 2019 – 2020 Recommended Budget. Available: <https://cms.sbcounty.gov/Portals/59/Content/2019-2020/2019-20-Recommended-Budget.pdf>. Accessed: August 27, 2019.
- Dodge Data & Analytics. 2019. City of Highland Capital Improvement Program (CIP). Available: <https://www.construction.com/projects/city-of-highland-capital-improvement-program-cip/>. Accessed: May 13, 2021.
- East Valley Water District. 2018. Capital Improvement Program. Available: <https://www.eastvalley.org/118/Capital-Projects>. Accessed: August 23, 2019.
- Government Finance Officers Association. 2018. Capital Improvement Planning & Budgeting Resource Center. Available: <https://www.gfoa.org/capital-improvement-planning-budgeting-resource-center>. Accessed: August 23, 2019.
- Hanak, E., J. Mount, C. Chappell, J. Lund, J. Medellín-Azuara, P. Moyle, and N. Seavy. 2015. What if California's drought continues? Public Policy Institute of California, Water Policy Center. Available: [https://www.ppic.org/content/pubs/report/R\\_815EHR.pdf](https://www.ppic.org/content/pubs/report/R_815EHR.pdf). Accessed: August 22, 2019.
- Harmony. 2015. Harmony: A Master Planned Community. Available: <http://www.harmonygreenspot.com/>. Accessed: August 27, 2019.
- Inland Empire Utilities Agency. 2018a. Fiscal Year 2018/19 Ten-Year Capital Improvement Plan. May. Available: <https://18x37n2ovtbb3434n48jhbs1-wpengine.netdna-ssl.com/wp-content/uploads/2018/04/FINAL-FY-2018-19-to-2027-28-TEN-YEAR-CAPITAL-IMPROVEMENT-PLAN.pdf>. Accessed: August 23, 2019.
- . 2018b. Santa Ana River Conservation and Conjunctive Use Project: Environmental Impact Report. November. Available: <https://18x37n2ovtbb3434n48jhbs1-wpengine.netdna-ssl.com/wp-content/uploads/2018/11/Santa-Ana-River-Conservation-and-Conjunctive-Use-Project-Draft-EIR-2018-11-05.pdf>. Accessed: August 23, 2019.
- Metropolitan Water District of Southern California. 2015. Capital Projects. Available: <http://www.mwdh2o.com/AboutYourWater/CapitalProjects>. Accessed: August 23, 2019.

- . 2016. Lake Mathews. Available: <http://www.mwdh2o.com/AboutYourWater/Storage-And-Delivery/Reservoirs/Lake-Mathews>. Accessed: August 29, 2019.
- Metropolitan Water District of Southern California and Riverside County Habitat Conservation Agency. 1995. *Lake Mathews Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan*. Volume 1: Conservation Plan. Available: [http://www.mwdh2o.com/PDF\\_In\\_The\\_Community/LakeMathews\\_Vol1\\_Conservation\\_Plan.pdf](http://www.mwdh2o.com/PDF_In_The_Community/LakeMathews_Vol1_Conservation_Plan.pdf). Accessed: August 23, 2019.
- Office of Planning and Research. 2017. State of California General Plan Guidelines. Available: [http://opr.ca.gov/docs/OPR\\_COMPLETE\\_7.31.17.pdf](http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf). Accessed: August 23, 2019.
- Orange County Water District. 2018. Budget Report FY 2018-19. March 7. Available: <https://www.ocwd.com/media/6454/06a1budget-fy-2018-19.pdf>. Accessed: August 23, 2019.
- RBF Consulting. 2014. West Valley Habitat Conservation Plan for the Issuance of an Incidental Take Permit Under Section 10(A)(1)(B) of the Endangered Species Act for the Federally Endangered Delhi Sand Flower-loving Fly Projects within Colton, California of San Bernardino County. Prepared for the City of Colton. June 2014.
- Redlands Daily Facts, 2018. Judge rules against 3,600-house Harmony development proposed for Highland. <https://www.redlandsdailyfacts.com/2018/07/06/judge-rules-against-3600-house-harmony-development-proposed-for-highland/>. Accessed: May 15, 2020.
- Riverside County Habitat Conservation Agency. 1996. *Stephens' Kangaroo Rat Habitat Conservation Plan*.
- San Bernardino Municipal Water Department. No date. "Capital Improvement Projects." Available: <https://sbmwd.org/183/Capital-Improvement-Projects>. Accessed: May 13, 2021.
- San Bernardino Valley Municipal Water District (Valley District). 2019. Capital Improvement Plan.
- San Bernardino Valley Water Conservation District. 2013. Upper Santa Ana Wash Land Management and Habitat Conservation Plan Environmental Impact Report. Available: <https://www.sbvwd.org/wash-plan/eir.html>. Accessed: August 23, 2019.
- . 2015. *Integrated Regional Water Management Plan*. <https://www.sbvwd.org/docman-projects/upper-santa-ana-integrated-regional-water-management-plan/3802-usarw-irwmp-2015-ch1-9-final/file.html>. Accessed: March 22, 2019.
- Santa Ana Watershed Project Authority. 2019. Proposition 84 Round 1 Integrated Regional Water Management Plan Implementation. Available: <https://sawpa.org/owow/owow-activities/proposition-84-round-1-irwm-implementation/>. Accessed: August 27, 2019.
- Southern California Association of Governments (SCAG). 2012. Regional Transportation Plan/Sustainable Communities Strategy. Adopted April 2012. Available: <http://rtpscsc.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf>. Accessed: August 23, 2019.
- . 2013. Regional Transportation Plan/Sustainable Communities Strategy. Amendment 1. Approved June 2013. Available: <http://rtpscsc.scag.ca.gov/Pages/Amendment-1.aspx>. Accessed: August 27, 2019.

- . 2014. Regional Transportation Plan/Sustainable Communities Strategy. Amendment 2. Approved September 2014. Available: <http://rtpscs.scag.ca.gov/Pages/Amendment-2.aspx>. Accessed: August 27, 2019.
- Southern California Edison. 2019. 2019 Annual Report. Available: <https://www.edison.com/content/dam/eix/documents/investors/corporate-governance/eix-sce-2019-annual-report.pdf>. Accessed: May 13, 2021.
- State of California. 2009. "Crafton Hills Reservoir Expansion Project." Available: <https://ceqanet.opr.ca.gov/2007111106/2>. Accessed: August 30, 2019.
- . 2021. Official California State Government Website. Blueprint for a Safer Economy, Coronavirus COVID-19 Response. Available: <https://covid19.ca.gov/safer-economy/>. Accessed: May 13, 2021.
- U.S. Department of the Interior, Bureau of Land Management. No date. How We Manage. Available: <https://www.blm.gov/about/how-we-manage>. Accessed: August 29, 2019.
- U.S. Forest Service. No date 1. Cleveland National Forest. About the Forest. Available: <https://www.fs.usda.gov/main/cleveland/about-forest>. Accessed: August 29, 2019.
- . No date 2. Cleveland National Forest. Resource Management. Available: <https://www.fs.usda.gov/detail/cleveland/landmanagement/resourcemanagement/?cid=stelprdb5207817>. Accessed: August 29, 2019.
- . No date 3. Angeles National Forest. About the Forest. Available: <https://www.fs.usda.gov/main/angeles/about-forest>. Accessed: August 29, 2019.
- . No date 4. San Bernardino National Forest. About the Forest. Available: <https://www.fs.usda.gov/main/sbnf/about-forest>. Accessed: August 29, 2019.
- . No date 5. San Bernardino National Forest. Special Places. Available: <https://www.fs.usda.gov/attmain/sbnf/specialplaces>. Accessed: August 29, 2019.
- U.S. Geological Survey No date 1. California Drought. Available: <https://ca.water.usgs.gov/california-drought/>. Accessed: August 29, 2019.
- . No date 2. Land Subsidence in California. Available: <https://www.usgs.gov/centers/ca-water-ls>. Accessed: August 29, 2019.
- University of California Natural Reserve System. 2019. Box Springs Reserve. Available: <https://ucnrs.org/reserves/box-springs-reserve/>. Accessed: August 27, 2019.
- West Valley Water District. 2018. Capital Improvement Plan: Fiscal Year 2018–2019. Available: <https://wvwd.org/wp-content/uploads/2018/06/FY-2018-19-Approved-Budget-Book-062918.pdf>. Accessed: August 23, 2019.
- Western Municipal Water District of Riverside County. 2019. Proposed Fiscal Year 2019-2020 Capital Improvement & Facilities Plan. June 5. Available: <https://www.wmwd.com/DocumentCenter/View/4733/Capital-Improvement-and-Facilities-Plan-Fiscal-Year-2019-2020>. Accessed: August 23, 2019.
- Western Riverside County Regional Conservation Authority. 2021. Existing Reserves. Available: <https://www.wrc-rca.org/habitat-conservation/reserves/>. Accessed: May 4, 2021.



## **8.6 Chapter 5, Statutorily Required Sections**

None.

## **8.7 Chapter 6, Alternatives Analysis**

San Bernardino Valley Municipal Water District (Valley District). 2018. *Santa Ana Sucker Translocation Plan*.

U.S. Fish and Wildlife Service (USFWS). 2017. *Recovery Plan for the Santa Ana Sucker*.

## **8.8 Chapter 7, Report Preparation and Persons Consulted**

None.

Appendix A

**Notice of Preparation and Comments Received**

---

**NOTICE OF PREPARATION  
OF  
ENVIRONMENTAL IMPACT REPORT**

---

Upper Santa Ana River Habitat Conservation Plan  
(Upper SAR HCP)

---

**LEAD AGENCY:**

San Bernardino Valley  
Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

*Primary Contact:*

*Heather Dyer, Water Resources Project Manager  
Email: [comments@sبvmwd.com](mailto:comments@sبvmwd.com) | Phone: (909) 387-9747*

**December 2018**

# Notice of Preparation (NOP) of an Environmental Impact Report (EIR)

**DATE:** December 7, 2018  
**TO:** Agencies & Interested Parties      **FROM:** San Bernardino Valley Municipal Water District

**SUBJECT:** Public Comment Period and Scoping Meeting for the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP) and the Notice of Preparation to Prepare an Environmental Impact Report (EIR).

The San Bernardino Valley Municipal Water District (Valley District), as the Lead Agency under the California Environmental Quality Act (CEQA), has determined in accordance with CEQA Sections 15060 and 15081 that preparation of an Environmental Impact Report (EIR) is required for the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). In accordance with Section 15060(d) an Initial Study is not required. The U.S. Fish and Wildlife Service (Service) will be the federal Lead Agency under the National Environmental Policy Act (NEPA) and will prepare an Environmental Impact Statement (EIS) separately for the Upper SAR HCP. The California Department of Fish and Wildlife (CDFW) is a Responsible and Trustee Agency for CEQA.

**Agencies:** We request input from your agency as to the scope and content of the environmental impact analysis relevant to your agency's statutory responsibilities and interests in connection with the proposed project. Your agency may need to use the EIR prepared by Valley District when considering any required permits issued by your agency or when authorizing other approvals for the project.

**Interested Parties:** Comments and concerns regarding the environmental issues associated with implementation and approval of this project are requested from organizations and individuals.

**Comments Due:** A 45-day public review of this Notice of Preparation begins on **December 6, 2018**. Any comments must be received **no later than 5 p.m. by January 21, 2018**. Please include your contact information and the name of your organization (if applicable) with your comment(s). Comments should be sent to:

Heather Dyer, Water Resources Project Manager  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408

Phone: (909) 387-9256, Fax: 909-387-9247

Email or online comments to: [comments@sbvmwd.com](mailto:comments@sbvmwd.com) or at <http://www.uppersarhcp.com/>

**Scoping Meeting:** A public scoping meeting will be held on **January 8, 2019, from 4:00 p.m. to 6:00 p.m.**, at the Valley District Office. Attendance is open to the public. The meeting will provide a brief description of the project, a brief overview of the CEQA process, and will provide a forum for submittal of public comments regarding the scope and content of the environmental analysis that will be provided within the EIR.

## 1.0 PROJECT SUMMARY

The project being analyzed in the EIR is the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP or HCP). The Upper SAR HCP is intended to serve a specified Permit Area generally within San Bernardino and Riverside Counties (**See Figure 1, Regional Location**) as a habitat conservation plan pursuant to the federal Endangered Species Act (FESA).

The HCP is being collaboratively developed by staffs from Valley District and other agencies in Southern California with planned water supply or other infrastructure projects needing permit coverage for endangered and threatened species in the Upper Santa Ana River watershed. On April 15, 2014, the Valley District Board of Directors authorized their role as lead agency for the development of the HCP, which currently has eleven funding partners (Partners): Valley District, City of Rialto, East Valley Water District, West Valley Water District, Inland Empire Utilities Agency, Riverside Public Utilities, Western Municipal Water District, San Bernardino Valley Water Conservation District, the City of San Bernardino Municipal Water District, Orange County Water District, and the Metropolitan Water District of Southern California. Southern California Edison will also be permittee of the HCP for their hydroelectric facilities that operate in streams being considered for Santa Ana sucker translocation. Together the twelve entities that will receive incidental take coverage through the Plan are referred to as the Permittees. Valley District is also leading the application process to the CDFW for a 2081 Incidental Take Permit for state listed species. The Upper SAR HCP participants include 11 local public agencies and Southern California Edison (SCE) (12 Permittees), the Service, and California Department of Fish and Wildlife (CDFW) (referred to as the Wildlife Agencies); see Section 2.3 below. Valley District is leading the preparation of the HCP for federally listed species and application to the Service on behalf of the parties that will implement the Upper SAR HCP.

The purpose of the HCP is to balance the effects of water supply management activities in the Plan Area with the conservation needs of special status plants and wildlife and their habitat. To meet this goal, the Upper SAR HCP has developed a conservation strategy that ensures the long term ecological health and resilience of native species within the Santa Ana River watershed. The conservation strategy includes measures to ensure that potential impacts on covered species and their habitats that could result from the proposed covered activities are avoided, minimized, and/or mitigated. The proposed covered activities, primarily related to water supply reliability, encompass long term maintenance of existing facilities as well as construction and operations of new facilities proposed by the permittees. These activities, called "covered activities," include water infrastructure development, construction, operations and maintenance (O&M) of water conservation facilities, flood control, habitat restoration, hydropower, and solar energy facility activities. The permittees are seeking a 50-year Incidental Take Permit, which would accommodate the expected schedule for construction of projects in the Plan Area and ongoing associated operations and maintenance.

Covered Activities involving infrastructure for water supply reliability (i.e. groundwater replenishment, direct reuse, conservation) and associated O&M are expected to extend beyond the 50-year period. Prior to expiration of the take permits, the Permittees may apply to the Service and CDFW to renew them. The permits may be renewed in accordance with applicable federal and state laws and regulations in effect at the time of application for renewal. The Permittees will initiate the permit renewal process prior to the expiration of the permit term with ample time to allow for the review and processing of the renewal application.



**Figure 1**  
**Regional Location Map**  
**Upper Santa Ana River Habitat Conservation Plan**

## **1.1 Project Objectives**

The Upper SAR HCP will achieve the specific project objectives listed below.

1. Allow issuance of permits to the Permittees for lawful incidental take<sup>1</sup> of species listed as threatened or endangered pursuant to the FESA and California Endangered Species Act (CESA) for implementation of planned local water supply projects to meet future demand.
2. Ensure the ability of the Permittees to construct new facilities and/or operate and maintain facilities associated with their mission.
3. Standardize avoidance, minimization, mitigation, and compensation requirements of the FESA, CESA, CEQA, and other applicable laws and regulations relating to biological and natural resources in the Plan Area, so that permittee actions will be governed consistently, thus reducing delays, expenses, and regulatory duplication.
4. Restore quantity, quality, and function of vulnerable habitats, conserve land and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species and prevent colonization by nonnative plants and animals, in order to offset impacts from permittee covered activities in the Plan Area.
5. Collaboratively manage the conservation of biological and aquatic resources at a watershed level and across jurisdictional boundaries to ensure that threatened and endangered species are protected with a long-term commitment.

## **2.0 PROJECT DESCRIPTION**

### **2.1 Project Location**

The area covered by the Plan Area is located in San Bernardino and Riverside Counties, California. The Plan Area encompasses approximately 862,987 acres. The Plan Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water resource agency boundaries extend beyond the Santa Ana River watershed or where the Plan Area is constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Plan Area because the Covered Activities and conservation activities under the HCP are not planned therein. Figure 1 shows the proposed project's regional location.

### **2.2 Project Background**

The Santa Ana River (SAR) watershed is the largest coastal stream system in Southern California, and has been the subject of many important water use and water rights agreements, judicial orders, judgments, and accords dating back to the early 20<sup>th</sup> century.

The Upper SAR is home to dozens of water districts, local jurisdictions, and other stakeholders with a vested interest in the management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. Many of these entities have participated in integrated regional watershed management coordination efforts in the Upper SAR since the 1960s. Recent cooperative planning initiatives among the water districts and stakeholders have resulted in a comprehensive vision for sustainable stewardship and watershed management (e.g., One Water, One Watershed 2.0 Plan finalized in 2014). However, several considerable challenges remain in the Upper SAR Watershed including modification of the Santa Ana River hydrogeomorphology, reduction of

---

<sup>1</sup> *Take* as defined by the FESA means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Incidental take* is take that is incidental to, and not intended as part of, an otherwise lawful activity.

river flow, alteration of natural habitats and the long term effects of these changes to the functional ecology and native species of the watershed.

Development of an HCP is a comprehensive planning process with careful consideration taken to address the FESA compliance needs of project proponents. The challenges facing water purveyors in the Upper SAR include the effects of population growth that increase water demand and decrease natural hydrological processes and groundwater recharge, the reduction of imported water availability, and the effects of climate change.

The primary purpose of this HCP is to give the partner agencies the ability to construct identified projects that would impact endangered species and require an incidental take permit. These public infrastructure projects have tremendous public value by increasing regional water supply reliability and improving flood protection. The Permittees will provide long-term commitment to native resources by agreeing to conserve, monitor, and manage covered species and their habitats in perpetuity. In exchange, The Permittees will receive assurances that the Service will not require additional land, water, or other natural resources beyond the level agreed upon in the HCP as long as the permittees are honoring the terms and conditions of the permit. The benefit of the HCP as a conservation tool is also extremely valuable because it provides a mechanism that allows Permittees, Wildlife Agencies, and other stakeholders to collaboratively address endangered species issues on a regional scale and with long term funding assurances. Together, the multi-stakeholder group can anticipate, prevent, and resolve potential conflicts over current and future resource needs through the HCP planning process. This includes development of strategies to meet minimum flow requirements to protect native aquatic species and riparian communities in the Santa Ana River. The breadth of Permittees' jurisdiction also allows creative solutions to be implemented for tributary restoration and long-term water supply for this habitat, even in the face of climate change and statewide water conservation. Finally, through the partnership and the collaborative efforts with the Wildlife agencies, a comprehensive strategy for long term protection, restoration, and conservation is being developed that will manage the natural resources and species of the Upper SAR watershed in a way that ensures long term ecological value to the region.

Another independent HCP, the Santa Ana River Wash Plan HCP (Wash Plan HCP), is under preparation in the watershed and includes several of the same participating water agencies with similar covered activities. The Wash Plan HCP began the public review process in 2017 and is expected to be completed in 2019. The Wash Plan HCP is also geographically located in the Upper Santa Ana River and includes the area from approximately 1 mile downstream of the Seven Oaks Dam to approximately 6 miles westward from Greenspot Road in the City of Highland to Alabama Street in the City of Redlands (encompassing approximately 4,892 acres). The Wash Plan HCP is entirely within the Upper SAR HCP Plan Area and given the overlap of participating water agencies and the similar name and geographic location, the two HCPs may be confused. While some covered activities have overlap between the two HCPs, the covered activities and associated incidental take permits of the Wash Plan HCP are independent of covered activities and incidental take permits of the Upper SAR HCP.

### **2.3 Permit Applicants**

The HCP participants include the 11 water resource agencies and SCE (12 Co-Permittees) and the Wildlife Agencies. The Co-Permittees are listed in alphabetical order below:

- City of Rialto Public Works (Rialto)
- East Valley Water District (East Valley)
- Inland Empire Utilities Agency (IEUA)
- Metropolitan Water District of Southern California (Metropolitan)
- Orange County Water District (OCWD)
- Riverside Public Utilities (RPU)
- San Bernardino Municipal Water Department (Water Department)



- San Bernardino Valley Municipal Water District (Valley District)
- San Bernardino Valley Water Conservation District (Conservation District)
- Southern California Edison (SCE)
- West Valley Water District (West Valley)
- Western Municipal Water District of Riverside County (Western)

When public agencies jointly prepare and implement a programmatic HCP, they typically use a co-permittee structure. In this approach, all permittees are named on one permit issued to all of them jointly. The Upper SAR HCP permit structure will likely follow this co-permittee approach with the exception of SCE holding an independent permit. The HCP delineates the responsibilities of each of the water agencies for HCP implementation, including funding. This approach provides the greatest flexibility in implementation and ensures that all permittees share equally in the obligations and risks associated with the HCP. The Permittees will apply for a Section 10(a)(1)(B) incidental take permit from the Service for all species in Upper SAR HCP and a Section 2081(b) permit from CDFW for all state-listed species in the Upper SAR HCP after CEQA and the National Environmental Policy Act (NEPA) approvals have been granted.

## **2.4 ENVIRONMENTAL SETTING AND GEOGRAPHIC SCOPE**

The Permit Applicants began the planning process by defining a broad area, the Plan Area, in which all planning would occur for the Upper SAR HCP (**see Figure 2, Plan Area**), followed by a Permit Area, which is where the focus of covered activities will take place. Both the Plan Area and Permit Area are discussed below.

### **2.4.1 Plan Area**

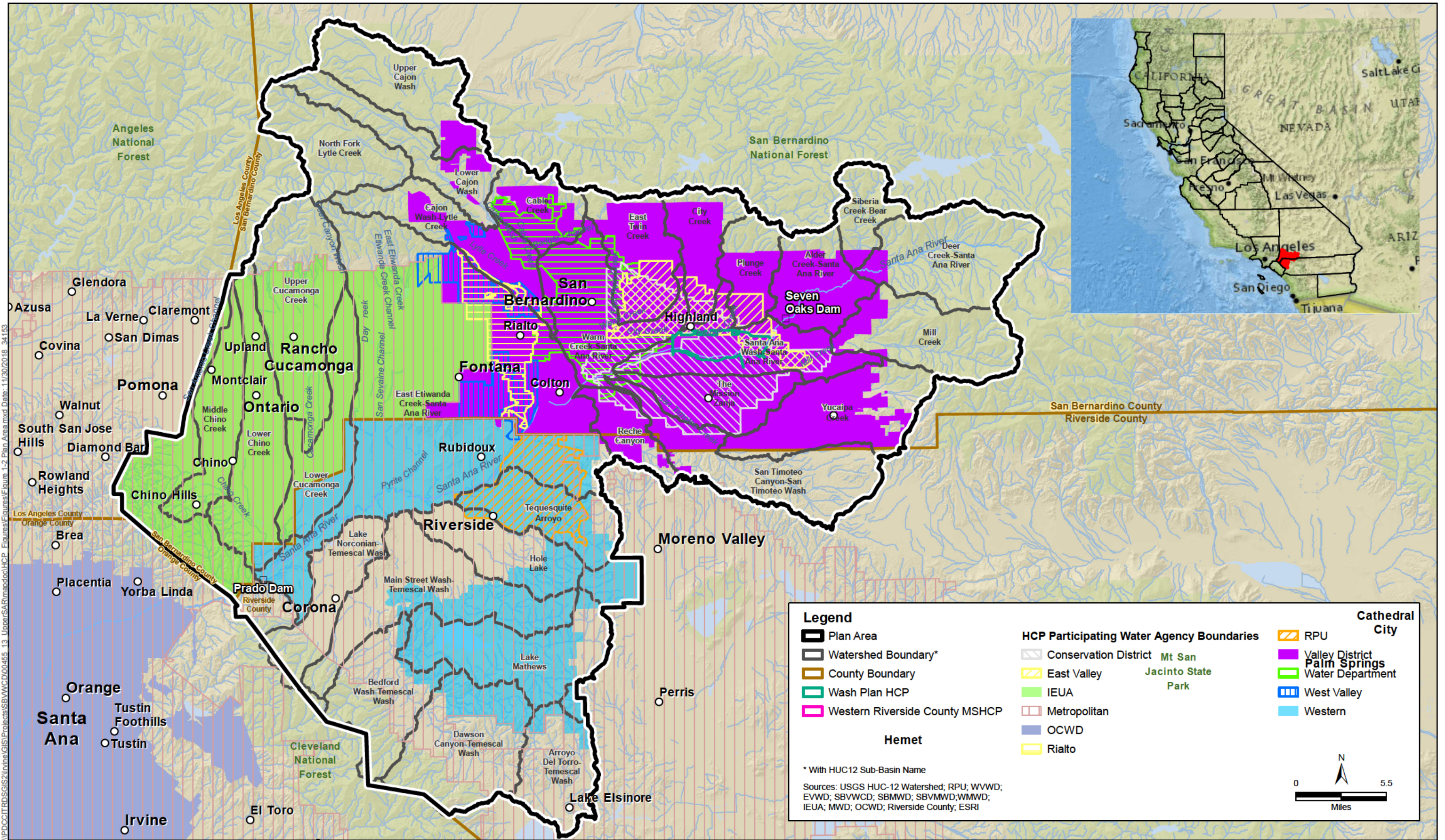
The Plan Area is the area that is being evaluated during the development of the HCP. All covered activities, including mitigation and avoidance and minimization measures, would occur within the Plan Area. The Plan Area proposed is 862,987 acres or 1,348 square miles. This Plan Area was developed to ensure that the natural resources that might be affected by covered activities can be adequately assessed at a regional scale and that sufficient mitigation opportunities are available.

The description that follows begins in the north and continues clockwise through all features used to assemble the Plan Area. The northern boundary follows the Santa Ana River watershed boundary, including the Upper Cajon Wash, Cable Creek, East Twin Creek, City Creek, Plunge Creek, Alder Creek-Santa Ana River, Siberia Creek-Bear Creek, and Deer Creek-Santa Ana River sub-watersheds. All of these sub-watersheds are intersected by at least one water resource agency service area boundary and contain habitat for the Covered Species where conservation activities could occur.

The eastern boundary follows the boundaries of the Deer Creek-Santa Ana River, Mill Creek, Yucaipa Creek, and San Timoteo Canyon-San Timoteo Wash sub-watersheds. These sub-watersheds contain Covered Species habitat where conservation activities could occur, and their lower reaches lie within water resource agency boundaries.

The southern boundary includes sub-watersheds that intersect water resource agency boundaries, including San Timoteo Canyon-San Timoteo Wash, Reche Canyon, East Etiwanda Creek-Santa Ana River, Tequesquite Arroyo, Lake Matthews, Arroyo Del Torro-Temescal Wash, and Dawson Canyon-Temescal Wash. The East Etiwanda Creek-Santa Ana River watershed is the largest sub-watershed included in the Plan Area, and its downstream extent terminates at Prado Dam.







The western boundary of the Plan Area corresponds with the San Bernardino-Los Angeles and San Bernardino-Orange County lines. The western region of the Plan Area includes the full extent of the Inland Empire Utilities Agency service area and the Middle Chino Creek, Lower Chino Creek, and Upper Cucamonga Creek sub-watersheds. The southwest portion includes Bedford Wash-Temescal Wash, Main Street Wash-Temescal Wash, and Lake Norconian-Temescal Wash sub-watersheds. The northwest portion includes the North Fork Lytle Creek, Upper Cajon Wash, and Lower Cajon Wash sub-watersheds.

#### 2.4.2 Permit Area

The Permit Area is the area in which the Permit Applicants are requesting take authorization from the Service and CDFW for activities and projects covered by this Plan. Covered activities will occur within the Permit Area, though conservation actions, including management and monitoring of mitigation sites, could occur within the larger Plan Area. A focused Permit Area will be identified during the HCP development process to identify the specific areas where take permits from the Wildlife Agencies are issued.

### 2.5 Covered Species

The incidental take permit issued by the Service must name specific species for which take is authorized that results from the impacts activities covered by the Plan. These species, called covered species, are either currently listed as threatened or endangered or may become listed during the permit term. Although the primary intent of this HCP is to provide conservation measures that offset the impacts to covered species, it will also contribute to the overall protection of native biological diversity, habitat for native species, natural communities, and local ecosystems. This broad scope will conserve a wide range of natural resources including native species that are common and those that are rare.

As listed in Table 1 below, the Upper SAR HCP proposes coverage for 22 listed and non-listed species, which include 21 animal species and two plant species. The incidental take authorization under Section 10 of ESA will apply to the wildlife species. The take of listed plant species is not prohibited under ESA or authorized under a Section 10(a)(1)(B) permit. However, plant species adequately conserved by this HCP are listed in the 10(a)(1)(B) permit in recognition of the conservation measures and benefits provided for them under the HCP such that the permittees will receive assurances pursuant to the Service’s “No Surprises” Rule. Federal authorization for incidental take of other species may be sought through the amendment process and in accordance with FESA Sections 10(a) and 7 (Table 1).

Species covered by the incidental take authorization under the CESA are Santa Ana River woolly-star, slender-horned spineflower, mountain yellow-legged frog, tricolored blackbird, western yellow-billed cuckoo, willow flycatcher, and least Bell’s vireo. State authorization for incidental take of other wildlife species may be sought through the amendment process and in accordance with the applicable provisions of the California Fish and Game Code.

**Table 1. Species Recommended for Coverage in the Upper Santa Ana River Habitat Conservation Plan**

	Common Name	Scientific Name	Status	
			Federal	State
<b>Plants</b>				
1	slender-horned spineflower	<i>Dodecahema leptoceras</i>	Endangered	Endangered
2	Santa Ana River woolly-star	<i>Eriastrum densifolium ssp. sanctorum</i>	Endangered	Endangered
<b>Invertebrates</b>				
3	Delhi Sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	Endangered	None

	Common Name	Scientific Name	Status	
			Federal	State
<b>Fish</b>				
4	Santa Ana sucker	<i>Catostomus santaanae</i>	Threatened	SSC
5	Arroyo chub	<i>Gila Orcuttii</i>	None	SSC
6	Santa Ana speckled dace	<i>Rhinichthys osculus ssp.3</i>	None	SSC
<b>Amphibians and Reptiles</b>				
7	arroyo toad	<i>Anaxyrus californicus</i>	Endangered	SSC
8	Mountain yellow-legged frog	<i>Rana muscosa</i>	Endangered	Endangered
9	western pond turtle	<i>Emys marmorata</i>	None	SSC
10	western spadefoot	<i>Spea hammondi</i>	None	SSC
11	South coast garter snake	<i>Thamnophis sirtalis ssp.</i>	None	SSC
12	California glossy snake	<i>Arizona elegans occidentalis</i>	None	None
<b>Birds</b>				
13	southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered
14	least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	Endangered
15	tricolored blackbird	<i>Agelaius tricolor</i>	None	SSC
16	western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Candidate	Endangered
17	yellow-breasted chat	<i>Icteria virens</i>	None	SSC
18	burrowing owl	<i>Athene cunicularia</i>	None	SSC
19	cactus wren	<i>Campylorhynchus brunneicapillus anthonyi</i>	None	None
20	coastal California gnatcatcher	<i>Poliophtila californica californica</i>	Threatened	SSC
<b>Mammals</b>				
21	San Bernardino Merriam's kangaroo rat	<i>Dipodomys merriami parvus</i>	Endangered	SSC
22	Los Angeles little pocket mouse	<i>Perognathus longimembris brevinasus</i>	None	SSC

Source: California Department of Fish and Game. 2017. California Natural Diversity Database, RareFind 5. Available: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed: [August 2017].

SSC = California Department of Fish and Wildlife Species of Special Concern

## 2.6 Covered Activities

The types of activities covered by the HCP (Covered Activities) include all actions to be covered by FESA Section 10 and CESA 2081(b) permits. Covered activities include both specific projects and ongoing activities (e.g., operations and maintenance actions).

- *Projects* are well-defined actions that occur **once** in a discrete location (e.g., construction of new facilities, infrastructure development, capital improvement projects).
- *Operations and maintenance activities* are actions that **occur repeatedly** in one area or over a wide area (e.g., bank stabilization, storm-damage repair, maintenance of facilities).

The Covered Activities have been subdivided into the following categories listed below in Table 2.

**Table 2. Covered Activity Types Included in the Upper SAR HCP**

<b>Activity Type</b>	<b>Description</b>
Treatment Facilities	Activities related to construction of new water treatment plants and associated facilities and operations and maintenance of existing and new water treatment plants and associated facilities
Diversions	Activities related to construction of new structures associated with diversion operation and operations and maintenance of existing and new diversion structures.
Recharge Basins	Activities related to construction of new recharge basins and operations and maintenance of existing and new recharge basins.
Flood Control	Activities related to the construction of new flood control structures and the operation and maintenance of existing and new flood control facilities.
Wells and Water Infrastructure	Activities related to the creation of new wells and associated development (pipelines, access roads, reservoirs, bridges) and the operations and maintenance of existing wells and associated development.
Solar Energy Development	Activities related to construction and maintenance of new solar projects.
General Property and Facility Maintenance	Activities related to new and existing property and facility maintenance.
Routine Operations and Maintenance	Actions that occur repeatedly in one location and/or in many locations over a wide area (e.g., bank stabilization, storm-damage repair, maintenance of facilities).
Habitat Enhancement and Monitoring	Activities that support the restoration and maintenance of habitat values in the HCP Preserve.

Activities not covered by the HCP and the incidental take authorizations are:

- Any activity conducted by a Permittee that is not described within this HCP and included in the covered activities GIS database.
- Any activity conducted by a non-Permittee is not covered under the HCP, for example:
  - Utility construction and maintenance, such as electric transmission lines, gas pipelines, petroleum pipelines, telecommunications lines, or cellular telephone stations and associated access roads, if not specifically required as part of a Covered Activity and included as part of the Covered Activity's design.
- Routine freeway operation and maintenance activities.
- Collection and handling of the Covered Species unless specifically required as a component of the biological monitoring and adaptive management for the HCP. Separate authorization from the Service and CDFW as appropriate is required for unrelated collection and handling of any listed species.
- Take of a Covered Species, species proposed for federal listing, state-listed species, or state candidate species as a result of the use of herbicides or other pesticides, or other chemical agents.<sup>2</sup>

<sup>2</sup> Activities associated with the application of herbicide that may result in take of a covered species (e.g., the operation of an all-terrain vehicle in San Bernardino Merriam's kangaroo rat habitat resulting in the collapse

### **3.0 ENVIRONMENTAL IMPACT REPORT**

The HCP will provide Incidental Take Permits (ITPs) for covered species under the State and federal Endangered Species Acts (ESAs) for HCP Permittees. Issuing the ITP by the Service will specifically require NEPA review, to be handled separately, whereas approval of the project itself requires CEQA review. Valley District will prepare a document (EIR) in compliance with CEQA. Valley District will be responsible for the scope and content of the document for CEQA purposes, and the Service will be responsible for the scope and content of the document for NEPA purposes separately.

The EIR will consider the proposed project (issuance of FESA permits) and a reasonable range of alternatives. A detailed description of the proposed project and alternatives will be included in the EIR. It is anticipated that the no project and one other alternative will be considered, which may include alternatives that vary by the level of conservation, impacts caused by the proposed activities, Permit Area, covered species, or a combination of these factors.

#### **3.1 Study of Probable Environmental Impacts of Project**

The EIR is anticipated to address potentially significant direct, indirect, and cumulative impacts and beneficial effects on the following environmental issues: aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, 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 and traffic, utilities and service systems, and tribal cultural resources. For potentially significant impacts, the EIR will identify mitigation measures, where feasible, to reduce these impacts to the extent possible.

#### **4.0 Proposed Discretionary Actions/Required Approvals**

Implementation of the project may require certain discretionary actions and approvals including and in addition to the HCP including, but not limited to, the following.

##### **4.1 Federal**

- United States Fish and Wildlife Service
  - Section 10 Incidental Take Permit and Approval of Habitat Conservation Plan
  - Certification of the Environmental Impact Statement
- U.S. Army Corps of Engineers
  - Section 404 Permit
  - Section 408 Permit

##### **4.2 State**

- California Department of Fish and Wildlife
  - Section 1600 et seq. permits (Streambed Alteration Agreements)
  - Section 2081 Permits (State-listed endangered species)

##### **4.3 Local**

- Regional Water Quality Control Board

---

of a San Bernardino Merriam's kangaroo rat burrow) are covered by the HCP. However, take resulting from the herbicide itself would not be covered. Applicators must use pesticides according to the label. This includes limits on applications to avoid impacts on wildlife.

- Section 401 Certification
- Section 402 National Pollutant Discharge Permit Construction General Permit Compliance
- San Bernardino Valley Municipal Water District
  - Adoption of final Upper SAR HCP
  - Certification of the Environmental Impact Report
  - Adoption of a Mitigation Monitoring and Reporting Program
  - San Bernardino Flood Control Encroachment Permit
- Individual agencies to have separate environmental review and approvals for each covered activity as needed

#### **5.0 DOCUMENT AVAILABILITY**

A copy of the NOP is available for review at the following locations:

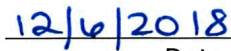
- San Bernardino Valley Municipal Water District, 380 East Vanderbilt Way, San Bernardino, CA 92408

For additional information regarding the Upper SAR HCP, please visit the following website:  
<http://www.uppersarhpc.com/>



---

Heather Dyer, Water Resources Project Manager  
San Bernardino Valley Municipal Water District



---

Date

Appendix B  
**Regional and Local Regulations**

---



# Appendix B

## Regional and Local Regulations

---

This appendix provides the individual local plans, policies, ordinances and programs for the County of San Bernardino General Plan and the County of Riverside General Plan for all the environmental resources evaluated in this environmental impact report (EIR). The discussion is provided below by section:

### Section 3.1, Aesthetics

#### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) was last amended in April 2014 and covers a planning period through 2020. The purpose of the General Plan is to express the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The relevant goals and policies are presented in the Land Use, Circulation and Infrastructure, Conservation, Open Space, and Safety Elements, as noted below.

#### Land Use Element

**Policy LU 12.2:** The Redevelopment Agency shall prepare and enforce development standards through the County Redevelopment Agency for the project areas that promote aesthetic enhancements and minimize impacts among adjoining uses.

**Policy LU 1.4:** Encourage preservation of the unique aspects of the rural communities and their rural character.

**Goal V/LU 1:** Provide opportunities, where possible, for a rural lifestyle that preserves the unique character within suitable locations of the Valley Region.

**Goal M/LU 1:** Retain the existing alpine character of the Mountain Region.

**Policy M/LU 1.1:** Regulate the density of development in sloping hillside areas in order to reduce fire hazards, prevent erosion, and to preserve the forest character of the region.

**Goal M/LU 2:** Provide opportunities for commercial and industrial development within the region that is compatible with the forest and mountain character and meets the needs of local residents and visitors.

**Policy M/LU 2.8:** Industrial land uses shall be located in areas where industrial uses will best serve the needs of the community and will have a minimum adverse effect upon surrounding property with minimal disturbance to the mountain environment and the total community. This can be accomplished by:

- a. Only permitting those industrial uses within the Community Industrial (IC) land use district or zone that can adequately control all sources of pollution, including noise, water and air quality concerns.

- b. Fully screening all open storage activities with fencing and indigenous landscaping, and limit open storage to the rear 75 percent of any parcel.
- c. Requiring the architecture and appearance of all buildings to be compatible with the mountain character; natural wood and masonry shall be used.

**Goal D/LU 1:** Maintain land use patterns in the Desert Region that enhance the rural environment and preserve the quality of life of the residents of the region.

**Goal D/LU 3:** Ensure that commercial and industrial development within the region is compatible with the rural desert character and meets the needs of local residents.

## Circulation and Infrastructure Element

**Policy CI 15.3:** Work with telecommunication industries to provide a reliable and effective network of facilities that is commensurate with open space aesthetics and human health and safety concerns.

**Goal D/CI 3:** Encourage property maintenance to enhance regional aesthetics with the promotion of water and soil conservation, recycling and proper solid waste disposal.

**Policy D/CI 3.1:** The County Land Use Services Department shall promote water and soil conservation through a variety of measures:

- a. Require native and drought tolerant landscaping or xeriscape in order to reduce watering needs, or retain native vegetation;
- b. Promote use of water efficient irrigation practices for all landscaped areas;
- c. Minimize use of irrigated landscape areas in commercial landscape; Encourage soil conservation methods for weed abatement that also limit fugitive dust.
- d. Provide educational materials regarding native desert plant protection ordinance and protected wildlife.

**Policy D/CI 3.4:** Where Commercial/Industrial/Multiple Family Residential uses are required through the Conditional Use Permit process to have landscaped areas, the following standards shall apply:

- a. Landscaping will consist of native or drought-tolerant plants capable of surviving the desert environment and climate with a minimum of maintenance and supplemental watering. The use of turf shall be minimized. A list of plants determined capable of meeting these criteria is available. Other plants may be considered on their merits in meeting these criteria. Determination of plant species suitability will be made upon submission of project plans.
- b. A maximum of ten percent of the project parcel shall be retained in planted landscaped areas in the interest of water conservation. Additional areas may include natural undeveloped and undisturbed areas that have sufficient native or compatible vegetation to promote a vegetated desert character and water conservation. All required vegetation shall be continuously maintained in a good condition. A landscape and irrigation plan shall be submitted and reviewed with any discretionary review request that proposes to install landscaping.
- c. Open space areas which are not to be left in a natural state will be landscaped with plants and vegetation in compliance with landscaping standards listed above.

**Policy D/CI 3.6:** Require subdivisions within the region to have all common landscaping be consistent with xeriscape design incorporating drought-tolerant plants as determined by the County and the water supply agency during review of landscape plans.

***Policy D/CI 3.10:*** Encourage the retention of natural drainage areas unless such areas cannot carry flood flows without damage to structures or other facilities.

***Policy D/CI 4.1:*** Promote public services commensurate with the rural character and rural lifestyles of the residents of the Desert Region.

## Conservation Element

***Policy CO 1.2:*** The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County will continue the review of the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

***Policy CO 8.1.4:*** Assist in the development and use of new designs for major transmission line towers that are aesthetically compatible with the environment from a close viewing distance.

***Policy CO 8.1.8:*** The County shall consult with electric utilities during the planning construction of their major transmission lines towers to ensure that they are aesthetically compatible with the surrounding environment.

***Policy CO 9.2.4:*** The County will consult with electric utilities during the construction of their major transmission line towers to ensure that they are aesthetically compatible with the surrounding environment.

***Goal M/CO 1:*** Preserve the unique environmental features of the Mountain Region including native wildlife, vegetation and scenic vistas.

***Policy M/CO 1.1:*** Encourage protection of natural features and scenic vistas by using the Special Development (SD) District or Zone to implement Planned Development and Planned Residential Development concepts.

***Policy M/CO 1.2:*** Protect scenic vistas by minimizing ridgeline development that would substantially detract from the scenic quality of major ridgeline viewsheds.

***Policy M/CO 1.4:*** Designate and protect unique habitats supporting rare and endangered species.

***Policy M/CO 1.7:*** Encourage conservation and sound management of the mountain forest character and natural resources, including water, streams, vegetation, soils and wildlife. Require the planting of native or drought-tolerant cultivar species, capable of surviving the mountain environment and climate.

***Policy M/CO 2.3:*** Require the re-vegetation of any graded surface with suitable native drought and fire-resistant planting to minimize erosion.

***Policy M/CO 2.7:*** Through the development review process, require replanting of ground cover in denuded areas with vegetation, either indigenous to the area or compatible with the montane climate and soil characteristics.

***Goal M/CO 5:*** Preserve the dark night sky as a natural resource in the Mountain Region communities.

***Policy M/CO 5.1:*** Protect the Night Sky by providing information about and enforcing existing ordinances:

**Policy M/CO 5.2:** Provide information about the Night Sky ordinance and lighting restrictions with each land use or building permit application.

**Policy M/CO 5.3:** Review exterior lighting as part of the design review process.

**Policy M/CO 5.4:** All outdoor lighting, including street lighting, shall be provided in accordance with the Night Sky Protection Ordinance and shall only be provided as necessary to meet safety standards.

**Goal D/CO 1:** Preserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas.

**Policy D/CO 1.1:** Encourage the greater retention of existing native vegetation for new development projects to help conserve water, retain soil in place and reduce air pollutants.

**Policy D/CO 1.2:** Require future land development practices to be compatible with the existing topography and scenic vistas, and protect the natural vegetation.

**Policy D/CO 1.3:** Require retention of existing native vegetation for new development projects, particularly Joshua trees, Mojave yuccas and creosote rings, and other species protected by the Development Code and other regulations. This can be accomplished by:

- a. Requiring a landscape plan, approved as part of the location and development plan review and approval process for all new development projects.
- b. Requiring the Building Official to make a finding that no other reasonable siting alternatives exist for development of the land prior to removal of a protected plant.
- c. Encourage on-site relocation of Joshua trees and Mojave yuccas. However, if on-site relocation is not feasible require developers to consult a list that will be established and maintained in the County Building and Safety Office of residents willing to adopt and care for relocated trees.
- d. The developer/home builder shall bear the cost of tree or yucca relocation.
- e. Retention and transplantation standards will follow best nursery practices.

**Policy D/CO 1.4:** Reduce disturbances to fragile desert soils as much as practicable in order to reduce fugitive dust. The County shall consider the following in the development of provisions to limit clearing.

- a. Parcels of one acre or larger shall not be disturbed or cleared of natural vegetation unless for the installation of building pads, driveways, landscaping, agriculture or other reasonable uses associated with the primary use of the land, including fire clearance areas.
- b. Fire abatement or local clean-up efforts shall be accomplished by mowing or means other than land scraping whenever possible to minimize fugitive dust and windblown sand. When de-brushing or blading is considered the most feasible alternative, additional methods shall be required for erosion control.
- c. The County Office of Building and Safety may issue permits for further grading or clearance of vegetation subject to proper review.

**Policy D/CO 1.5:** Mechanical removal of vegetation shall be minimized and limited to the building pad, driveway and areas prepared for permitted accessory uses.

**Policy D/CO 1.6:** In the landscaping of individual sites, native and other drought tolerant plants shall be encouraged.

**Policy D/CO 1.7:** Encourage and educate the public to maintain properties in a manner to minimize fugitive dust.

**Policy D/CO 1.8:** Require future development to utilize water conservation techniques.

**Policy D/CO 1.9:** Promote conservation of water by implementing the following policies/actions:

- a. Encourage the use of drip irrigation systems or systems of equivalent efficiency for all landscaping on residential lots.
- b. Encourage the use of pervious paving materials on commercial, industrial and institutional parking areas. Large parking areas should consider using landscape areas as depressions to receive and percolate runoff as an alternative.
- c. If a wastewater treatment system is developed within the region, the system which will reclaim the treated effluent and make it available for public or private landscape purposes.

**Policy D/CO 1.10:** Preserve scenic vistas where natural slope exceeds 15 percent by requiring building foundations for residential, non-residential and accessory structures to conform to the natural slope to ensure that rooflines do not eliminate or dominate the ridge lines or that the natural landform is not significantly impacted by excessive grading or erosion.

**Policy D/CO 1.11:** Encourage the retention of specimen sized Joshua Trees (as defined below) by requiring the Building Official to make a finding that no other reasonable siting alternative exists for the development of the land. Specimen size trees are defined as meeting one or more of the following criteria:

- a. Circumference measurement equal to or greater than 50 inches measured at 4 feet from grade.
- b. Total tree height of 15 feet or greater.
- c. Trees possessing a bark-like trunk.
- d. A cluster of ten (10) or more individual trees, of any size, growing in close proximity to each other.

**Goal D/CO 3:** Preserve the dark night sky as a natural resource in the Desert Region communities.

**Policy D/CO 3.1:** Protect the Night Sky by providing information about and enforcing existing ordinances:

- a. Provide information about the Night Sky ordinance and lighting restrictions with each land use or building permit application.
- b. Review exterior lighting as part of the design review process.

**Policy D/CO 3.2:** All outdoor lighting, including street lighting, shall be provided in accordance with the Night Sky Protection Ordinance and shall only be provided as necessary to meet safety standards.

**Policy D/CO 3.3:** Allow for desert communities' input on the need for, and placement of, new streetlights.

## Open Space Element

**Policy OS 1.9:** Ensure that open space and recreation areas are both preserved and provided to contribute to the overall balance of land uses and quality of life.

**Policy OS 1.9.3:** Areas in new developments that are not suitable for habitable structures will be offered for recreation, other open space uses, trails, and scenic uses. Retention of open space lands will be considered with modifications to a site to increase its buildable area. Potential measures used to set aside open space lands of all types include dedication to the County or an open space agency, dedication or purchase of conservation easements, and transfer of development rights. Use density transfer methods through the planned development process to preserve natural open space.

**Policy OS 2.3:** Locate trail routes to highlight the County's recreational and educational experiences, including natural, scenic, cultural, and historic features.

**Goal OS 4:** The County will preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.

**Policy OS 4.1:** The County will protect the scenic and open space qualities of cinder cones and lava flows. Permit extractive uses of cinder resources only when the scenic values can be adequately maintained.

**Policy OS 4.2:** The County will preserve and encourage the management of suitable land for greenbelts, forests, recreation facilities and flood control facilities to assist the County's efforts to provide adequate water supply, achieve air quality improvement, and provide habitat for fish, wildlife and wild vegetation.

**Policy OS 4.3:** On open space lands maintained by the County, grazing may be considered as part of an overall management strategy where this use is consistent with the purpose of the open space lands.

**Policy OS 4.4:** To preserve and protect recreational facilities in the County, utilize public funding mechanisms wherever possible to protect and acquire regional park lands.

**Goal OS 5:** The County will maintain and enhance the visual character of scenic routes in the County.

**Policy OS 5.1:** Features meeting the following criteria will be considered for designation as scenic resources:

- a. A roadway, vista point, or area that provides a vista of undisturbed natural areas.
- b. Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer).
- c. Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

**Policy OS 5.2:** Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

**Policy OS 5.3:** The County desires to retain the scenic character of visually important roadways throughout the County. A "scenic route" is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following routes as scenic highways and applies all applicable policies to development on these routes (see Figures 2-4A through 2-4C of the Circulation and Infrastructure Background Report):

**Valley Region:**

- a. Beaumont Avenue within the Loma Linda SOI.
- b. Citrus Avenue within the Redlands SOI.
- c. Colton Avenue within the Redlands SOI.
- d. Crafton Avenue within the Redlands SOI.
- e. Fifth Avenue within the Redlands SOI.
- f. Highland Avenue within the Redlands SOI.
- g. I-10 from the City of Redlands to the City of Yucaipa.
- h. Mentone Boulevard within the Redlands SOI.
- i. San Bernardino Avenue within the Redlands SOI.
- j. Sand Canyon Road between Crafton Avenue and the City of Yucaipa.
- k. San Timoteo Canyon Road in the Loma Linda SOI.
- l. State Route 71 — All of the route in unincorporated County area.

**Mountain Region:**

- a. Crest Forest Drive from State Route 18 west to Sawpit Canyon Road.
- b. Dart Canyon Road.
- c. Devil's Canyon Road.
- d. Grass Valley Road.
- e. Green Valley Lake Road/101 Mile Drive.
- f. Kuffel Canyon Road.
- g. Lake Drive from Knapps Cutoff northeast to Dart Canyon Road.
- h. Lake Gregory Drive.
- i. Lone Pine Canyon Road.
- j. Mt. Baldy Road from Los Angeles County line northeast to Mt. Baldy.
- k. North Road from Lake Gregory Drive northeast to State Route 189.
- l. Oak Glen Road.
- m. Old Waterman Canyon Road
- n. Playground Drive.
- o. Rim of the World Drive from Green Valley Lake Road to State Route 38.
- p. San Moritz Drive.
- q. Sawpit Canyon Road/Sawpit Creek Road.
- r. State Route 2 from State Route 138 southwest to the Los Angeles County line.
- s. State Route 330 from the San Bernardino National Forest boundary northeast to State Route 18.

**Desert Region:**

- a. Amboy Road from Bullion Mt. Road northeast to Amboy.
- b. \*Black Canyon Road.
- c. \*Cedar Canyon Road from Kelso Cima Road southeast to Lanfair Road.
- d. \*Cima Road from Interstate 15 southeast to Cima.
- e. \*Essex Road from Essex northwest to Mitchell Caverns.
- f. Historic Route 66 (National Trails Highway or Main Street) from Oro Grande northeast and east to the Arizona state line, excepting those areas with incorporated cities.
- g. Interstate 40 from Ludlow northeast to Needles.
- h. \*Kelbaker Road from Interstate 15 southeast to Interstate 40.
- i. \*Kelso-Cima Road from Kelso northeast to Cima.
- j. Lanfair/Ivanpah Road.
- k. Park Blvd./Quail Springs Road from State Route 62 southeast to Joshua Tree National Park.
- l. \*Parker Dam Road from Parker Dam southwest to the Colorado River Indian Reservation.
- m. Pioneer Town Road from Pipes Canyon Road to the Town of Yucca Valley.
- n. State Route 127 from Interstate 15 at Baker northwest to Inyo County line.
- o. State Route 247 (Old Woman Springs Road/Barstow Road) from the Town of Yucca Valley north to Barstow.
- p. State Route 62 (Twentynine Palms Highway) from the Riverside County line northeast to the Town of Yucca Valley; from the Town of Yucca Valley east to Twentynine Palms; from Twentynine Palms southeast to the Riverside County line and from the Riverside County line northeast to state line.

**Multiple Regions:**

- a. Baldwin Lake Road from State Route 18 southeast to Pioneer Town Road; continuing east on Pioneer Town Road to Burns Canyon Road; continuing southeast on Burns Canyon Road to Rimrock Road; and continuing southeast on Rimrock Road to Pipes Canyon Road.
- b. Coxe Truck Trail from Bowen Ranch Road southeast to Rim of the World Drive.
- c. Interstate 15 from the junction with Interstate 215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and the community of Baker where there is commercial/industrial development; those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side; and all incorporated areas.
- d. State Route 18 from San Bernardino northeast to the City of Big Bear Lake; from Big Bear Lake northwest to Apple Valley; within the Victorville sphere of influence; and from Victorville and Adelanto to the Los Angeles County line.
- e. State Route 38 from Garnet St. in Mentone northeast to Big Bear Dam
- f. State Route 138 from Crestline cutoff at State Route 18 northwest to Los Angeles County line.
- g. State Route 173 from State Route 18 northwest to Hesperia.



\*Starred items in the list above have been designated by the BLM as a part of their Back Country Byway Program, a component of the National Scenic Byway System.

**Policy OS 7.6:** Require that hillside development be compatible with natural features and the ability to develop the site in a manner that preserves the integrity and character of the hillside environment, including but not limited to, consideration of terrain, landform, access needs, fire and erosion hazards, watershed and flood factors, tree preservation, and scenic amenities and quality.

**Goal M/OS 1:** Ensure the preservation and proper management of National Forest lands within the Mountain Region to maintain the alpine character of the region.

**Policy D/OS 1.6:** No development of any kind, including resource extraction, shall be approved which would destroy or seriously diminish the visual quality of existing sand dunes.

## Safety Element

**Policy S 5.8:** Design flood control and drainage measures as part of an overall community improvement program that advances the goals of recreation, resource conservation, preservation of natural riparian vegetation and habitat, and the preservation of the scenic values of the County's streams and creeks.

**Policy S 5.8.1:** Consider ecological significance and aesthetic quality of natural drainage ways in the design of all drainage projects.

**Policy S 5.8.3:** Preserve all existing "unlined" and "natural" drainage channels and water courses, such as creeks and river beds, as resource management areas or linear parks and recreation trails, whenever technically and economically feasible. Linear parks and/or recreation trails will be part of a master-planned system.

**Policy S 6.2:** Utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply, and water recharge.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12% of unincorporated lands (the balance is primarily under Federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019. The Countywide Plan Natural Resources Element maintains specific goals and policies related to preservation of agricultural lands. The following goals and policies from the Land Use and Natural Resources Elements are pertinent to this EIR.

## Land Use Element

**Goal LU-2 Land Use Mix Compatibility:** An arrangement of land uses that balances the lifestyle of existing residents, the needs of future generations, opportunities for commercial and industrial development, and the value of the natural environment.

***Policy LU-2.5 Hillside Preservation:*** We require that new development in sloping hillside areas preserve the natural character of the surrounding environment and does not further exacerbate natural hazards or erosion.

***Goal LU-4 Community Design:*** Preservation and enhancement of unique community identities and their relationship with the natural environment.

***Policy LU-4.1 Context-Sensitive Design in the Mountain/Desert Regions:*** We require new development to employ site and building design techniques and use building materials that reflect the natural mountain or desert environment and preserve scenic resources.

***Policy LU-4.3 Native or Drought Tolerant Landscaping:*** We require new development, when outside of high and very high fire hazard severity zones, to install and maintain drought tolerant landscaping and encourage the use of native species.

***Policy LU-4.4 Natural Topography in the Mountain Region:*** We require new development in the Mountain region to retain natural topography and minimize grading unless it is necessary to reduce exposure to natural hazards.

***Policy LU-4.5 Community Identity:*** We require that new development be consistent with and reinforce the physical and historic character and identity of our unincorporated communities, as described in Table LU-3 and the values section of Community Action Guides. In addition, we consider the aspirations section of Community Action Guides in our review of new development.

***Policy LU-4.6 Adaptive Reuse:*** We encourage the rehabilitation, adaptive reuse, and revitalization of existing structures to preserve and celebrate the unique sense of place, identity, and history of our communities.

***Policy LU-4.7 Dark Skies:*** We minimize light pollution and glare to preserve views of the night sky, particularly in the Mountain and Desert regions where dark skies are fundamentally connected to community identities and local economies. We also promote the preservation of dark skies to assist the military in testing, training, and operations.

***Policy LU-4.10 Entry Monumentation, Signage, and Public Art:*** We encourage the installation of durable signage, entry monumentation, and/or works of public art in commercial areas of unincorporated Community Planning Areas as a means of reinforcing a community's character, culture, heritage, or other unique features.

## Natural Resources Element

***Goal NR-3 Open Spaces, Parks, and Recreation:*** A system of well-planned and maintained parks, trails, and open space that provides recreation opportunities for residents, attracts visitors from across the region and around the country, and preserves the natural environment.

***Policy NR-3.1 Open Space Preservation:*** We regulate land use and coordinate with public and nongovernmental agencies to preserve open space areas that protect natural resources, function as a buffer against natural hazards or between land uses, serve as a recreation or tourist destination, or are central to the identity of an unincorporated community.

***Goal NR-4 Scenic Resources:*** Scenic resources that highlight the natural environment and reinforce the identity of local communities and the county.

**Policy NR 4.1 Preservation of Scenic Resources:** We consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs.

**Policy NR-4.2 Coordination with Agencies:** We coordinate with adjacent federal, state, local, and tribal agencies to protect scenic resources that extend beyond the County's land use authority and are important to countywide residents, businesses, and tourists.

**Policy NR-4.3 Off-Site Signage:** We prohibit new off-site signage and encourage the removal of existing off-site signage along or within view of County Scenic Routes and State Scenic Highways.

**Goal NR-5 Biological Resources:** An interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors.

**Policy NR-5.3 Multiple-Resource Benefits:** We prioritize conservation actions that demonstrate multiple resource preservation benefits, such as biology, climate change adaptation and resiliency, hydrology, cultural, scenic, and community character.

## County of San Bernardino Code of Ordinances

San Bernardino County does not have any ordinances relevant to potential aesthetics impacts of the Proposed Project.

## County of Riverside General Plan

The County of Riverside General Plan contains the following aesthetics-related policies within multiple general plan elements that are pertinent to the EIR (County of Riverside 2015a, 2016a, 2016b, 2017).

### Land Use Element

**Policy LU 9.1:** Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.

**Policy LU 9.3:** Incorporate open space, community greenbelt separators, and recreational amenities into Community Development areas in order to enhance recreational opportunities and community aesthetics, and improve the quality of life.

**Policy LU 12.1:** Apply the following policies to areas where development is allowed and that contain natural slopes, canyons, or other significant elevation changes, regardless of land use designation:

- a. Require that hillside development minimize alteration of the natural landforms and natural vegetation.
- b. Allow development clustering to retain slopes in natural open space whenever possible.
- c. Require that areas with slope be developed in a manner to minimize the hazards from erosion and slope failures.
- d. Restrict development on visually significant ridgelines, canyon edges and hilltops through sensitive siting and appropriate landscaping to ensure development is visually unobtrusive.

- e. Require hillside adaptive construction techniques, such as post and beam construction, and special foundations for development when the need is identified in a soils and geology report which has been accepted by the County of Riverside.

**Policy LU 14.1:** Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.

**Policy LU 14.2:** Incorporate riding, hiking, and bicycle trails and other compatible public recreational facilities within scenic corridors.

**Policy LU 14.3:** Ensure that the design and appearance of new landscaping, structures, equipment, signs, or grading within Designated and Eligible State and County scenic highway corridors are compatible with the surrounding scenic setting or environment.

**Policy LU 14.4:** Maintain at least a 50-foot setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways.

**Policy LU 14.5:** Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and County Scenic Highways, to be placed underground.

**Policy LU 14.8:** Avoid the blocking of public views by solid walls.

**Policy LU 31.5:** Require that public facilities be designed to consider their surroundings and visually enhance, not degrade, the character of the surrounding area.

## Circulation Element

Figure C-8 in the Riverside County General Plan Circulation Element identifies County-eligible scenic corridors and are managed to protect their aesthetic value.

**Policy C 5.1:** Encourage Caltrans to install and maintain landscaping and other mitigation elements along freeways and highways, especially when they are adjacent to existing residential or other noise sensitive uses.

**Policy C 5.2:** Encourage the use of drought-tolerant native plants and the use of recycled water for roadway landscaping.

**Policy C 19.1:** Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan.

## Multipurpose Open Space Element

**Policy OS 4.7:** Encourage storm water management and urban runoff reduction as an enhanced aesthetic and experience design element. Many design practices exist to accomplish this depending on site conditions, planned use, cost-benefit, and development interest.

**Policy OS 9.3:** Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.

**Policy OS 21.1:** Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.

**Policy OS 22.3:** Encourage joint efforts among federal, state, and county agencies, and citizen groups to ensure compatible development within scenic corridors.

**Policy OS 22.4:** Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan, when it is necessary to preserve unique or special visual features.

**Policy OS 22.5:** Utilize contour grading and slope rounding to gradually transition graded road slopes into a natural configuration consistent with the topography of the areas within scenic highway corridors.

## Safety Element

**Policy S 3.4:** Require adequate mitigation of potential impacts from erosion, slope instability, or other hazardous slope conditions, or from loss of aesthetic resources for development occurring on slope and hillside areas.

## Healthy Communities Element

**Policy HC 4.1:** Promote healthy land use patterns by doing each of the following to the extent feasible:

- a. Preserving rural open space areas, and scenic resources.
- b. Preventing inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards.
- c. Developing incentives, such as transfer of development rights, clustered development, development easements, and other mechanisms, to preserve the economic value of agricultural and open space lands.

## County of Riverside Code of Ordinances

Riverside County does not have any ordinances relevant to potential aesthetics impacts of the Proposed Project.

## Section 3.2, Agriculture

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) expresses the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The Land Use, Conservation, and Open Space Elements provide goals and policies related to agricultural resources. The following are relevant to the Proposed Project.

### Land Use Element

**Goal V/LU 1.1:** Provide opportunities, where possible, for a rural lifestyle that preserves the unique character within suitable locations of the Valley Region.

**Policy V/LU 1.1:** Where appropriate, support small scale agricultural uses and animal-raising activities that are established in association with rural residential uses to ensure the continuation of

an important lifestyle in the Valley communities of Bloomington and Muscoy by maintaining the Additional Agricultural Overlay as delineated on the Land Use Policy Map.

***Policy M/LU 1.1:*** Regulate the density of development in sloping hillside areas in order to reduce fire hazards, prevent erosion, and to preserve the forest character of the region.

## Conservation Element

**Goal CO 1:** The County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County.

***Policy CO 1.1:*** The County will coordinate with appropriate agencies and interested groups to develop, fund and implement programs to maintain the County's natural resources' base.

***Policy CO 1.2:*** The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County will continue the review of the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

***Goal M/CO 1.7*** Encourage conservation and sound management of the mountain forest character and natural resources, including water, streams, vegetation, soils and wildlife. Require the planting of native or drought-tolerant cultivar species, capable of surviving the mountain environment and climate.

**Goal M/CO 2.** Maintain the health and vigor of the forest environment.

***Goal M/CO 2.3*** Require the re-vegetation of any graded surface with suitable native drought and fire resistant planting to minimize erosion.

***Goal M/CO 2.5*** Adopt and enforce tree protection and forest conservation provisions and standards as listed in the Development Code

***Goal M/CO 2.7*** Through the development review process, require replanting of ground cover in denuded areas with vegetation, either indigenous to the area or compatible with the montane climate and soil characteristics.

**Goal CO 6.** The County will balance the productivity and conservation of soil resources.

***Policy CO 6.1*** Protect prime agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

***Policy CO 6.2*** The County will allow the development of areas of prime agriculture lands supporting commercially valuable agriculture to urban intensity when it can be demonstrated that there is no long-term viability of the agricultural uses due to encroaching urbanization, creating incompatible land uses in close proximity to each other.

***Policy CO 6.3*** Preservation of prime and statewide important soils types, as well as areas exhibiting viable agricultural operations will be considered as an integral portion of the Open Space element when reviewing development proposals.

***Policy CO 6.4*** Provide and maintain a viable and diverse agricultural industry in San Bernardino County.

**Goal D/CO 4.** Protect agricultural lands from the effects of nonagricultural development.

**Policy D/CO 4.2** The conversion of agricultural land to non-agricultural uses shall be discouraged unless the proposed use can be demonstrated to be preferable in terms of economic development, and resource availability and resource conservation.

**Policy D/CO 4.3** Encourage adequate buffering between agricultural and nonagricultural land use zoning districts.

## Open Space Element

**Goal OS 4.** The County will preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.

**Policy OS 4.2** The County will preserve and encourage the management of suitable land for greenbelts, forests, recreation facilities and flood control facilities to assist the County's efforts to provide adequate water supply, achieve air quality improvement, and provide habitat for fish, wildlife and wild vegetation.

**Goal M/OS 1.** Ensure the preservation and proper management of National Forest lands within the Mountain Region to maintain the alpine character of the region.

## Agricultural Land Use Designations

The County of San Bernardino General Plan establishes two agricultural land use designations: Agriculture (AG) and Rural Living (RL).

### Agriculture (AG)

The AG (Agriculture) land use zoning district identifies areas where agriculture is the primary land use but where other secondary uses that directly support agricultural uses may be permitted. The County also aims to encourage the open space values of these uses and to provide areas for both extensive and intensive agricultural pursuits.

### Rural Living (RL)

The RL (Rural Living) land use zoning district provides sites where non-agricultural activities are the primary use of the land, but where agricultural and compatible uses may coexist.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under Federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019. The Countywide Plan Natural Resources Element maintains specific goals and policies related to preservation of agricultural lands. The following goals and policies from the Natural Resources Element are pertinent to this EIR.

## Natural Resources Element

**Goal NR-7** Agriculture and Soils: An ability of property and farm owners to conduct sustainable and economically viable farm operations.

**Policy NR-7.1** Protection of agricultural land: We protect economically viable and productive agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

**Policy NR-7.2** Preservation of important agricultural lands: We require project applicants seeking to develop 20 or more acres of agricultural land (classified as prime, of statewide importance, or unique) to non-agricultural uses to prepare an agricultural resource evaluation prior to project approval. The evaluation shall use generally accepted methodologies to identify the potentially significant impact of the loss of agricultural land as well as the economic viability of future agricultural use of the property. If the conversion is deemed significant, the County shall require mitigation at a 1:1 ratio of converted to preserved acreage through conservation easements, payment of its valuation equivalent if a fee mitigation program is established, or inclusion in a regional agricultural preservation program.

**Policy NR-7.3** Conservation and preservation incentives: We support programs and policies that provide tax and economic incentives to conserve existing productive agricultural lands or preserve agricultural land classified as prime, of statewide importance, unique, or of local importance. We support landowners in establishing new and maintaining existing California Land Conservation (Williamson Act) contracts.

**Policy NR-7.4** Economic diversity of farm operations: We encourage farm operations to strengthen their economic viability through diversifying potential sources of farm income and activity, including value added products, agricultural tourism, roadside stands, organic farming, and farmers markets. Ordinance Code 82-1 (65/35 Land Preservation Plan). The 65/35 Land Preservation Plan requires that urban development in the County shall be limited to no more than 35 percent of the land in all the County. At least 65 percent of all land in the County shall be preserved for agriculture, open space, wetlands, parks, and other nonurban uses. Ordinance Code Section 82-1.024 requires, to the extent feasible, that the County enter into preservation agreements with cities in the County designed to preserve certain land in the County for agriculture and open space, wetlands, or parks.

## Agricultural Land Use Zoning Designations

The San Bernardino Countywide Plan establishes two agricultural land use zoning districts: Agriculture (AG) and Floodway (FW).

### Agriculture (AG)

The AG (Agriculture) land use zoning district provides sites for commercial agricultural operations, agriculture support services, rural residential uses, and similar and compatible uses. Open space and recreation uses may occur on non-farmed lands within this land use zoning district.

### Floodway (FW)

The FW (Floodway) land use zoning district provides sites for animal keeping, grazing, crop production, and similar and compatible uses.



## County of San Bernardino Code of Ordinances

San Bernardino County does not have any ordinances relevant to potential agriculture or forestry resources.

## County of Riverside General Plan

The General Plan maintains specific policies related to the preservation of agricultural and forested lands. One of the general plan's principal goals is to provide for the continued and even expanded production of agricultural products by conserving areas appropriate for agriculture and related infrastructure and supporting services. The following goals and policies from the Land Use (County of Riverside 2019) and Multipurpose Open Space (County of Riverside 2015) Elements are pertinent to the EIR.

### Land Use Element

**Policy LU 7.10** The proponent for new development proposals on forested lands with at least 10% coverage of mature conifer trees, forest land or timber in which three or more acres of forested lands will be cleared (removed) of trees must demonstrate to the County of Riverside compliance with any/all applicable state regulations regarding the protection and operation of said forest resources. As used here, the term, "native trees," shall only apply to naturally-occurring conifers growing above 5,000 feet AMSL elevation. Additionally, replacement trees for all qualifying mature trees removed must be planted at a ratio of 1:1. The replacement trees must be planted on the project site or, where that is infeasible because the entire site must be permanently cleared, on property in an acceptable alternate location, preferably nearby.

**Policy LU 20.1** Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.

**Policy LU 20.2** Protect agricultural uses, including those with industrial characteristics (dairies, poultry, hog farms, etc.) by discouraging inappropriate land division in the immediate proximity and allowing only uses and intensities that are compatible with agricultural uses.

**Policy LU 20.3** Permit farm-workers housing as an interim land use under the following circumstances: The area in which the proposal is located appears to be predominantly agricultural in nature and does not appear it will change in the near future.

- a. The proposal is an interim use (5 to 10 years) and will not substantially affect the existing character of the area.
- b. Adequate infrastructure exists in the area to ensure safe, sound, and decent housing for farm workers.
- c. The proposal will not create any significant land use incompatibilities.
- d. The proposal will not jeopardize public health, safety, and welfare.

**Policy LU 20.4** Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production.

**Policy LU 20.5** Continue to participate in the California Land Conservation Act (the Williamson Act) of 1965.

**Policy LU 20.6** Require consideration of state agricultural land classification specifications when a 2.5-year Agriculture Foundation amendment to the General Plan is reviewed that would result in a shift from an agricultural to a non-agricultural use.

**Policy LU 20.7** Adhere to Riverside County's Right-to-Farm Ordinance.

**Policy LU 20.8** Encourage educational and incentive programs in coordination with the Riverside County Agricultural Commissioner's Office, the University of California Cooperative Extension Service, and the Riverside County Farm Bureau, that convey the importance of conserving watercourses and their associated habitat, as well as protective buffers for domestic and farm livestock grazing.

**Policy LU 20.9** Weigh the economic benefits of surface mining with the preservation/conservation of agriculture when considering mineral excavation proposals on land classified for agricultural uses.

**Policy LU 20.10** Allow agriculturally related retail uses such as feed stores and permanent produce stands in all areas and land use designations. It is not the County's intent pursuant to this policy to subject agricultural related uses to any discretionary permit requirements other than those in existence at the time of adoption of the General Plan.

**Policy LU 20.11** The County of Riverside shall pursue the creation of new incentive programs, such as tax credits, that encourage the continued viability of agricultural activities.

**Policy LU 20.12** Support and participate in ongoing public education programs by organizations such as the County Agricultural Commissioner's Office, University of California Cooperative Extension, Farm Bureau, and industry organizations to help the public better understand the importance of the agricultural industry.

## Multipurpose Open Space Element

**Policy OS 7.1** Work with state and federal agencies to periodically update the Agricultural Resources map to reflect current conditions.

**Policy OS 7.2** In cooperation with individual farmers, farming organizations, and farmland conservation organizations, the County of Riverside shall employ a variety of agricultural land conservation programs to improve the viability of farms and ranches and thereby ensure the long-term conservation of viable agricultural operations within Riverside County. The County of Riverside shall seek out available funding for farmland conservation. Examples of programs which may be employed include: land trusts; conservation easements (under certain circumstances, these may also provide federal and state tax benefits to farmers); dedication incentives; Land Conservation Contracts; Farmland Security Act contracts; the Agricultural Land Stewardship Program Fund; agricultural education programs; transfer and purchase of development rights; providing adequate incentives (e.g. clustering and density bonuses) to encourage conservation of productive agricultural land in Riverside County's Incentive Program; and providing various resource incentives to landowners (e.g. establish a reliable and/or less costly supply of irrigation water. The County of Riverside shall establish a Farmland Protection and Stewardship Committee and the Board of Supervisors shall appoint its members. The Committee shall include members of the farming community as well as other individuals and organizations committed to farmland protections and stewardship. The Committee shall develop a strategy to preserve agricultural land within Riverside County and shall identify and prioritize agricultural lands for conservation. This strategy shall not only address the preservation of agricultural land but shall also promote sustainable agriculture within Riverside County. In developing its strategy, the Committee shall consider an array of proven techniques and, where necessary, adapt these techniques to address the unique conditions faced by

the farming community within Riverside County. Riverside County staff shall assist the Committee in accomplishing its task. Riverside County Departments, that may be called upon to assist the Committee, include, but are not limited to the following: the Agricultural Commissioner, Planning Department, Assessor's Office and County Counsel. In developing its strategy, the Committee shall consult government and private organizations with expertise in farmland protection. These organizations may include, but are not limited to, the following: USDA Natural Resources Conservation Service; State Department of Conservation and its Division of Land Resource Protection; University of California Sustainable Agriculture Research and Education Program; the University of California Cooperative Extension; The Nature Conservancy; American Farmland Trust; The Conservation Fund; the Trust for Public Land; and the Land Trust Alliance. The Committee shall, from time to time, recommend to the Board of Supervisors the adoption of policies and/or regulation that it finds will further the goals of the farmland protection and stewardship. The Committee shall also advise the Board of Supervisors regarding proposed policies that curb urban sprawl and the accompanying conversion of agricultural land to urban development, and that support and sustain continued agriculture. Planning policies that may benefit farmland conservation and fall within the purview of the Committee for review include measures to promote efficient development in and around existing communities including clustering, incentive programs, transfer of development rights, and other planning tools.

***Policy OS 7.3*** Encourage conservation of productive agricultural lands and preservation of prime agricultural lands.

***Policy OS 7.4*** Encourage landowners to participate in programs that reduce soil erosion, improve soil quality, and address issues that relate to pest management. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other agencies and organizations.

***Policy OS 7.5*** Encourage the combination of agriculture with other compatible open space uses in order to provide an economic advantage to agriculture. Allow by right, in areas designated Agriculture, activities related to the production of food and fiber, and support uses incidental and secondary to the on-site agricultural operation.

***Policy OS 8.1*** Cooperate with federal and state agencies to achieve the sustainable conservation of forest land as a means of providing open space and protecting natural resources and habitat lands included within the [Multiple Species Habitat Conservation Plans].

***Policy OS 8.2*** Support conservation programs to reforest privately held forest lands.

***Policy OS 9.4*** Conserve the oak tree resources in the county.

## **Agricultural Land Use Designations**

The Riverside County General Plan establishes one agricultural land use designation: Agriculture (AG).

### **Agriculture (AG)**

The purpose of the AG designation is to “help conserve productive agricultural lands within the county” (County of Riverside 2019). This land use designation includes row crops, nurseries, citrus groves and vineyards, dairies, ranches, poultry and hog farms, and other agriculture-related uses. Areas designated as AG generally lack an infrastructure that is supportive of urban development.

Residential density is permitted at one dwelling unit per parcel provided that the parcel is 10 acres in size or larger. An additional dwelling unit may be allowed for each additional 10 acres being farmed for use by the owner, operator, or employees, up to five total dwelling units per parcel.

## County of Riverside Code of Ordinances

The County of Riverside Agricultural Commissioner's Office produces agricultural production reports for the acreage, yield, and gross valuation of all agricultural crops and livestock within Riverside County and oversees programs regarding environmental protection, pest prevention and exclusions, consumer protection, and compliance with many of the ordinances regarding agricultural production and operation provided below.

### Ordinance No. 559 (Regulating the Removal of Trees)

The purpose of this ordinance is to ensure that Riverside County's timberlands are protected and their ecological balance preserved by requiring the review and issuance of a permit prior to removal of living native trees on properties greater than one-half acre and located in the unincorporated area of the County of Riverside above 5,000 feet in elevation. In view of the proximity of the timberlands to urban centers of expanding population, and the unique nature of the timberlands themselves, this ordinance is necessary to protect and preserve such lands to serve the interests and provide for the welfare of the people of Riverside County. This ordinance does not apply to:

- Timber operations conducted under the Forest Practice Act;
- Trees removed on lands owned by the United States government or the State of California;
- Activities conducted by a public utility, subject to the jurisdiction of the Public Utilities Commission or any other constituted public agency, where, to construct and maintain safe operation of facilities under their jurisdiction, trees are removed, pruned, topped or braced;
- Trees removed by a federal or state agency; trees required to be removed per other codes, ordinances, or laws of the county, state, or federal government;
- Trees that the California Department of Forestry and Fire Protection recommends be removed because they are diseased, dying, dead, or otherwise detrimental to the forest health;
- Trees constituting immediate threats to public health, safety or general welfare and requiring emergency removal;
- Trees needing removal for stand management or stocking control (when accompanied by the written plan approved by the California Department of Forestry and Fire Protection);
- Trees removed pursuant to a County of Riverside permit containing conditions for the removal of trees;
- Trees that a fire protection agency requires be removed as part of an approved fire hazard reduction program; and
- Any tree within 20 feet of an existing legal structure.

### Ordinance No. 509 (Establishing Agricultural Preserves)

Agricultural preserves are lands identified for, and devoted to, agricultural and compatible uses, and are established through resolutions adopted by the Riverside County Board of Supervisors. The

purpose of this ordinance is to ensure that incompatible uses are not allowed within established agricultural preserves. It sets forth the powers of the County of Riverside in establishing and administering agricultural preserves pursuant to the California Land Conservation Act of 1965 (California Government Code Section 51200, et seq.). The ordinance also establishes “Uniform Rules” for the agricultural and compatible uses allowed in an agricultural preserve. Land uses not covered in the ordinance are prohibited within agricultural preserves.

### **Ordinance No. 625 (Right to Farm)**

The purpose of this ordinance is to “conserve, protect and encourage the development, improvement and continued viability of agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the county’s residents.” It seeks to “balance the rights of farmers to produce food and other agricultural products with the rights of nonfarmers who own, occupy or use land within or adjacent to agricultural areas.” Therefore, the ordinance includes regulations to reduce the loss of agricultural resources in Riverside County by limiting the circumstances under which agricultural operations may be deemed a “nuisance.” It states that an agricultural activity that has been operating for more than 3 years on a site (and assuming it was not a nuisance at the time it began) cannot be later classed as a public or private nuisance due to “any changed condition in or about the locality.” This prevents, for example, existing dairies from being targeted by odor complaints from residents of housing units constructed in the surrounding area 3 or more years after the dairy use began. Furthermore, it requires buyers of properties within 300 feet of any land zoned primarily for agricultural purposes to be given notice of the preexisting agricultural use and its right to continue.

### **Resolution No. 84-526 (Riverside County Rules and Regulations Governing Agricultural Preserves)**

These rules and regulations were adopted pursuant to California Government Code Section 51231 to govern agricultural preserve procedures within Riverside County and to aid in implementation of the Williamson Act. The rules and regulations address procedures for the initiation, establishment, enlargement, disestablishment, and diminishment of agricultural preserves. To protect existing agricultural lands and agricultural preserves within Riverside County, Division VI of the rules require a Comprehensive Agricultural Preserve Technical Advisory Committee (CAPTAC) to review and report on land use proposals and applications related to agricultural preserves and advise the Riverside County Board of Supervisors on the administration of agricultural preserves, as well as Williamson Act contract-related matters. In particular, the CAPTAC is charged with reviewing any proposals for the diminishment or disestablishment of an agricultural preserve and providing its recommendations to the Board of Supervisors. Regarding diminishments and disestablishments, the CAPTAC reviews the following findings:

- Whether a notice of nonrenewal has been served pursuant to the Williamson Act, Section 401 of these rules
- Whether a cancellation is likely to result in the removal of adjacent lands from agricultural use
- Whether the proposed alternative use of land is consistent with the provisions of the Riverside County General Plan
- Whether the cancellation will result in discontinuous patterns of urban development

- Whether there is proximate non-contracted land that is both available and suitable for the use for which the contracted land is being proposed
- Whether the development of the contracted land would provide more contiguous patterns of urban development than that of proximate non-contracted land

## Section 3.3, Air Quality

### County of San Bernardino General Plan

The County of San Bernardino General Plan includes goals and policies within the Conservation Element to ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy. Additional programs, goals and policies for San Bernardino County are provided in Section 3.7, *Greenhouse Gas Emissions*. The following policies from the General Plan Conservation Element would be applicable to the Proposed Project

**Policy CO 4.1** Because developments can add to the wind hazard (due to increased dust, the removal of wind breaks, and other factors), the County will require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:

- Grading restrictions and/or controls on the basis of soil types, topography or season.
- Landscaping methods, plant varieties, and scheduling to maximize successful revegetation.
- Dust-control measures during grading, heavy truck travel, and other dust generating activities.

**Policy CO 4.2** Coordinate air quality improvement technologies with the South Coast Air Quality Management District (SCAQMD) and the Mojave Air Quality Management District (MAQMD) to improve air quality through reductions in pollutants from the region.

#### Programs

- Establish incentives and/or regulations to eliminate work trips including such actions as:
  - Implementing staggered, flexible and compressed work schedules in public agencies.
  - Requiring work schedule flexibility programs for employers with more than 25 employees at a single location. Apply to existing businesses at license renewal time and to new businesses at project approval or permit stage.

**Policy CO 4.4** Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by insuring the timely provision of infrastructure to serve new development.

#### Programs

- Consistent with the land use designations in the Land Use Policy Map (see the Land Use Element) that will improve growth management at a subregional level in relation to major activity centers, review new development to encourage new intensified development around transit nodes and along transit corridors.
- Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants through such means as:

- a. Promoting mixed-use development to reduce the length and frequency of vehicle trips;
- b. Providing for increased intensity of development along existing and proposed transit corridors; and
- c. Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.
- d. The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses, as recommended in California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective, which includes the following:

Notable siting recommendations include avoiding siting new sensitive land uses within:

- 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
  - 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration units exceed 300 hours per week);
  - 1,000 feet of a chrome plater;
  - 300 feet of any dry cleaning operation; and 300 feet of a large gas station (defined as a facility with a through put of 3.6 million gallons per year or greater); a 50 foot separation is recommended for typical gas dispensing facilities
3. Incorporate phasing policies and requirements in the General Plan and development plans to achieve timely provision of infrastructure (particularly transportation facilities) to serve development through:
    - a. Tying growth to Level of Service (LOS) standards; and
    - b. Using phasing areas to manage growth.

**Policy CO 4.5** Reduce emissions through reduced energy consumption.

#### **Programs**

1. Implement programs to phase in energy conservation improvements through the annual budget process.

**Policy CO 4.6** Provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

**Policy CO 4.10** Support the development of alternative fuel infrastructure that is publicly accessible.

**Policy CO 4.12** Provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).

## **Proposed San Bernardino Countywide Plan Update**

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August

2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Natural Resource Element, as noted below.

**Goal NR-1 Air Quality** Air quality that promotes health and wellness of residents in San Bernardino County through improvements in locally-generated emissions.

**Policy NR-1.1 Land use.** We promote compact and transit-oriented development countywide and regulate the types and locations of development in unincorporated areas to minimize vehicle miles traveled and greenhouse gas emissions.

**Policy NR-1.2 Indoor air quality.** We promote the improvement of indoor air quality through the California Building and Energy Codes and through the provision of public health programs and services.

**Policy NR-1.3 Coordination on air pollution.** We collaborate with air quality management districts and other local agencies to monitor and reduce major pollutants affecting the county at the emission source.

**Policy NR-1.4 Military coordination on air quality.** We collaborate with the military to avoid or minimize impacts on military training and operations from air pollution and haze.

**Policy NR-1.5 Sensitive land uses.** We consider recommendations from the California Air Resources Board on the siting of new sensitive land uses and exposure to specific source categories.

**Policy NR-1.6 Fugitive dust emissions.** We coordinate with air quality management districts on requirements for dust control plans, revegetation, and soil compaction to prevent fugitive dust emissions.

**Policy NR-1.7 Greenhouse gas reduction targets.** We strive to meet the 2040 and 2050 greenhouse gas emission reduction targets in accordance with state law.

**Policy NR-1.8 Construction and operations.** We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

**Policy NR-1.9 Building design and upgrades.** We use the CALGreen Code to meet energy efficiency standards for new buildings and encourage the upgrading of existing buildings to incorporate design elements, building materials, and fixtures that improve environmental sustainability and reduce emissions.

## County of Riverside General Plan

The Air Quality Element of the County of Riverside General Plan is intended to provide background information on the physical and regulatory environment affecting air quality in the county. This element also identifies goals, policies, and programs that are meant to balance the County's actions regarding land use, circulation, and other issues with their potential effects on air quality. This element in conjunction with local and regional air quality planning efforts addresses ambient air quality standards set forth by EPA and CARB. The following programs, goals, and policies from the General Plan Air Quality Element would be applicable to the Proposed Project

**Policy AQ 1.1** Promote and participate with regional and local agencies, both public and private, to protect and improve air quality. (AI 111)



**Policy AQ 1.2** Support Southern California Association of Government's (SCAG) Regional Growth Management Plan by developing intergovernmental agreements with appropriate governmental entities such as the Western Riverside Council of Governments (WRCOG), the Coachella Valley Association of Governments (CVAG), sanitation districts, water districts, and those subregional entities identified in the Regional Growth Management Plan. (AI 111)

**Policy AQ 1.3** Participate in the development and update of those regional air quality management plans required under federal and state law, and meet all standards established for clean air in these plans. (AI 110)

**Policy AQ 1.4** Coordinate with the SCAQMD and MDAQMD to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced. (AI 111)

**Policy AQ 1.5** Establish and implement air quality, land use and circulation measures that improve not only the County's environment but the entire region. (AI 111)

**Policy AQ 1.9** Encourage, publicly recognize and reward innovative approaches that improve air quality. (AI 113)

**Policy AQ 1.10** Work with regional and local agencies to evaluate the feasibility of implementing a system of charges (e.g., pollution charges, user fees, congestion pricing and toll roads) that requires individuals who undertake polluting activities to bear the economic cost of their actions where possible. (AI 111)

**Policy AQ 2.1** The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible. (AI 114)

**Policy AQ 2.2** Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible. (AI 114)

**Policy AQ 2.3** Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution. (AI 114)

**Policy AQ 2.4** Consider creating a program to plant urban trees on an Area Plan basis that removes pollutants from the air, provides shade and decreases the negative impacts of heat on the air. (AI 114)

**Policy AQ 3.1** Allow the market place, as much as possible, to determine the most economical approach to relieve congestion and cut emissions.

**Policy AQ 3.2** Seek new cooperative relationships between employers and employees to reduce vehicle miles traveled.

**Policy AQ 3.3** Encourage large employers and commercial/industrial complexes to create Transportation Management Associations. (AI 115)

**Policy AQ 3.4** Encourage employee rideshares and transit incentives for employers with more than 25 employees at a single location.

**Policy AQ 4.1** Require the use of all feasible building materials/methods which reduce emissions.

**Policy AQ 4.2** Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

**Policy AQ 4.3** Require centrally heated facilities to utilize automated time clocks or occupant sensors to control heating where feasible.

**Policy AQ 4.5** Require stationary pollution sources to minimize the release of toxic pollutants through:

- Design features;
- Operating procedures;
- Preventive maintenance;
- Operator training; and
- Emergency response planning

**Policy AQ 4.6** Require stationary air pollution sources to comply with applicable air district rules and control measures.

**Policy AQ 4.7** To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.

**Policy AQ 4.8** Expand, as appropriate, measures contained in the County's Fugitive Dust Reduction Program for the Coachella Valley to the entire County.

**Policy AQ 4.9** Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.

**Policy AQ 4.10** Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended. (AI 111)

**Policy AQ 7.2** Work with SCAQMD and MDAQMD to develop a means to encourage the location of new commercial and industrial development in those localities where jobs are most needed. (AI 18)

**Policy AQ 7.4** Offer incentives to businesses to control emissions and implement the AQMP. (AI 18)

**Policy AQ 8.1** Locate new public facilities in job-poor areas of the county. (AI 18)

**Policy AQ 8.2** Emphasize job creation and reductions in vehicle miles traveled in job-poor areas to improve air quality over other less efficient methods. (AI 18)

**Policy AQ 8.3** Time and locate public facilities and services so that they further enhance job creation opportunities. (AI 18)

**Policy AQ 8.8** Promote land use patterns which reduce the number and length of motor vehicle trips. (AI 26)

**Policy AQ 8.9** Promote land use patterns that promote alternative modes of travel. (AI 26)

**Policy AQ 9.1** Cooperate with local, regional, state and federal jurisdictions to reduce vehicle miles traveled and motor vehicle emissions through job creation. (AI 18)

**Policy AQ 9.2** Attain performance goals and/or VMT reductions which are consistent with SCAG's Growth Management Plan. (AI 26)

**Policy AQ 10.1** Encourage trip reduction plans to promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking. (AI 47)

**Policy AQ 10.2** Use incentives, regulations and Transportation Demand Management in cooperation with surrounding jurisdictions when possible to eliminate vehicle trips which would otherwise be made. (AI 47)

**Policy AQ 10.4** Continue to enforce the County's Transportation Demand Management Ordinance and update as necessary.

**Policy AQ 12.1** Manage traffic flow through signal synchronization, while coordinating with and permitting the free flow of mass transit vehicles, when possible. (AI 117)

**Policy AQ 12.2** Synchronize signals throughout the County with those of its cities, adjoining counties and the California Department of Transportation. (AI 117)

**Policy AQ 12.3** Construct and improve traffic signals with channelization and Automated Traffic Surveillance and Control systems at appropriate intersections. (AI 117)

**Policy AQ 12.4** Eliminate traffic hazards and delays through highway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings, when possible. (AI 119)

**Policy AQ 12.5** Encourage business owners to schedule deliveries at off-peak traffic periods.

**Policy AQ 13.2** Cooperate with local, regional, state, and federal jurisdictions to better manage transportation facilities and fleets.

**Policy AQ 13.3** Encourage the construction of high-occupancy-vehicle (HOV) lanes whenever possible to relieve congestion, safety hazards and air pollution as described in the AQMP.

**Policy AQ 14.1** Emphasize the use of high occupancy vehicle lanes, light rail and bus routes, and pedestrian and bicycle facilities when using transportation facility development to improve mobility and air quality.

**Policy AQ 14.2** When developing new capital facility improvement plans, also consider measures such as Transportation Demand Management, Transportation Systems Management, or job/housing balance strategies.

**Policy AQ 14.3** Monitor traffic and congestion to determine when and where the County needs new transportation facilities to achieve increased mobility efficiency.

**Policy AQ 15.1** Identify and monitor sources, enforce existing regulations, and promote stronger controls to reduce particulate matter.

**Policy AQ 16.1** Cooperate with local, regional, state and federal jurisdictions to better control particulate matter.

**Policy AQ 16.2** Encourage stricter state and federal legislation on bias belted tires, smoking vehicles, and vehicles that spill debris on streets and highways, to better control particulate matter. (AI 113)

**Policy AQ 16.3** Collaborate with the SCAQMD and MDAQMD to require and/or encourage the adoption of regulations or incentives to limit the amount of time trucks may idle. (AI 120)

**Policy AQ 17.1** Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible. (AI 123)

**Policy AQ 17.3** Identify and create a control plan for areas within the County prone to wind erosion of soil.

**Policy AQ 17.4** Adopt incentives, regulations and/or procedures to manage paved and unpaved roads and parking lots so they produce the minimum practicable level of particulates. (AI 111)

**Policy AQ 17.5** Adopt incentives and/or procedures to limit dust from agricultural lands and operations, where applicable. (AI 123)

**Policy AQ 17.6** Reduce emissions from building materials and methods that generate excessive pollutants, through incentives and/or regulations.

**Policy AQ 17.7** Separate trucks from other vehicles in industrial areas of the County with the creation of truck only access lanes to promote the free flow of traffic. (AI 43)

**Policy AQ 17.8** Adopt regulations and programs necessary to meet state and federal guidelines for diesel emissions. (AI 121)

Additional programs, goals, and policies for Riverside County are provided under *Greenhouse Gas Emissions and Energy*.

## Section 3.4, Biological Resources

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) provides goals, policies, and programs designed to protect and conserve biological resources while minimizing impacts of land use development on the environment. The Land Use Element, Conservation Element, and Open Space Element of San Bernardino County's General Plan (County of San Bernardino 2007) contains countywide goals and policies that are relevant to the preservation of biological resources and are listed here. See the general plan for specific programs relating to the countywide goals and policies, as well as the goals and policies for the Valley Region and Mountain Region.

#### Land Use Element

**Goal LU 7** The distribution of land uses will be consistent with the maintenance of environmental quality, conservation of natural resources, and the preservation of open spaces.

**Policy LU 7.2** Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or streamside areas, and hazardous areas, such as flood plains, steep slopes, high fire risk areas, and geologically hazardous areas.

#### Conservation Element

**Goal CO 1** The County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County.

**Policy CO 1.1** The County will coordinate with appropriate agencies and interested groups to develop, fund and implement programs to maintain the County's natural resources' base.

**Policy CO 1.2** The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County will continue the review of the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic

area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

**Goal CO 2** The County will maintain and enhance biological diversity and healthy ecosystems throughout the County.

**Policy CO 2.1** The County will coordinate with state and federal agencies and departments to ensure that their programs to preserve rare and endangered species and protect areas of special habitat value, as well as conserve populations and habitats of commonly occurring species, are reflected in reviews and approvals of development programs.

**Policy CO 2.2** Provide a balanced approach to resource protection and recreational use of the natural environment.

**Policy CO 2.3** In addition to conditions of approval that may be required for specific future development proposals, the County shall establish long-term comprehensive plans for the County's role in the protection of native species because preservation and conservation of biological resources are statewide, Regional, and local issues that directly affect development rights. The conditions of approval of any land use application approved with the Biological Resource Overlay District shall incorporate the mitigation measures identified in the report required by Section 82.13.030 (Application Requirements), to protect and preserve the habitats of the identified plants and/or animals.

**Policy CO 2.4** All discretionary approvals requiring mitigation measures for impacts to biological resources will include the condition that the mitigation measures be monitored and modified, if necessary, unless a finding is made that such monitoring is not feasible.

## Open Space Element

**Goal OS 6** Improve and preserve open space corridors throughout the County.

**Policy OS 6.1** Support and actively pursue an open space preservation and acquisition program which will create a linked system of both privately and publicly owned open space lands throughout the County.

**Policy OS 6.2** Use open space corridors to link natural areas.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Natural Resources Element, as noted below.

## Natural Resources Element

**Goal NR-5** An interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors.

**Policy NR-5.1** Coordinated habitat planning. Participate in landscape-scale habitat conservation planning and coordinate with existing or proposed habitat conservation and natural resource management plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions and for land development and infrastructure permitting.

**Policy NR-5.2** Capacity for resource protection and management. Coordinate with public and nongovernmental agencies to seek funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species.

**Policy NR-5.3** Multiple-resource benefits. Prioritize conservation actions that demonstrate multiple resource preservation benefits, such as biology, climate change adaptation and resiliency, hydrology, cultural, scenic, and community character.

**Policy NR-5.4** Off-base recovery efforts. Coordinate with military installations to facilitate off-base recovery of threatened and endangered species and landscape-scale conservation.

**Policy NR-5.5** Mitigation and future responsibilities. Require that new development satisfy habitat conservation responsibilities without shifting conservation responsibilities onto military property.

**Policy NR-5.6** Mitigation banking. Support the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. We require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

**Policy NR-5.7** Development review, entitlement, and mitigation. Comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes.

**Policy NR-5.8** Invasive species. Require the use of non-invasive plant species with new development and encourage the management of existing invasive plant species that degrade ecological function.

## County of San Bernardino Tree Policy

The San Bernardino Tree Policy (Chapter 88.01 Plant Protection and Management) is an ordinance of the County of San Bernardino regulating the removal of trees. The policy states that “No person, except as provided in this policy, shall commence with a disturbance of land (e.g., grading or land clearing) without first obtaining approval to assure that said disturbance will not result in the removal of any regulated native trees or plants. Said approval may be in the form of a development permit or a Tree or Plant Removal Permit issued by the appropriate authority.”

## County of Riverside General Plan

The Multipurpose Open Space Element of Riverside County’s General Plan (County of Riverside 2015) contains policies that are relevant to the preservation of biological resources and are listed here.

## Floodplain and Riparian Area Management

**Policy OS 5.1** Substantially alter floodways or implement other channelization only as a “last resort,” and limit the alteration to:

- (a) That necessary for the protection of public health and safety only after all other options are exhausted;
- (b) Essential public service projects where no other feasible construction method or alternative project location exists; or
- (c) Projects where the primary function is improvement of fish and wildlife habitat. (AI 25, 59, 60)

**Policy OS 5.2** If substantial modification to a floodway is proposed, design it to reduce adverse environmental effects to the maximum extent feasible, considering the following factors:

- (a) Stream scour;
- (b) Erosion protection and sedimentation;
- (c) Wildlife habitat and linkages;
- (d) Cultural resources including human remains;
- (e) Groundwater recharge capability;
- (f) Adjacent property; and
- (g) Design (a natural effect, examples could include soft riparian bottoms and gentle bank slopes, wide and shallow floodways, minimization of visible use of concrete, and landscaping with native plants to the maximum extent possible). A site specific hydrologic study may be required. (AI 25, 59, 60)

**Policy OS 5.3** Based upon site, specific study, all development shall be set back from the floodway boundary a distance adequate to address the following issues: (AI 59, 60, 133)

- (a) Public safety;
- (b) Erosion;
- (c) Riparian or wetland buffer;
- (d) Wildlife movement corridor or linkage;
- (e) Slopes;
- (f) Type of watercourse;
- (f) Cultural resources.

**Policy OS 5.4** Consider designating floodway setbacks for greenways, trails, and recreation opportunities on a case-by-case basis. (AI 25, 59, 60)

**Policy OS 5.5** Preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses. Prohibit fencing that constricts flow across watercourses and their banks. Incentives shall be utilized to the maximum extent possible. (AI 25, 60)

**Policy OS 5.6** Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas. (AI 60, 61)

**Policy OS 5.7** Where land is prohibited from development due to its retention as natural floodways, floodplains and watercourses, incentives should be available to the owner of the land including

density transfer and other mechanisms as may be adopted. These incentives will be provided for the purpose of encouraging the preservation of natural watercourses without creating undue hardship on the owner of properties following these policies. (AI 60, 134, 135)

### **Wetlands**

**Policy OS 6.1** During the development review process, ensure compliance with the CWA Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands. (AI 3)

**Policy OS 6.2** Preserve buffer zones around wetlands where feasible and biologically appropriate. (AI 61)

**Policy OS 6.3** Consider wetlands for use as natural water treatment areas that will result in improvement of water quality. (AI 56)

### **Vegetation**

**Policy OS 9.1** Update the Vegetation Map for Western Riverside County in consultation with CDFW, the California Natural Diversity Data Base (CNDDDB), the United States Forest Service, and other knowledgeable agencies. The County of Riverside shall also provide these agencies with data as needed. (AI 11)

**Policy OS 9.2** Expand vegetation mapping to include the eastern portion of the County of Riverside. (AI 11)

**Policy OS 9.3** Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes. (AI 3, 79)

**Policy OS 9.4** Conserve the oak tree resources in the county. (AI 3, 77, 78)

**Policy OS 9.5** Encourage research and education on the effects of smog and other forms of pollution on human health and on natural vegetation.

**Policy OS 9.6** Conserve important traditional Native American plant gathering resource areas.

### **Multiple Species Habitat Conservation Plans**

**Policy OS 17.1** Enforce the provisions of applicable Multiple Species Habitat Conservation Plans (MSHCP) and implement related Riverside County policies when conducting review of possible legislative actions such as general plan amendments, zoning ordinance amendments, etc. including policies regarding the handling of private and public stand alone applications for general plan amendments, lot line adjustments and zoning ordinance amendments that are not accompanied by, or associated with, an application to subdivide or other land use development application. Every stand alone application shall require an initial Habitat Evaluation and Acquisition Negotiation Process (HANS) assessment and such assessment shall be made by the Planning Department's Environmental Programs Division. Habitat assessment and species-specific focused surveys shall not be required as part of this initial HANS assessment for stand alone applications but will be required when a development proposal or land use application to subsequently subdivide, grade or build on the property is submitted to the County.

**Policy OS 17.2** Enforce the provisions of applicable MSHCPs and implement related Riverside County policies when conducting review of development applications.



**Policy OS 17.3** Enforce the provisions of applicable MSHCP's and implement related Riverside County policies when developing transportation or other infrastructure projects that have been designated as covered activities in the applicable MSHCP.

### **Environmentally Sensitive Lands**

**Policy OS 18.1** Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs and through implementing related Riverside County policies.

**Policy OS 18.2** Provide incentives to landowners that will encourage the protection of significant resources in the county beyond the preservation and/or conservation required to mitigate project impacts. (AI 9)

**Policy OS 18.3** Prohibit the planting or introduction of invasive, non-native species to watercourses, their banks, riparian areas, or buffering setbacks.

**Policy OS 18.4** Develop standards for the management of private conservation easements and conservation lots in fee title. For areas with watercourses, apply special standards a – f (below) for their protection, and apply standards g-j (below) generally:

- (a) For conservation lands with watercourses, conform easement boundaries to setback conditions that will preserve natural flows and changes in the natural boundaries of a watercourse and its protective riparian habitat.
- (b) Use only “open” fencing that permits the movement of wildlife, and limit fencing to locations outside of setbacks to watercourses (no fencing is permitted to cross the banks or channel of a watercourse, unless no other option is available).
- (c) Allow fuel modification only to the outside of buffering vegetation (riparian vegetation and vegetation on slopes that buffer the watercourse from erosion and storm water pollution).
- (d) No planting of non-native invasive species is permitted.
- (e) No lighting of watercourse area is permitted.
- (f) Prohibit the use of pesticides and herbicides known to harm aquatic species and sensitive amphibians.
- (g) Ensure that lands under control of Homeowner's Associations employ an experienced nonprofit conservation group or agency to manage/maintain the land.
- (h) Prohibit use of recreational off-road vehicles.
- (i) Prohibit grazing and alterations of vegetation except for fuel and weed management under close supervision of qualified natural lands manager.
- (j) For private conservation lands, especially those within criteria cells of MSHCP areas, ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

### **Open Space, Parks, and Recreation**

**Policy OS 20.1** Preserve and maintain open space that protects County environmental and other nonrenewable resources and maximizes public health and safety in areas where significant environmental hazards and resources exist.

**Policy OS 20.2** Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas. (AI 74)

## County of Riverside Tree Removal Ordinance

Ordinance No. 559 (as amended through 559.7 and as provided for in Ordinance No. 725) is an ordinance of the County of Riverside regulating the removal of trees. This ordinance states that, “No person shall remove any living native tree on any parcel or property greater than one-half acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the County of Riverside, without first obtaining a permit to do so, unless exempted by the provisions of Section 4 of this ordinance.”

## County of Riverside Oak Tree Management Guidelines

Riverside County’s oak tree management guidelines, approved by the Riverside County Board of Supervisors on March 2, 1993, are intended to provide long-term protection and conservation of oak trees and oak woodlands and provide guidance on establishing baseline oak tree data to develop adequate avoidance, minimization, and/or compensation for impacts on this natural resource. For properties with oak tree resources, the guidelines include the following biological study requirements.

- Inventory of on-site vegetation, including:
  - The location and size of individual oak trees that are 2 inches diameter at breast height or larger within proposed roads, driveways, and homesites including their protected zones as identified by a biologist and mapped by a surveyor or engineer on a map that is the same scale as the project map.
  - An accurate depiction of the distance and direction of all proposed grading.
  - Identification of boundaries of plant communities.
  - Dead or dying trees within proposed roads, driveways, or homesites shall be identified and evaluated for their value to cavity nesting birds.
- Impacts of the proposed development shall be identified and quantified.
- All possible options for mitigation measures shall be identified, including redesign/clustering, if impacts cannot be avoided by the project as proposed.
- The biological report shall include required mitigation, consistent with CEQA and applicable State or County codes and ordinances.
- The mitigation program shall be incorporated into the project’s conditions of approval.

Refer to the guideline document for additional guidelines and design provisions.

## Section 3.5, Cultural Resources

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) expresses the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The relevant goals and policies are presented in the Conservation Element, as noted below.

**Goal CO 3** The County will preserve and promote its historic and prehistoric cultural heritage.

**Policy CO 3.1** Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

#### Programs

1. Require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped Cultural Resource Overlay area.
2. Mitigation of impacts to important cultural resources will follow the standards established in Appendix K of the California Environmental Quality Act Guidelines, as amended to date.

**Policy CO 3.2** Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.

#### Programs

1. Require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands located outside of planning regions.
2. Should the County's preliminary review indicate the presence of known cultural resources or moderate to high sensitivity for the potential presence of cultural resources, a field survey and evaluation prepared by a qualified professional will be required with project submittal. The format of the report and standards for evaluation will follow the "Guidelines for Cultural Resource Management Reports" on file with the San Bernardino County Land Use Services Department.

**Policy CO 3.3** Establish programs to preserve the information and heritage value of cultural and historical resources.

**Policy CO 3.4** The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

#### Programs

1. Site record forms and reports of surveys, test excavations, and data recovery programs will be filed with the Archaeological Information Center at the San Bernardino County Museum, and will be reviewed and approved in consultation with that office.
  - a. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed will be required prior to project grading and/or building permits.
  - b. Final reports will be submitted and approved prior to project occupancy permits.

2. Any artifacts collected or recovered as a result of cultural resource investigations will be catalogued per County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.
3. When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured will be developed and approved prior to conditional approval.

**Policy CO 3.5** Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.

### **Programs**

1. Consistent with SB 18, as well as possible mitigation measures identified through the CEQA process, the County will work and consult with local tribes to identify, protect and preserve “traditional cultural properties” (TCPs). TCPs include both manmade sites and resources as well as natural landscapes that contribute to the cultural significance of areas.
2. The County will protect confidential information concerning Native American cultural resources with internal procedures, per the requirements of SB 922, an addendum to SB 18. The purpose of SB 922 is to exempt cultural site information from public review as provided for in the Public Records Act. Information provided by tribes to the County shall be considered confidential or sacred.
3. The County will work in good faith with the local tribes, developers/applicants and other parties if the local affected tribes request the return of certain Native American artifacts from private development projects. The developer is expected to act in good faith when considering the local tribe’s request for artifacts. Artifacts not desired by the local tribe will be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts will be donated to the local tribe.
4. The County will work with the developer of any “gated community” to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites within the “gated community.” If a site is identified within a gated community project, and preferably preserved as open space, the development will be conditioned by the County allow future access to Native Americans to view and/or visit that site.
5. Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions will be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:
  - a. The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders will be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.
  - b. The concerns of the Native American community will be fully considered in the planning process.

- c. If human remains are encountered during grading and other construction excavation, work in the immediate vicinity will cease and the County Coroner will be contacted pursuant to the state Health and Safety Code.
- d. In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find will cease and a qualified archaeologist meeting U.S. Secretary of Interior standards will be hired to assess the find. Work on the overall project may continue during this assessment period.
- e. If Native American cultural resources are discovered, the County will contact the local tribe. If requested by the tribe, the County will, in good faith, consult on the discovery and its disposition with the tribe.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Natural Resources and Cultural Resources Elements, as noted below.

### Natural Resources Element

**Goal NR-4** Scenic Resources. Scenic resources that highlight the natural environment and reinforce the identity of local communities and the county.

**Policy NR-4.1** Preservation of scenic resources. We consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs.

**Policy NR-4.2** Coordination with agencies. We coordinate with adjacent federal, state, local, and tribal agencies to protect scenic resources that extend beyond the County's land use authority and are important to countywide residents, businesses, and tourists.

### Cultural Resources Element

**Goal CR-1** Tribal Cultural Resources. Tribal cultural resources that are preserved and celebrated out of respect for Native American beliefs and traditions.

**Policy CR-1.1** Tribal notification and coordination. We notify and coordinate with tribal representatives in accordance with state and federal laws to strengthen our working relationship with area tribes, avoid inadvertent discoveries of Native American archaeological sites and burials, assist with the treatment and disposition of inadvertent discoveries, and explore options of avoidance of cultural resources early in the planning process.

**Policy CR-1.2** Tribal planning. We will collaborate with local tribes on countywide planning efforts and, as permitted or required, planning efforts initiated by local tribes.

**Policy CR-1.3** Mitigation and avoidance. We consult with local tribes to establish appropriate project-specific mitigation measures and resource-specific treatment of potential cultural resources. We require project applicants to design projects to avoid known tribal cultural resources, whenever possible. If avoidance is not possible, we require appropriate mitigation to minimize project impacts on tribal cultural resources.

**Policy CR-1.4** Resource monitoring. We encourage active participation by local tribes as monitors in surveys, testing, excavation, and grading phases of development projects with potential impacts on tribal resources.

**Goal CR-2** Historic and Paleontological Resources. Historic resources (buildings, structures, or archaeological resources) and paleontological resources that are protected and preserved for their cultural importance to local communities as well as their research and educational potential.

**Policy CR-2.1** National and state historic resources. We encourage the preservation of archaeological sites and structures of state or national significance in accordance with the Secretary of Interior's standards.

**Policy CR-2.2** Local historic resources. We encourage property owners to maintain the historic integrity of resources on their property by (listed in order of preference): preservation, adaptive reuse, or memorialization.

**Policy CR-2.3** Paleontological and archaeological resources. We strive to protect paleontological and archaeological resources from loss or destruction by requiring that new development include appropriate mitigation to preserve the quality and integrity of these resources. We require new development to avoid paleontological and archeological resources whenever possible. If avoidance is not possible, we require the salvage and preservation of paleontological and archeological resources.

**Policy CR-2.4** Partnerships. We encourage partnerships to champion and financially support the preservation and restoration of historic sites, structures, and districts.

**Policy CR-2.5** Public awareness and education. We increase public awareness and conduct education efforts about the unique historic, natural, tribal, and cultural resources in San Bernardino County through the County Museum and in collaboration with other entities.

## County of San Bernardino Code of Ordinances

### Chapter 82.12. Cultural Resources Preservation (CP) Overlay

#### § 82.12.010. Purpose.

The Cultural Resources Preservation (CP) Overlay established by §§ 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is intended to provide for the identification and preservation of important archaeological and historical resources. This is necessary because:

- (a) Many of the resources are unique and non-renewable; and
- (b) The preservation of cultural resources provides a greater knowledge of County history, thus promoting County identity and conserving historic and scientific amenities for the benefit of future generations

**§ 82.12.020. Location Requirements.**

The CP Overlay may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories:

- (a) California Archaeological Inventory;
- (b) California Historic Resources Inventory;
- (c) California Historical Landmarks;
- (d) California Points of Historic Interest; and/or
- (e) National Register of Historic Places.

**§ 82.12.030. Application Requirements.**

The application for a project proposed within the CP Overlay shall include a report prepared by a qualified professional that determines through appropriate investigation the presence or absence of archaeological and/or historical resources on the project site and within the project area, and recommends appropriate data recovery or protection measures. The measures may include:

- (a) Site recordation;
- (b) Mapping and surface collection of artifacts, with appropriate analysis and curation;
- (c) Excavation of sub-surface deposits when present, along with appropriate analysis and artifact curation;
- (d) Preservation in an open space easement and/or dedication to an appropriate institution with provision for any necessary maintenance and protection; and/or
- (e) Proper curation of archeological and historical resource data and artifacts collected within a project area pursuant to federal repository standards. Such data and artifacts shall be curated at San Bernardino County Museum. Pursuant to State Historical Resources Commission motion dated February 2, 1992, the repository selected should consider 36 C.F.R. 79, Curation of Federally-owned and Administered Archaeological Collection, Final Rule, as published Federal Register, September 12, 1990, or a later amended for archival collection standards.

**§ 82.12.040. Development Standards.**

- (a) The proposed project shall incorporate all measures recommended in the report required by § 82.12.030 (Application Requirements).
- (b) Archaeological and historical resources determined by qualified professionals to be extremely important should be preserved as open space or dedicated to a public institution when possible.

**§ 82.12.050. Native American Monitor.**

If Native American cultural resources are discovered during grading or excavation of a development site of the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered.

## County of Riverside General Plan

The General Plan of the County of Riverside follows both federal and state laws and guidelines for the definition of significance and sensitivity of cultural resources. Cultural resources may include objects, buildings, structures, sites, area, places, records, or manuscripts. They also may include places that have historic or traditional associations or important for traditional cultural uses.

The cultural history of Riverside County is divided chronologically into time periods associated with European contact, before and after contact. Native American populations that predate European contact extend back over 10,000 years in history, which can be seen from numerous archaeological sites in the county.

The county has enacted the following policies in the Multipurpose Open Space Element (2015) to ensure that cultural resources are appropriately considered:

***Policy OS 19.1*** Cultural resources (both prehistoric and historic) are a values part of the history of the County of Riverside.

***Policy OS 19.2*** The County of Riverside shall establish a cultural resources program in consultation with Tribes and the professional cultural resources consulting community. Such a program shall, at a minimum, address each of the following: application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; and the descendant community consultation requirements of local, state and federal law.

***Policy OS 19.3*** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

***Policy OS 19.4*** To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state.

***Policy OS 19.5*** Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

## County of Riverside Code of Ordinances

### Title 2, Chapter 2.100 – Emergency Management Organization

#### 2.100.020 – Purpose

The declared purpose of this chapter is to provide for the coordination of disaster mitigation, preparation, response and recovery activities for the protection of persons and property within the County of Riverside in the event of an emergency or disaster; the establishment and direction of the emergency management organization; and the coordination of the emergency related activities of the County of Riverside, functioning as the operational area, with all other stakeholders including but not limited to public agencies, tribal partners, private non-government organizations, and the whole community.



**2.100.050 – Emergency Management Organization**

The Riverside County Emergency Management Organization consists of all officers and employees of the County of Riverside, its agencies, cities, tribal governments and special districts of Riverside County, together with all volunteers and all groups, organizations and persons commandeered under the provisions of the act and this chapter, with all equipment and material publicly owned, volunteered, commandeered or in any way under the control of the aforementioned personnel, for the support of the aforementioned personnel in the conduct of emergency operations.

**2.100.060 Disaster Council**

A. The Riverside County Disaster Council is hereby created and shall consist of the following:

(12) The director of emergency services from each tribe within Riverside County as appointed by the tribal council.

**Chapter 15.72 Historic Preservation Districts****§ 15.72.020. Purpose.**

The purpose of this chapter is to set forth reasonable and uniform procedures for historic preservation districts that do each of the following:

- A. Protect, enhance and perpetuate structures, architectural styles, landmarks and irreplaceable assets that represent past eras, events, and persons important in county history, or which provide significant examples of the physical surroundings in which past generations lived.
- B. Safeguard the county's historic heritage, as embodied and reflected in established historic preservation districts.
- C. Stabilize and improve property values.
- D. Protect and enhance the county's attractiveness to residents, tourists and visitors, and serve as a support and stimulus to business and industry.
- E. Strengthen the economy of the county.
- F. Promote the use of historic preservation districts for the education, pleasure, prosperity and welfare of the county's residents.

**Certified Local Governments**

In 1980, the NHPA was amended to include the Certified Local Governments (CLG) program. The purpose of this program was to support local governments in efforts to identify, evaluate, and register historic resources within their province and integrate preservation into local planning. A CLG is a local government whose historic preservation program and/or ordinance has been certified pursuant to Section 101(c) of the NHPA. The CLG program is a partnership among local governments, the California Office of Historic Preservation, and the National Park Service, which is responsible for administering the National Historic Preservation Program. CLGs must be included in the process of nominating properties within their jurisdictions to the NRHP. They are also eligible to apply for a portion of the state's annual allotment of Historic Preservation Funds, which are designated for historic preservation projects.

Of the cities within the Planning Area, Colton, Highland, Ontario, Pomona, Norco, Redlands, Riverside are participating CLG members, and are subject to its historic preservation plan. The plan includes designation criteria, the public hearing process, maintenance and relocation requirements for historic properties, and incentives for maintenance and development of historic properties.

## Section 3.6, Geology, Soils and Paleontological Resources

### Geologic, Seismic, and Soil Hazards

#### Southern California Association of Governments

##### Regional Transportation Plan/Sustainable Communities Strategy

The Regional Transportation Plan/Sustainable Communities Strategy (2016) provides mitigation measures designed to minimize geologic, soil, and seismic hazards, as follows:

- Comply with Section 4.7.2 of the Alquist-Priolo Act, requiring a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.
- Comply with the CBSC and local regulatory agencies with oversight of development associated with the project, ensuring that projects are designed in accordance with county and city code requirements for seismic ground shaking.
- Adhere to design standards described in the CBSC and all standard geotechnical investigation, design, grading, and construction practices to avoid or reduce impacts from earthquakes, ground shaking, ground failure, and landslides.

#### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007a) provides goals, policies, and programs designed to minimize geologic, soil, and seismic hazards and impacts on paleontological resources. The relevant goals, policies, and programs are presented in the Conservation, Circulation and Infrastructure, and Safety Elements, as noted below.

##### Conservation Element

**Goal CO 3** The County will preserve and promote its historic and prehistoric cultural heritage.

**Policy CO 3.4** The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

##### Programs

4. In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontologic monitoring.
5. Projects requiring grading plans that are located in areas of known fossil occurrences, or demonstrated in a field survey to have fossils present, will have all rough grading (cuts greater than 3 feet) monitored by trained paleontologic crews working under the direction of a qualified

professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.

6. A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

**Goal M/CO 4** Protect cultural and paleontological resources within the Mountain Region.

**Goal D/CO 5** The County will balance the productivity and conservation of soil resources.

**Policy D/CO 5.1** Desert playas shall not be used for habitable structures nor have large quantities of waters applied to them, except for mining operations or to maintain existing wetlands.

**Goal D/CO 6** Protect cultural and paleontological resources within the Desert Region.

## Circulation and Infrastructure Element

**Goal D/CI 3** Encourage property maintenance to enhance regional aesthetics with the promotion of water and soil conservation, recycling and proper solid waste disposal.

**Policy D/CI 3.1** The County Land Use Services Department shall promote water and soil conservation through a variety of measures:

- a. Require native and drought tolerant landscaping or xeriscape in order to reduce watering needs, or retain native vegetation;
- b. Promote use of water efficient irrigation practices for all landscaped areas;
- c. Minimize use of irrigated landscape areas in commercial landscape; Encourage soil conservation methods for weed abatement that also limit fugitive dust.

## Safety Element

**Goal S 4** The County will minimize damage due to wind and water erosion where possible.

**Policy S4.2** Apply the provisions of the Revised Erosion and Sediment Control Ordinance countywide.

**Policy S4.3** Tailor grading, land clearance, and grazing to prevent unnatural erosion in erosion susceptible areas.

**Goal S 6** The County will protect residents from natural and manmade hazards.

**Policy S 6.1** Require development on hillsides to be sited in such a manner that minimizes the extent of topographic alteration required to minimize erosion, to maintain slope stability, and to reduce the potential for offsite sediment transport.

**Goal S 7** The County will minimize exposure to hazards and structural damage from geologic and seismic conditions.

**Policy S 7.1** Strive to mitigate the risks from geologic hazards through a combination of engineering, construction, land use, and development standards.

**Programs**

1. Require sites to be developed and all structures designed in accordance with recommendations contained in any required geotechnical or geologic reports, through conditioning, construction plans, and field inspections.
2. Require that all recommended mitigation measures be clearly indicated on all grading and construction plans.
3. Require all facilities to meet appropriate geologic hazard specifications as determined by the County Geologist for discretionary and ministerial authorizations.
4. Because of the potential for displacement along faults not classified as active, the County will reserve the right to require site-specific geotechnical analysis and mitigation for development located contiguous to potentially active faults, if deemed necessary by the County Geologist.

**Policy S 7.3** Coordinate with local, regional, state, federal, and other private agencies to provide adequate protection against seismic hazards to County residents.

**Programs**

1. Continue to work with public utilities, school districts, railroads, the state Department of Transportation (Caltrans), and other agencies supplying critical public services to ensure that they have incorporated structural safety and other measures to be adequately protected from seismic hazards for both existing and proposed facilities.
2. Coordinate with utility companies to institute orderly programs of installing cut-off devices on utility lines, starting with the lines that appear to be most vulnerable and those that serve the most people. Adequate emergency water supplies will be established and maintained in areas dependent upon water lines that cross active fault zones.

**Policy S 7.4** Designate areas identified by the Alquist-Priolo Earthquake Fault Zoning Act (Public Resource Code, Division 2, Chapter 7.5) on the Hazard Overlay Maps to protect occupants and structures from high level of risk caused by ground rupture during earthquake.

**Programs**

1. Apply the definitions, provisions, and mapping of the Alquist-Priolo Earthquake Fault Zoning Act.
2. Apply the Land Use Compatibility Chart in Earthquake Fault Zones (Table S-2) when reviewing all discretionary and ministerial applications.

**Policy S 7.5** Minimize damage cause by liquefaction, which can cause devastating structural damage and a high potential for saturation exists when the groundwater level is within the upper 50 feet of alluvial material.

**Programs**

1. Require that each site located within the Liquefaction Hazard Overlay be evaluated by a licensed geologist prior to design, land disturbance or construction, for soil type, history of the water table's fluctuation, and adequacy of the structural engineering to withstand the effects of liquefaction.
2. Apply the Land Use Compatibility Chart in Liquefaction Potential Zones (Table S-3) when reviewing all discretionary and ministerial applications.

**Policy S 7.6** Protect life and property from risks resulting from landslide, especially in San Bernardino and San Gabriel Mountains that have high landslide potential.

## Programs

1. Require that a stability analysis be required in Landslide Hazard areas designated “Generally Susceptible” and “Most Susceptible” on the Hazards Overlay Maps and where required by the County Geologist.
2. Require site development and construction comply with soil and geologic investigation report recommendations.
3. Apply the Land Use Compatibility Chart in Landslide Susceptibility Zones (Table S-4) when reviewing all discretionary and ministerial applications.
4. Restrict avoidable alteration of the land that is likely to increase the hazard within areas of demonstrated or potential landslide hazard, including concentrations of water through drainage or septic systems, removal of vegetative cover, steepening of slopes, and undercutting the base of a slope.
5. Restrict grading to minimal amounts necessary to provide access and require grading permits to have an approved site plan that conforms to the recommendations of any required geologic investigation.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County’s General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Hazards and Cultural Resources Elements, as noted below.

### Hazards Element

**Goal HZ** Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

**Policy HZ-1.2 New development in environmental hazard areas.** We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)

**Policy HZ-1.6 Critical and essential facility location.** We require new critical and essential facilities to be located outside of hazard areas, whenever feasible.

**Policy HZ-1.7 Underground utilities.** We require that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.

**Policy HZ-1.9 Hazard areas maintained as open space.** We minimize risk associated with flood, geologic, and fire hazard zones or areas by encouraging such areas to be preserved and maintained as open space.

## Cultural Resources Element

**Goal CR-2 Historic and Paleontological Resources.** Historic resources (buildings, structures, or archaeological resources) and paleontological resources that are protected and preserved for their cultural importance to local communities as well as their research and educational potential.

**Policy CR-2.3 Paleontological and archaeological resources.** We strive to protect paleontological and archaeological resources from loss or destruction by requiring that new development include appropriate mitigation to preserve the quality and integrity of these resources. We require new development to avoid paleontological and archeological resources whenever possible. If avoidance is not possible, we require the salvage and preservation of paleontological and archeological resources.

## San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan

The San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (County of San Bernardino 2017) is a document that sets out the hazards present in San Bernardino County, including geologic, soils, and seismic hazards, and provides a description of responsibilities and possible mitigation to reduce hazard risk.

**Earthquake Objective 4** Protect life and property from risks resulting from gravity-derived and/or earthquake-triggered landslides, expansive soils and/or other poor soil conditions. (Complements General Plan, Section VIII, Safety Element Policy § 7.6)

**EQ Action 4.1** Require development on hillsides to minimize the extent of topographic alteration and erosion, to maintain slope stability, and to reduce the potential for offsite sediment transport (Complements General Plan, Section VIII, Safety Element Policy § 6.1).

## County of San Bernardino Code of Ordinances

San Bernardino County Code of Ordinances, Division 3, Building Regulations, Chapter 1, Section 63.0101, states that San Bernardino County adopts the 2016 CBSC, contained in Part 2 of Title 24 of the California Code of Regulations.

## County of Riverside General Plan

### Safety Element

The County of Riverside General Plan Safety Element (2016) contains various policies to address geologic, soil, and seismic hazards. The following are relevant to the Proposed Plan:

**Policy S 1.1** Mitigate hazard impacts through adoption and strict enforcement of current building codes, which will be amended as necessary when local deficiencies are identified.

**Policy S 2.1** Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following policies: (AI 80, 91)

- a. Require geologic studies or analyses for critical structures, and lifeline, high-occupancy, schools, and high-risk structures, within 0.5 miles of all Quaternary to historic faults shown on the Earthquake Fault Studies Zones map.

- b. Require geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined and accepted by the Riverside County Engineering Geologist, is presented. The County of Riverside may require geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.
- c. Require that lifelines be designed to resist, without failure, their crossing of a fault, should fault rupture occur.

**Policy S 2.2** Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory buildings. (AI 81)

**Policy S 2.3** Require that a state-licensed professional investigate the potential for liquefaction in areas designated as underlain by “Susceptible Sediments” and “Shallow Ground Water” for all general construction projects, except for accessory buildings (Figure S-3).

**Policy S 2.4** Require that a State-licensed professional investigate the potential for liquefaction in areas identified as underlain by “Susceptible Sediments” for all proposed critical facilities (Figure S-3).

**Policy S 2.5** Require that engineered slopes be designed to resist seismically- induced failure. For lower-risk projects, slope design could be based on pseudo-static stability analyses using soil engineering parameters that are established on a site-specific basis. For higher-risk projects, the stability analyses should factor in the intensity of expected ground shaking, using a Newmark-type deformation analysis.

**Policy S 2.6** Require that cut and fill transition lots be over-excavated to mitigate the potential of seismically-induced differential settlement.

**Policy S 2.7** Require a 100% maximum variation of fill depths beneath structures to mitigate the potential of seismically-induced differential settlement.

**Policy S 3.1** Require the following in landslide potential hazard management zones, or when deemed necessary by the California Environmental Quality Act: (AI 104)

- a. Preliminary geotechnical and geologic investigations.
- b. Evaluations of site stability, including any possible impact on adjacent properties, before final project design is approved.
- c. Consultant reports, investigations, and design recommendations required for grading permits, building permits, and subdivision applications be prepared by state-licensed professionals.

**Policy S 3.2** Require that stabilized landslides be provided with redundant drainage systems. Provisions for the maintenance of subdrains must be designed into the system.

**Policy S 3.3** Before issuance of building permits, require certification regarding the stability of the site against adverse effects of rain, earthquakes, and subsidence.

**Policy S 3.4** Require adequate mitigation of potential impacts from erosion, slope instability, or other hazardous slope conditions, or from loss of aesthetic resources for development occurring on slope and hillside areas.

**Policy S 3.5** During permit review, identify and encourage mitigation of onsite and offsite slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements.

**Policy S 3.6** Require grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, in order to assure the adequate demonstration of a project=s ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.

**Policy S 3.7** Support mitigation on existing public and private property located on unstable hillside areas, especially slopes with recurring failures where Riverside County property or public right-of-way is threatened from slope instability, or where considered appropriate and urgent by the Riverside County Engineer, Fire, or Sheriff Department. (AI 100)

**Policy S 3.8** Require geotechnical studies within documented subsidence zones, as well as zones that may be susceptible to subsidence, as identified in Figure S-7 and the Technical Background Report, prior to the issuance of development permits. Within the documented subsidence zones of the Coachella, San Jacinto, and Elsinore valleys, the studies must address the potential for reactivation of these zones, consider the potential impact on the project, and provide adequate and acceptable mitigation measures.

## County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan

The County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan (County of Riverside 2018) includes the following policies and recommendations.

### Earthquake Hazards

**S 1.1** Mitigate hazard impacts through adoption and strict enforcement of current building codes, which will be amended as necessary when local deficiencies are identified.

**S 1.2** Enforce state laws aimed at identification, inventory, and retrofit of existing vulnerable structures.

**S 2.1** Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following policies: (AI 80, 91)

- a. Require geologic studies or analyses for critical structures, lifeline, high-occupancy, schools, and high-risk structures within 0.5 miles of all Quaternary historic faults shown on the Earthquake Fault Studies Zones map.
- b. Require geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined and accepted by the Riverside County Engineering Geologist, is presented. The County of Riverside may require geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.
- c. Require that lifelines be designed to resist, without failure, their crossing of a fault, should fault rupture occur.
- d. Support efforts by the California Department of Conservation, California Geological Survey to develop geologic and engineering solutions in areas of ground deformation due to faulting and seismic activity, in those areas where a through-going fault cannot be reliably located.

**S 2.2** Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory buildings.

**S 2.5** Require that engineered slopes be designed to resist seismically- induced failure. For lower-risk projects, slope design could be based on pseudo-static stability analyses using soil engineering



parameters that are established on a site-specific basis. For higher-risk projects, the stability analyses should factor in the intensity of expected ground shaking, using a Newmark-type deformation analysis.

**S 2.6** Require that cut and fill transition lots be over-excavated to mitigate the potential of seismically-induced differential settlement.

**S 2.7** Require a 100% maximum variation of fill depths beneath structures to mitigate the potential of seismically-induced differential settlement.

## County of Riverside Code of Ordinances

Riverside County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.12, Uniform Building Code, Section 15.12.010 states that Riverside County adopts the 2001 CBSC, adopted by the California Building Standards Commission into the California Code of Regulations as Title 24, Part 2, based upon the 1997 edition of the Uniform Building Code adopted by the International Conference of Building Officials.

## Paleontological Resources

### County of San Bernardino General Plan

The County of San Bernardino 2007 General Plan (County of San Bernardino 2007a) contains goals, policies, and programs relevant to paleontological resources.

**Goal CO 3** The County will preserve and promote its historic and prehistoric cultural heritage.

**Policy CO 3.4** The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

#### Programs

1. In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontologic monitoring.
2. Projects requiring grading plans that are located in areas of known fossil occurrences, or demonstrated in a field survey to have fossils present, will have all rough grading (cuts greater than 3 feet) monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.
3. A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupancy permits. The adequacy of paleontologic reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

**Goal M/CO 4** Protect cultural and paleontological resources within the Mountain Region.

**Policy M/CO 4.1** Identify and protect significant cultural resources from damage or destruction.

**Goal D/CO 6** Protect cultural and paleontological resources within the Desert Region.

***Policy M/CO 6.1*** Identify and protect significant cultural resources from damage or destruction.

## County of San Bernardino Code of Ordinances

San Bernardino County Code of Ordinances, Title 8, Development Code, Division 2, Land Use Zoning Districts and Allowed Uses, Chapter 82.20, Paleontologic Resources (PR) Overlay, Section 82.20.010 states that the Paleontologic Resources Overlay was created because the identification and preservation of significant paleontologic (fossil) resources is necessary, as many such resources are unique and non-renewable, and because preservation of such paleontologic resources provides a greater knowledge of county natural history, thus promoting county identity and conserving scientific amenities for the benefit of future generations.

Section 82.20.030, Criteria for Site Evaluation for Paleontologic Resources, states that when a land use is proposed within a Paleontologic Resources Overlay, the following criteria shall be used to evaluate the project's compliance with the intent of the overlay.

- (a) **Field Survey Before Grading.** In areas of potential but unknown sensitivity, field surveys before grading shall be required to establish the need for paleontologic monitoring.
- (b) **Monitoring During Grading.** A project that requires grading plans and is located in an area of known fossil occurrence within the overlay, or that has been demonstrated to have fossils present in a field survey, shall have all grading monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Paleontologic monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring is not necessary if the potentially-fossiliferous units described for the property in question are not present, or if present are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.
- (c) **Recovered Specimens.** Qualified paleontologic personnel shall prepare recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils is essential in order to fully mitigate adverse impacts to the resources.
- (d) **Identification and Curation of Specimens.** Qualified paleontologic personnel shall identify and curate specimens into the collections of the Division of Geological Sciences, San Bernardino County Museum, an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance. The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not considered complete until curation into an established museum repository has been fully completed and documented.
- (e) **Report of Findings.** Qualified paleontologic personnel shall prepare a report of findings with an appended itemized of specimens. A preliminary report shall be submitted and approved before granting of building permits, and a final report shall be submitted and approved before granting of occupancy permits. The report and inventory, when submitted to the appropriate Lead

Agency along with confirmation of the curation of recovered specimens into the collections of the San Bernardino County Museum, will signify completion of the program to mitigate impacts to paleontologic resources.

- (f) Mitigation Financial Limits. In no event shall the County require the applicant to pay more for mitigation as required by Subdivisions (b), (c), and (d), above within the site of the project than the following amounts:
- (1) One-half of one percent of the projected cost of the project, if the project is a commercial or industrial project;
  - (2) Three-fourths of one percent of the projected cost of the project for a housing project consisting of one unit; and
  - (3) If a housing project consists of more than one unit, three-fourths of one percent of the projected cost of the first unit plus the sum of the following:
    - (A) \$200.00 per unit for any of the next 99 units;
    - (B) \$150.00 per unit for any of the next 400 units; and
    - (C) \$100.00 per unit for units in excess of 500.

(Ord. 4011, passed – 2007)

## County of Riverside General Plan

### Multipurpose Open Space Element

The County of Riverside General Plan Multipurpose Open Space Element (County of Riverside 2015) contains policies relevant to paleontological resources.

**Policy OS 19.6** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

**Policy OS 19.7** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

**Policy OS 19.8** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

**Policy OS 19.9** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

## County of Riverside Code of Ordinances

Riverside County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.52, Pre-Application Review Procedures for Development Proposals, Section 15.52.060 states that the pre-application review letter shall contain staff comments on the applicant's development proposal, but shall not be considered approval of the development proposal. The letter shall include paleontological studies, as applicable to the Proposed Project.

## Section 3.7, Greenhouse Gas Emissions and Energy

### County of San Bernardino General Plan

The County of San Bernardino General Plan includes goals and policies within the Conservation Element to ensure to ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy, reduce GHG emissions within the County, and minimize energy consumption and promote safe energy extraction, uses, and systems to benefit local regional and global environmental goals. The following programs, goals, and policies from the General Plan Conservation Element would be applicable to the Proposed Project:

### Conservation Element

**Policy CO 4.13** Reduce Greenhouse Gas (GHG) emissions within the County boundaries.

#### Programs

1. Emission Inventories. The County will prepare GHG emissions inventories including emissions produced by: (1) the County's operational activities, services and facilities, over which the County has direct responsibility and control, and (2) private industry and development, that is located within the area subject to the County's discretionary land use authority.
  - a. Establish an inventory of existing GHG emissions.
  - b. Establish a projected inventory for year 2020.
2. GHG Emissions Reduction Plan. The County will adopt a GHG Emissions Reduction Plan that includes:
  - a. Measures to reduce GHG emissions attributable to the County's operational activities, services and facilities, over which the County has direct responsibility and control; and,
  - b. Measures to reduce GHG emissions produced by private industry and development that is located within the area subject to the County's discretionary land use authority and ministerial building permit authority; and,
  - c. Implementation and monitoring procedures to provide periodic review of the plan's progress and allow for adjustments over time to ensure fulfillment of the plan's objectives.

**Goal CO 8.** The County will minimize energy consumption and promote safe energy extraction, uses and systems to benefit local regional and global environmental goals.

**Policy CO 8.1** Maximize the beneficial effects and minimize the adverse effects associated with the siting of major energy facilities. The County will site energy facilities equitably in order to minimize net energy use and consumption of natural resources, and avoid inappropriately burdening certain

communities. Energy planning should conserve energy and reduce peak load demands, reduce natural resource consumption, minimize environmental impacts, and treat local communities fairly in providing energy efficiency programs and locating energy facilities.

### **Programs**

1. Monitor federal and state activity, including their review of proposed facilities, new legislation, new funding sources, and technological advances in the energy and telecommunications fields.
2. Develop a system to provide energy providers with detailed information of proposed residential, commercial, and industrial developments as early as possible so that all necessary permits can be obtained and schedules met.
3. Require undergrounding of new and existing transmission lines when feasible.
4. Assist in the development and use of new designs for major transmission line towers that are aesthetically compatible with the environment from a close viewing distance.
5. Because land uses adjacent to utility corridors must be compatible, the County will approve only those secondary uses within corridors that are compatible with adjacent land uses.
6. Include the location of underground pipelines and the type of fuel being carried in the pipelines on the Infrastructure Maps.
7. The County shall consult with the major electric utilities regarding the location of undergrounding of new and existing transmission lines, and consider the under-grounding of distribution lines when feasible and as determined by California state regulatory processes.
8. The County shall consult with electric utilities during the planning construction of their major transmission lines towers to ensure that they are aesthetically compatible with the surrounding environment.

**Policy CO 8.2** Conserve energy and minimize peak load demands through the efficient production, distribution and use of energy.

### **Programs**

1. Work with other governmental agencies, utility companies, and the private sector to achieve energy conservation and the use of alternative energy resources and technologies.
2. Actively participate and represent the County in the development and implementation of standards and regulations under the jurisdiction of the state and federal governments.
3. The County will promote the education of its residents about utility energy conservation programs including the CEC's 20/20 HAC recycling program, White Roof and Solar Roof Initiatives.

**Policy CO 8.3** Assist in efforts to develop alternative energy technologies that have minimum adverse effect on the environment, and explore and promote newer opportunities for the use of alternative energy sources.

### **Programs**

4. Encourage methanol production from biomass, wastes, natural gas or coal to provide a cleaner substitute liquid fuel for automobiles, trucks, and electric generators.
5. All County facilities, actions, and policies will provide good examples of the best available technologies and methods for minimizing energy consumption and waste.

**Policy CO 8.4** Minimize energy consumption attributable to transportation within the County.

**Programs**

3. Encourage the development of recreational facilities within neighborhoods in new developments.

**Policy CO 8.5** There are unique climatic and geographic opportunities for energy conservation and small scale alternative energy systems within each of the County's three geographic regions and, therefore, the County shall:

- a. Implement land use and building controls and incentives to ensure energy-efficient standards in new developments that comply with California energy regulations as minimum requirements.
- b. Quantify local climate variations and in each climatic region require energy conservation systems in new construction.
- c. Fully enforce all current residential and commercial California Energy Commission energy conservation standards.

**Policy CO 8.6** Fossil fuels combustion contributes to poor air quality. Therefore, alternative energy production and conservation will be required, as follows:

- a. New developments will be encouraged to incorporate the most energy-efficient technologies that reduce energy waste by weatherization, insulation, efficient appliances, solar energy systems, reduced energy demand, efficient space cooling and heating, water heating, and electricity generation.
- b. All new subdivisions for which a tentative map is required will provide, to the extent feasible, for future natural heating or cooling opportunities in the subdivision. This can be accomplished by design of lot size and configuration for heating or cooling from solar exposure or shade and breezes, respectively.
- c. For all new divisions of land for which a tentative map is required, a condition of approval will be the dedication of easements, for the purpose of assuring solar access, across adjacent parcels or units.

**Policy CO 8.8** Promote energy-efficient design features, including appropriate site orientation, use of lighter color roofing and building materials, and use of deciduous shade trees and windbreak trees to reduce fuel consumption for heating and cooling.

**Policy CO 8.9** Promote the use of automated time clocks or occupant sensors to control central heating and air conditioning.

**Goal CO 9.** The County will promote energy conservation and encourage safe mining practices.

**Policy CO 9.1** The County will promote energy conservation in its government owned facilities, with its contractors, and the community at large.

**Programs**

1. The County will promote energy conservation to reduce electricity demand, natural gas usage, and benefit the environment.

**Policy CO 9.2** The County will work with utilities and generators to maximize the benefits and minimize the impacts associated with siting major energy facilities. It will be the goal of the County to

site generation facilities in proximity to end-users in order to minimize net energy use and natural resource consumption, and avoid inappropriately burdening certain communities.

### Programs

6. Include the location of underground pipelines and the type of fuel being carried in the pipelines on the Infrastructure Maps.

**Goal CO 10.** The General Plan will anticipate and accommodate future electric facility planning and will enable information sharing to improve electric load forecasting.

**Policy CO 10.1** Electric infrastructure is essential to serve growth and development in the County. Effective planning for electrical infrastructure requires collaboration between the major utilities and the County.

**Policy CO 10.2** The location of electric facilities should be consistent with the County's General Plan, and the General Plan should recognize and reflect the need for new and upgraded electric facilities.

**Policy CO 10.3** The County will continue ongoing information-sharing with electric utilities on community growth projections, which will be used by the utilities to forecast electricity demand, which, in turn, assists with future electric facility planning needed to serve the County.

### Programs

1. The County will continue to coordinate with and share information with local utilities to recognize that future utility infrastructure plans are more precise regarding the need for electricity, but are more uncertain regarding the precise future location of facilities due to the difficulty of predicting future availability of land and other development or land-use compatibility factors.
2. The County will continue to coordinate with and share information with local utilities to recognize since electric utility infrastructure planning is regulated under a unique regulatory framework governed by the California Public Utilities Commission and in some cases the California Energy Commission and the California Independent System Operator, in cooperation with FERC jurisdiction.
3. The County will continue to coordinate with and share information with local utilities in recognition of planning cycles that differ between the County and utilities. For example, SCE has a 10-year plan that is updated every year.

**Goal D/CO 2.** Encourage utilization of renewable energy resources.

**Policy D/CO 2.1** Through the development process encourage building orientations conducive to utilizing available solar energy.

Additional programs, goals, and policies for San Bernardino County are provided in Section 3.3, *Air Quality*.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in

August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Housing, Infrastructure and Utilities, Natural Resources, and Hazards Elements, as noted below.

## Housing Element

***Policy H-1.5 Life-cycle costs.*** We encourage energy-conservation techniques and upgrades in both the construction and rehabilitation of residential units that will reduce the life-cycle costs of housing.

***Policy D/H-1.4 Funding priorities.*** As funding becomes available, we prioritize the use and application of grants and loans for housing rehabilitation, energy conservation retrofits, and water conservation retrofits for housing in the Desert Region.

## Infrastructure and Utilities Element

***Policy IU-4.3 Waste diversion.*** We shall meet or exceed state waste diversion requirements, augment future landfill capacity, and reduce greenhouse gas emissions and use of natural resources through the reduction, reuse, or recycling of solid waste.

## Natural Resources Element

***Policy NR-1.1 Land use.*** We promote compact and transit-oriented development countywide and regulate the types and locations of development in unincorporated areas to minimize vehicle miles traveled and greenhouse gas emissions.

***Policy NR-1.7 Greenhouse gas reduction targets.*** We strive to meet the 2040 and 2050 greenhouse gas emission reduction targets in accordance with state law.

***Policy NR-1.8 Construction and operations.*** We invest in County facilities and fleet vehicles to improve energy efficiency and reduce emissions. We encourage County contractors and other builders and developers to use low-emission construction vehicles and equipment to improve air quality and reduce emissions.

***Policy NR-1.9 Building design and upgrades.*** We use the CALGreen Code to meet energy efficiency standards for new buildings and encourage the upgrading of existing buildings to incorporate design elements, building materials, and fixtures that improve environmental sustainability and reduce emissions.

## Hazards Element

***Policy HZ-1.10 Energy independence.*** We encourage new residential development to include rooftop solar energy systems and battery storage systems that can provide backup electrical service during temporary power outages.

***Policy HZ-1.11 Energy efficiency retrofits.*** We encourage owners of existing residential and commercial properties to retrofit the walls, doors, windows, ceilings, roofs, ductwork, and other elements of their building envelopes, in order to improve energy efficiency and better protect occupants from extreme temperatures.



## County of Riverside General Plan

The Air Quality Element of the County of Riverside General Plan is intended to provide background information on the physical and regulatory environment affecting air quality in the county. This element also identifies goals, policies, and programs that are meant to balance the County's actions regarding land use, circulation, and other issues with their potential effects on air quality, GHG emissions reduction, and energy use and conservation. The following programs, goals, and policies from the General Plan Air Quality Element would be applicable to the Proposed Project:

### Air Quality Element

**Policy AQ 5.2** Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments. (AI 62)

**Policy AQ 5.3** Update, when necessary, the County's Policy Manual for Energy Conservation to reflect revisions to the County Energy Conservation Program.

**Policy AQ 5.4** Encourage the incorporation of energy-efficient design elements, including appropriate site orientation and the use of shade and windbreak trees to reduce fuel consumption for heating and cooling.

**Policy AQ 18.1** Baseline emissions inventory and forecast. Riverside County CAP has included baseline emissions inventory with data from the County's CO<sub>2</sub>e emissions, for specific sectors and specific years. The carbon inventory greatly aids the process of determining the type, scope and number of GHG reduction policies needed. It also facilitates the tracking of policy implementation and effectiveness. The carbon inventory for the County consists of two distinct components; one inventory is for the County as a whole, as defined by its geographical borders and the other inventory is for the emissions resulting from the County's municipal operations.

**Policy AQ 18.2** Adopt GHG emissions reduction targets. Pursuant to the results of the Carbon Inventory and Greenhouse Gas Analysis for Riverside County, future development proposed as a discretionary project pursuant to the General Plan shall achieve a greenhouse gas emissions reduction of 25% compared to Business As Usual (BAU) project in order to be found consistent with the County's Climate Action Plan (CAP). (AI 26)

**Policy AQ 18.3** Develop a Climate Action Plan for reducing GHG emissions. The Riverside County CAP has been developed to formalize the measure necessary to achieve County GHG emissions reduction targets. The CAP includes both the policies necessary to meet stated targets and objectives are met. These targets, objectives and Implementation Measures may be refined, superseded or supplemented as warranted in the future. (AI 146)

**Policy AQ 18.4** Implement policies and measures to achieve reduction targets. The County shall implement the greenhouse gas reduction policies and measures established under the County Climate Action Plan for all new discretionary development proposals. (AI 23, 147)

**Policy AQ 18.5** Monitor and verify results. The County shall monitor and verify the progress and results of the CAP periodically. When necessary, the CAPs "feedback" provisions shall be used to ensure that any changes needed to stay "on target" with stated goals are accomplished. (AI 26, 147)

**Policy AQ 19.1** Continue to coordinate with CARB, SCAQMD, and the State Attorney General's office to ensure that the milestones and reduction strategies presented in the General Plan and the CAP adequately address the county's GHG emissions. (AI 110, 111, 113)

**Policy AQ 19.2** Utilize County’s CAP as the guiding document for determining County’s greenhouse gas reduction thresholds and implementation programs. Implementation of the CAP and its monitoring program shall include the ability to expand upon, or where appropriate, update or replace the Implementation Measures established herein such that the implementation of the CAP accomplishes the greenhouse gas reduction targets. (AI 146)

**Policy AQ 19.3** Require new development projects subject to County discretionary approval to achieve the greenhouse gas reduction targets established in the CAP either through: (AI 147)

- a. Garnishing 100 points through the Implementation Measures found the County’s CAP; or
- b. Requiring quantification of project specific GHG emissions and reduction of GHG emissions to, at minimum, the applicable GHG reduction threshold established in the CAP.

**Policy AQ 19.4** All discretionary project proposals shall analyze their project-specific GHG reduction targets in comparison to the “business as usual” (BAU) scenario for the development’s operational life and the “operational life” of a new development shall be defined as a 30-year span. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. Alternatively, a project may use the CAP Screening Tables to show the attainment of the applicable number of points needed to ensure adequate GHG reductions and CAP compliance. (AI 47, 147)

**Policy AQ 20.1** Reduce VMT by requiring expanded multi-modal facilities and services that provide transportation alternatives, such as transit, bicycle and pedestrian modes. Improve connectivity of the multi-modal facilities by providing linkages between various uses in the developments. (AI 47, 53, 146)

**Policy AQ 20.2** Reduce VMT by facilitating an increase in transit options. In particular, coordinate with adjacent municipalities, transit providers and regional transportation planning agencies to develop mutual policies and funding mechanisms to increase the use of alternative transportation. (AI 47, 53, 146)

**Policy AQ 20.3** Reduce VMT and GHG emissions by improving circulation network efficiency. (AI 47, 53, 146)

**Policy AQ 20.4** Reduce VMT and traffic through programs that increase carpooling and public transit use, decrease trips and commute times, and increase use of alternative-fuel vehicles. (AI 47, 146)

**Policy AQ 20.6** Reduce emissions from commercial vehicles, through VMT, by requiring all new commercial buildings, in excess of 162,000 square feet, to install circuits and provide capacity for electric vehicle charging stations.

**Policy AQ 20.10** Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design. (AI 147)

**Policy AQ 20.11** Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment. (AI 147)

**Policy AQ 20.14** Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance 859 and increase use of non-potable water.

**Policy AQ 20.15** Decrease energy costs associated with treatment of urban runoff water through greater use of bioswales and other biological systems.

**Policy AQ 20.16** Preserve and promote forest lands and other suitable natural and artificial vegetation areas to maintain and increase the carbon sequestration capacity of such areas within the County. Artificial vegetation could include urban forestry and reforestation, development of parks and recreation areas, and preserving unique farmlands that provide additional carbon sequestration potential.

**Policy AQ 20.18** Encourage the installation of solar panels and other energy efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.). (AI 147)

**Policy AQ 20.19** Facilitate development and siting of renewable energy facilities and transmission lines in appropriate locations. (AI 147)

**Policy AQ 20.20** Reduce the amount of solid waste generation by increasing solid waste recycle, maximizing waste diversion, and composting for residential and commercial generators. Reduction in decomposable organic solid waste will reduce the methane emissions at County landfills. (AI 146)

**Policy AQ 20.22** Develop motorist education programs on reducing VMT, idling and vehicle maintenance, while increasing carpooling and public transit usage. (AI 147)

**Policy AQ 20.25** Coordinate County GHG emissions reduction efforts with those of other regional agencies and plans, i.e., SCAG's Compass Blueprint, Regional Transportation Plan (RTP) and SCAQMD's Air Quality Management Plans. In addition, coordinate with cities and sub-regional planning agencies, particularly WRCOG and CVAG, on efforts that jointly affect the County and the cities. Also, coordinate with utility and service providers to develop programs to improve energy efficiency, water efficiency and delivery or structural improvements to reduce demand or better coordinate infrastructure development, as appropriate. (AI 111, 146)

**Policy AQ 20.26** Voluntary GHG reduction objectives for the community sector shall be achieved through development and implementation of specific implementation measures, as determined appropriate and feasible by the County. (AI 147)

**Policy AQ 21.1** The County shall require new development projects subject to County discretionary approval to incorporate measures to achieve 100 points through incorporation of the Implementation Measures (IMs) found in the Screening Tables within the Riverside County Climate Action Plan. One hundred points represent a project's fare-share of reduction in operational emissions associated with the developed use needed to reduce emissions down to the CAP Reduction Target. (AI 147)

- a. This reduction shall be measured in comparison to the "business as usual" (BAU) scenario for the development's operational life. The BAU scenario shall be consistent with the General Plan build out assumptions detailed in Appendix E-1 of the General Plan.
- d. Other methods for calculating BAU and showing GHG emissions reductions may be used provided such methods are both scientifically defensible and show actual emission reduction measures incorporated into project design, mitigation or alternative selection. That is, reductions must not be illusory "paper" reductions achieved merely through baseline manipulation.

**Policy AQ 21.2** Implementation Measures found necessary for a given project pursuant to the CAP Screening Tables shall be incorporated into a project's Conditions of Approval issued by the County to ensure the measures are implemented appropriately. (AI 147)

**Policy AQ 21.4** Implementation of the Climate Action Plan (CAP) and monitoring progress toward the CAP reduction targets shall include the ability to expand upon or, where appropriate, update or replace the Implementation Measures established herein such that the implementation of the CAP accomplishes the County's GHG reduction targets. (AI 146)

**Policy AQ 22.1** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions associated with transportation (AI 110, 111, 120, 146, 147):

- a. Reduce vehicle miles traveled by providing or requiring expanded multi-modal facilities and services that provide transportation alternatives, such as transit, bicycle and pedestrian modes.
- b. Reduce vehicle miles traveled by facilitating an increase in transit options. In particular, coordinate with adjacent municipalities, transit providers and regional transportation planning agencies to develop mutual policies and funding mechanisms to increase the use of alternative transportation.
- c. Improve connectivity by requiring pedestrian linkages between developments and transportation facilities, as well as between residential and commercial, recreational and other adjacent land uses.
- d. Reduce air pollution and greenhouse gas emissions by improving circulation network efficiency.
- e. Reduce traffic through programs that increase carpooling and public transit use, decrease trips and commute times and increase use of alternative-fuel vehicles.
- f. Preserve transportation corridors for renewable energy transmission lines and for new transit lines, where appropriate.

**Policy AQ 23.2** For discretionary actions, land use-related greenhouse gas reduction objectives shall be achieved through development and implementation of the appropriate Implementation Measures of the Climate Action Plan for individual future projects. County programs shall also be developed and implemented to address land use-related reductions for County operations and voluntary community efforts. (AI 147)

**Policy AQ 24.1** The County shall implement programs and requirements to achieve the following Objectives related to reducing greenhouse gas emissions achieved through improving energy efficiency and increasing energy conservation (AI 146):

- a. Require new development (residential, commercial and industrial) to reduce energy consumption through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design. Passive solar design addressed the innate heating and cooling effects achieved through building design, such as selective use of deep eaves for shading, operable windows for cross-ventilation, reflective surfaces for heat reduction and expanses of brick for thermal mass (passive radiant heating).
- b. Require new development (residential, commercial and industrial) to design energy efficiency into the project through efficient use of utilities (water, electricity, natural gas) and infrastructure design.
- c. Require new development (residential, commercial and industrial) to reduce energy consumption through use of energy efficient mechanical systems and equipment.

**Policy AQ 24.2** For discretionary actions, energy efficiency and conservation objectives shall be achieved through development and implementation of the appropriate Implementation Measures of the Climate Action Plan for all new development approvals. County programs shall also be developed

and implemented to address energy efficiency and conservation efforts for County operations and the community.

**Policy AQ 25.1** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions through water conservation (AI 146):

- a. Reduce water use in both new and existing housing, commercial and industrial uses.
- b. Reduce wastewater generation in both new and existing housing, commercial and industrial uses.
- c. Reduce the amount of water used for landscaping irrigation through implementation of County Ordinance No. 859.
- d. Increase use of non-potable water where appropriate, such as for landscaping and agricultural uses.
- e. Encourage increased efficiency of water use for agricultural activities.
- f. Decrease energy costs associated with treatment of urban runoff water through greater use of bioswales and other biological systems.

**Policy AQ 25.2** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions through biota conservation:

- a. Conserve biota that provides carbon sequestration through implementation of the Multiple Species Habitat Conservation Plans for western and eastern Riverside County.
- b. Preserve forest lands and other suitable natural vegetation areas to maintain the carbon sequestration capacity of such areas within the County.
- c. Promote establishment of vegetated recreational uses, such as local and regional parks, that provide carbon sequestration potential in addition to opportunities for healthy recreation.
- d. Promote urban forestry and reforestation, as feasible, to provide additional carbon sequestration potential.
- e. Promote the voluntary preservation of farmlands for carbon sequestration purposes. In particular, protect important farmlands and open space from conversion and encroachment by urban uses. Also, seek to retain large parcels of agricultural lands to enhance the viability of local agriculture and prevent the encroachment of sprawl into rural areas.
- f. Promote the voluntary preservation of areas of native vegetation that may contribute to biological carbon sequestration functions.
- g. Protect vegetation from increased fire risks associated with drought conditions to ensure biological carbon remains sequestered in vegetation and not released to the atmosphere through wildfires. In particular, prevent unnecessary intrusion of people, vehicles and development into natural open space areas to lessen risk of wildfire from human activities.

**Policy AQ 25.3** For discretionary actions, greenhouse gas reduction objectives related to water and biota conservation shall be achieved through development and implementation of the applicable Implementation Measures of the Climate Action Plan. County programs shall also be developed and implemented to address conservation issues related to County operations and voluntary community efforts. (AI 146)

**Policy AQ 26.1** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions derived from energy generation (AI 146, 147):

- a. Encourage the installation of solar panels and other energy-efficient improvements.
- b. Facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.).
- c. Facilitate development of renewable energy facilities and transmission lines in appropriate locations.
- d. Facilitate renewable energy facilities and transmission line siting.
- e. Provide incentives for development of local green technology businesses and locally produced green products.
- f. Provide incentives for investment in residential and commercial energy efficiency improvements.
- g. Identify lands suitable for wind power generation or geothermal production and encourage development of these alternative energy sources.

**Policy AQ 26.2** For discretionary actions, the objectives for greenhouse gas reduction through increased use of alternative energy sources shall be achieved through development and implementation of the applicable Implementation Measures of the Climate Action Plan. County programs shall also be developed and implemented to address use of alternative energy for County operations and within the community. (AI 147)

**Policy AQ 27.1** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions associated with wastes (AI 146, 147):

- a. Reduce the amount of solid waste generated.
- b. Increase the amount of solid waste recycled by maximizing waste diversion, composting and recycling for residential and commercial generators.
- c. Promote reductions in material consumption.
- d. Decrease wastewater generation.
- e. Reduce fugitive methane emissions and increase methane conversion to alternative energies at County landfills.

**Policy AQ 27.2** Greenhouse gas reduction through the above waste reduction Objectives shall be achieved through development and implementation of the applicable Implementation Measures of the Climate Action Plan for new development. County programs shall also be developed and implemented to address waste reductions for County operations and voluntary community efforts. (AI 146)

**Policy AQ 28.2** The County shall implement programs and requirements to achieve greenhouse gas emissions reductions through the following interagency coordination objectives (AI 146):

- a. Coordinate County regional GHG reduction efforts with those of other regional agencies and plans, i.e.:
  - SCAG Regional Blueprint Plan
  - SCAG Regional Transportation Plan (which will address SB375)

- SCAQMD Air Quality Management Plans
  - SB 375 Coordination and “Sustainable Communities Strategies”
- b. Coordinate with constituent cities and sub-regional planning agencies, particularly WRCOG and CVAG, on GHG reduction efforts that jointly affect the County and these cities.
  - c. Coordinate with utility and service providers serving the County to develop programs to improve energy efficiency, water efficiency and delivery or structural improvements to reduce demand or better coordinate infrastructure development, as appropriate.
  - d. Coordinate with regional agencies responsible for developing utility corridors, particularly for electricity transmission, to ensure alternate energy sources available to Riverside County are used to their fullest extent.

**Policy AQ 28.3** Voluntary greenhouse gas reduction objectives for the community sector shall be achieved through development and implementation of specific implementation measures, as determined appropriate and feasible by the County.

Additional programs, goals, and policies for Riverside County are provided under *Air Quality*.

## Section 3.8, Hazardous Materials

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007a) expresses the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The Safety Element identifies potential hazards and contains goals and policies pertaining to the management and minimization of risk or danger to residents and property in San Bernardino County. The goals and policies relevant to the Proposed Project are listed below.

**Goal S 2** The County will minimize the generation of hazardous waste in the County and reduce the risk posed by storage, handling, transportation, and disposal of hazardous wastes.

**Policy S 2.1** Because reducing the amount of waste generated in this County is an effective mechanism for reducing the potential impact of these wastes on the public health and safety and the environment, and because legislation encourages the reduction, to the extent feasible, of hazardous waste, this jurisdiction will encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous wastes at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes that cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment will be land disposed.

**Policy S 2.2** Include extensive public participation in the County’s application review process for siting hazardous waste facilities and coordinate among agencies and County departments to expedite the process. Apply a uniform set of criteria to the siting of these facilities for the protection of public health and safety and the environment.

**Policy S 2.3** Ensure that environmental review is conducted for HCP Project Implementation Actions proposed on sites that have been identified as contaminated.

**Programs:**

1. Require a conditional use permit and a General Plan Amendment from applicants for hazardous waste facilities. The applicant will meet all provisions of the specified hazardous waste facility overlay as well as other General Plan and Development Code provisions.

**Policy S 2.4** Protect vital groundwater resources and other natural resources from contamination for present and future beneficial uses.

**Policy S 2.5** Minimize the risk of exposure to hazardous substances by residential and other sensitive receptors through the application of program review and permitting procedures.

**Programs:**

1. The County shall provide 24-hour response to emergency incidents involving hazardous materials or wastes in order to protect the public and the environment from accidental releases and illegal activities.
2. The County shall operate collection facilities and events for residents of San Bernardino County to safely dispose of household hazardous waste.
3. The County shall provide affordable waste management alternatives to businesses that generate very small quantities of waste through the Conditionally Exempt Small Quantity Generator program.
4. The County shall inspect hazardous material handlers and hazardous waste generators to ensure full compliance with laws and regulations.
5. The County shall implement CUPA programs for the development of accident prevention and emergency plans, proper installation, monitoring, and closure of USTs, and the handling, storage, transportation, and disposal of hazardous wastes.
6. The County shall conduct investigations and take enforcement action as necessary for illegal hazardous waste disposal or other violations of federal, state, or local hazardous materials laws and regulations.
7. The County shall manage the investigation and remediation of environmental contamination due to releases from USTs, hazardous waste containers, chemical processes, or the transportation of hazardous materials.
8. The County shall provide access to records for potential buyers of property to perform due diligence research and environmental assessment.
9. The County shall use the County's Certificate of Occupancy process to address identification of new facilities that may handle hazardous materials, including facilities subject to the California Accidental Release Prevention Program, accordance with Government Code 65850.2.

**Goal S 3** The County will protect its residents and visitors from injury and loss of life and protect property from fires.

**Policy S 3.1** Continue the Fire Department's consolidation efforts to develop an integrated approach to coordinate the County's present and future needs in fire protection services in response to fire hazards and risks and to serve as a basis for program budgeting, identification, and implementation of optimum cost-effective solutions with the goal of providing necessary Service Levels and achieve Deployment Goals. These Service Levels and Deployment Goals are as follows:



The deployment of fire companies with appropriate levels of staffing and apparatus within the service area plays an important role in effective community fire protection and provision of a higher standard of care for life threatening health emergencies and thereby increasing the quality of life for our citizens. Consolidation provides the most effective option for streamlining the delivery of service and simplifying budget, fiscal, operational, and asset management and creates a single countywide Fire Protection District. It also provides the longest projections of financial solvency for the County Fire Department based on a special district deliver system. A tiered response, including staffing levels, response times and performance goals seems the only reasonable conclusion for the near future as the Department works towards establishing service planning goals for all areas of the County. Matching service levels with the various characteristics of a geographic area will provide several things including: base line service, knowledge of when the area will move to the next level of service, reasonable stabilization of current service, allow for community identity and choice, allow for the projection of future service levels, and lay the basic foundation for strategic planning and future growth of the Department.

**Policy S 3.2** The County will endeavor to prevent wildfires and continue to provide public safety from wildfire hazards.

**Policy S 3.3** Minimize the fire hazard posed by expanding development in wildland/urban intermix areas.

**Programs:**

1. Apply the regulations of the Fire Safety Overlay Ordinance, as found in the Development Code, to all County areas subject to wildland/urban intermix fire hazards including all mountain and foothill areas.

**Goal S 10** San Bernardino County will provide a Hazard Mitigation Plan (HMP) with the intent to reduce and/or eliminate risk that may result in loss of life and property.

**Policy S 10.1** Prepare a Multi-Jurisdictional Hazard Mitigation Plan that assists in developing sustainable, self-reliant, disaster-resistant communities within San Bernardino County. By this policy, the Hazard Mitigation Plan shall be part of this Safety Element of the San Bernardino County General Plan.

**Programs:**

1. The Office of Emergency Services shall organize and preside over a coalition of local jurisdictions governed by the Board of Supervisors, participating agencies, pertinent stakeholders and emergency responders in the preparation of a comprehensive Multi-Jurisdictional Hazard Mitigation Plan that is regional in nature.
2. The Office of Emergency Services shall develop a San Bernardino County Planning Team to participate in the development and implementation of the Multi-Jurisdictional Hazard Mitigation Plan to include, but not limited to:
  - a. The County,
  - b. The County Fire Department/Fire Protection District,
  - c. The Flood Control District,
  - d. The Special Districts Department,
  - e. The Land Use Services Department,
  - f. The Big Bear Recreation and Parks District, and

- g. The Bloomington Recreation and Parks District.

**Policy S 10.2** The San Bernardino County Planning Team shall meet annually to review the status of the Multi-Jurisdictional Hazard Mitigation Plan and all associated Proposed Project and take necessary actions to ensure compliance with the Plan.

**Programs:**

1. Complete pre-disaster and post-disaster actions required by the plan as funding and circumstances permit.
2. Analyze the current situation annually at the San Bernardino County Planning Team meeting to add, remove, or modify projects as projects are completed, identified, or project priorities/rankings are changed by the individual jurisdictions/departments responsible for the projects.
3. Track all projects including those completed, in progress, waiting funding, in planning and development stage, or projects removed from lists for any reason. Project tracking shall be included in the next update cycle of the Multi-Jurisdictional Hazard Mitigation Plan.

**Policy S 10.3** Every five years, starting with the latest FEMA Approval Date for the MJHMP, submit completed necessary revisions, updates and additions to the latest FEMA approved Multi-Jurisdictional Hazard Mitigation Plan. Plan updates will be a joint project of the County Planning Team with input from the public as indicated in the Federal Emergency Management Agency guidance documents.

**Policy S 10.4** After disasters, complete the necessary repairs and reconstruction as quickly as possible as funding permits to restore a sense of normalcy to the affected communities while following the guidelines established by the Multi-Jurisdictional Hazard Mitigation Plan and other plans, regulations and laws that apply.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019b) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The Hazards Element enumerates goals and policies for protecting residents and property from the exposure to hazards and pollution from hazardous materials, and the Personal Property Protection Element provides goals and policies to provide public safety and an integrated response to emergencies and natural disasters. The goals and policies in the Hazards and Personal and Property Protection Elements relevant to the Project are described below.

### Hazards Element

**Goal HZ-1** Natural Environmental Hazards. Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

**Policy HZ-1.2** New development in environmental hazard areas. We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area
- Fire: high or very high fire hazard severity zone

**Goal HZ-2** Human-Generated Hazards. People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

**Policy HZ-2.1** Hazardous waste facilities. We regulate and buffer hazardous waste facilities to protect public health and avoid impacts on the natural environment.

**Policy HZ-2.2** Database of hazardous materials. We maintain up-to-date databases of the storage, use, and production of hazardous materials, based on federally- and state-required disclosure and notification, to appropriately respond to potential emergencies.

**Policy HZ-2.3** Safer alternatives. We minimize the use of hazardous materials by choosing and by encouraging others to use non-toxic alternatives that do not pose a threat to the environment.

**Policy HZ-2.4** Truck routes for hazardous materials. We designate truck routes for the transportation of hazardous materials through unincorporated areas and prohibit routes that pass through residential neighborhoods to the maximum extent feasible.

**Policy HZ 2.5** Community education. We engage with residents and businesses to promote safe practices related to the use, storage, transportation, and disposal of hazardous materials.

## Personal Property Protection Element

**Goal PP-3** Fire and Emergency Medical. Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

**Policy PP-3.7** Fire safe design. We require new development in the Fire Safety Overlay to comply with additional site design, building, and access standards to provide enhanced resistance to fire hazards.

**Policy PP-3.11** Post-burn risks. In areas burned by wildfire, we require new and reconstructed development to adhere to current development standards, and may require additional study to evaluate increased flooding, debris flow, and mudslide risks.

**Goal PP-4** Emergency Preparedness and Recovery. A reduced risk of and impact from injury, loss of life, property damage, and economic and social disruption resulting from emergencies, natural disasters, and potential changes in climate.

**Policy PP-4.1** Emergency management plans. We maintain, update, and adopt the Emergency Operations, Plan, Continuity of Operations Plan, and the Multi-Jurisdictional Hazard Mitigation Plan.

## County of San Bernardino Hazardous Waste Management Plan

The County of San Bernardino Hazardous Waste Management Plan was adopted by the County of San Bernardino Board of Supervisors and approved by the California Health Services in 1990. The Hazardous Waste Management Plan serves as the primary planning document for the countywide management and safe disposal of hazardous waste. The plan identifies types of hazardous wastes found in San Bernardino County; establishes programs for managing this waste; outlines a process for the siting of hazardous waste facilities; identifies strategies for reducing hazardous waste generated in San Bernardino County; and identifies goals, policies, and actions for achieving effective hazardous waste management.

## County of San Bernardino Code of Ordinances

### Fire Safety Overlay

The Fire Safety Overlay is established by the San Bernardino County Development Code Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays). The Fire Safety Overlay is mapped based on distinct geographic areas and the associated wildland fire hazard. The purpose of the Fire Safety Overlay is to establish general development standards to provide greater public safety in these areas associated with greater wildland fire hazard.

## County of San Bernardino CUPA Program

As stated above under *Unified Hazardous Waste and Hazardous Materials Management Regulatory Program*, the San Bernardino County Fire Department's Hazardous Materials Division has been designated by the State Secretary for Environmental Protection as the CUPA for the County of San Bernardino jurisdiction. As the CUPA, the Hazardous Materials Division oversees six hazardous material and hazardous waste programs: (1) Hazardous Materials Release Response Plans and Inventory; (2) Hazardous Waste Generation and Onsite Treatment; (3) Aboveground Petroleum Storage Act/Spill Prevention, Control, and Countermeasure Plan; (4) Underground Storage Tanks; (5) California Accidental Release Program; and (6) Hazardous Materials Management Plans and Inventory Statements under the California Fire Code.

Facilities that would handle hazardous materials or produce hazardous waste are required to have a CUPA permit, and modifying an existing facility may also require additional permitting. Facilities handling hazardous materials over a certain designated quantity are required to report to local, state, and federal agencies. The CUPA program coordinates and enforces hazardous waste reporting.

## County of San Bernardino Multi-Jurisdictional Hazard Mitigation Plan

The Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) was developed to reduce or eliminate loss of life and property for unincorporated areas of the County of San Bernardino and within areas managed by the Flood Control District, Fire District, and Special District Departments. The MJHMP was developed in accordance with the Disaster Mitigation Act and was approved by the Federal Emergency Management Agency on July 13, 2017. The MJHMP provides coordinated goals and objectives for the partner organizations to support an effective mitigation program. The MJHMP

addresses hazards associated with geologic hazards, wildfire, floods, drought, terrorism, and climate change (County of San Bernardino 2017).

## County of San Bernardino Disaster Recovery Plan

Phase I of the County of San Bernardino's Disaster Recovery Plan was approved by the County Disaster Council in March 2017 (County of San Bernardino 2018). The Disaster Recovery Plan is a document to organize and manage a coordinated recovery effort in response to a disaster within the San Bernardino County Operational Area. The Disaster Recovery Plan outlines roles and responsibilities, operational concepts, and organizations required to accomplish effective disaster recovery efforts. The plan also identifies sources of support, such as other jurisdictions, state and federal agencies, and the private sector, through mutual aid or specific statutory authorities.

## County of Riverside General Plan

The County of Riverside General Plan, Safety Element, last updated in 2016 (County of Riverside 2016), provides a framework for considering safety issues in the land use planning process, and presents policies for identifying hazards and reducing exposure to hazardous conditions. The goals and policies in the Safety Element that are relevant to the proposed project are listed here.

**Policy S 5.1** Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:

- a. All proposed development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire and Building and Safety departments.
- b. All proposed development and construction shall meet minimum standards for fire safety as defined in the Riverside County Building or County Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.
- c. In addition to the standards and guidelines of the California Building Code and California Fire Code fire safety provisions, continue to implement additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.
- d. Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County Ordinances.
- e. Proposed development and construction in Fire Hazard Severity Zones shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the Riverside County Fire Chief.
- f. Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, and constructed that provide adequate defensibility from wildfires.

**Policy S 5.4** Limit or prohibit development or activities in areas lacking water and access roads.

**Policy S 5.5** Encourage proposed development in Fire Hazard Severity Zones to develop where fire and emergency services are available or planned.

**Policy S 5.6** Demonstrate that the proposed development can provide fire services that meet the minimum travel times identified in Riverside County Fire Department Fire Protection and EMS Strategic Master Plan.

**Policy S 5.8** Design to account for topography of a site and reduce the increased risk from fires in the Fire Hazard Severity Zones located near ridgelines, plateau escarpments, saddles, hillsides, peaks, or other areas where the terrain or topography affect its susceptibility to wildfires by:

- a. Providing fuel modification zones with removal of combustible vegetation, but minimizing visual impacts and limiting soil erosion.
- b. Replacing combustible vegetation with fire resistant vegetation to stabilize slopes.
- c. Submitting topographic map with site specific slope analysis.
- d. Submitting erosion and sedimentation control plans.
- e. Providing a minimum 30 foot of setback from the edge of the fuel modification zones.
- f. Minimizing disturbance of 25% or greater natural slopes.

**Policy S 6.1** Enforce the land use policies and siting criteria related to hazardous materials and wastes through continued implementation of the programs identified in the County of Riverside Hazardous Waste Management Plan including the following:

- a. Ensure county businesses comply with federal, state and local laws pertaining to the management of hazardous wastes and materials including all Certified Unified Program Agency (CUPA) programs.
- b. Ensure active public participation in hazardous waste and hazardous materials management decisions in Riverside County through the County's land use and planning processes.
- c. Encourage and promote the programs, practices, and recommendations contained in the Riverside County Hazardous Waste Management Plan, giving the highest waste management priority to the reduction of hazardous waste at its sources.

## County of Riverside Code of Ordinances

Ordinance No. 615 (as amended through 615.4) is intended to implement the Hazardous Waste Control Law of California, Health and Safety Code, Chapter 6.5, Division 20, Sections 25100, et seq., as amended, and the regulations adopted pursuant to that law, Title 22 of the California Code of Regulations (CCR), Division 4.5, Chapter 10 as amended, and to establish a system of permitting and enforcing regulations for businesses that handle hazardous materials or waste. Ordinance No. 615 also establishes the Department of Environmental Health as the CUPA for the County of Riverside. This ordinance provides regulation for the inspection and permitting of businesses that use or produce hazardous materials.

## Riverside Countywide Integrated Waste Management Plan

The Riverside County Countywide Integrated Waste Management Plan was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095 (Assembly Bill 939). The Countywide Integrated Waste Management Plan, dated June 1992, contains the Countywide Siting Element, the Source Reduction and Recycling Element, the Household Hazardous Waste Element, and the non-Disposal Facility Element. The Household Hazardous Waste Element provides a framework for recycling, treatment, and disposal practices for household hazardous waste

programs. A separate Household Hazardous Waste Element was developed by Riverside County for the unincorporated area and each of the cities in Riverside County.

## County of Riverside CUPA Program

As stated above under *Unified Hazardous Waste and Hazardous Materials Management Regulatory Program*, the Riverside County Department of Environmental Health, Hazardous Materials Branch has been designated as the CUPA for Riverside County. As the CUPA, the Hazardous Materials Branch oversees the six programs for the management and enforcement of hazardous materials facilities in Riverside County. The CUPA also coordinates with two Participating Agencies, Corona Fire Department and Riverside Fire Department, which also implement hazardous materials programs.

## County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan

The *County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan* (MJLHMP) was developed in conformance with Title 44 CFR Part 201.6, Local Mitigation Plans, and was adopted by the County on June 5, 2012. The MJLHMP identifies hazards present in the county, assesses previous disaster occurrences, and sets goals and objectives to mitigate potential risks to reduce or eliminate the risk of loss of life or property due to natural or human-made hazards.

## Section 3.9, Hydrology

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) provides goals and policies to ensure safe and available water supply and minimize water quality impacts. The Circulation and Infrastructure, Conservation, and Safety Elements of San Bernardino County's General Plan (County of San Bernardino 2007) address, among other issues, surface and groundwater resources and quality, storm drainage and flood control, and flood protection goals, policies, and programs. The following policies would be applicable to the Proposed Plan.

### Circulation and Infrastructure Element

**Goal CI 11** The County will coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and ground water pollution.

**Policy CI 11.1** Apply federal and state water quality standards for surface and groundwater and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project to safeguard public health.

**Policy CI 11.2** Support the safe management of hazardous materials to avoid the pollution of both surface and groundwaters. Prohibit hazardous waste disposal facilities within any area known to be or suspected of supplying principal recharge to a regional aquifer.

**Policy CI 11.3** Support the development of groundwater quality management plans with emphasis on protection of the quality of underground waters from non-point pollution sources.

**Policy CI 11.6** Cooperate with state, regional, and responsible authorities to expand water sampling programs to determine ambient groundwater quality conditions affecting public, agricultural, and private wells. Identify the sources, extent, and types of organic and inorganic groundwater contaminants, and evaluate their impacts on groundwater resources.

**Policy CI 11.10** Because the recharge of groundwater basins is vital to the supply of water in the County, and because these areas can function only when retained in open space, the County will consider retaining existing groundwater recharge and storm flow retention areas as open space lands.

**Policy CI 11.13** Prevent surface and groundwater pollution and continue the cleanup of contaminated waters and watersheds.

**Goal CI 13** The County will minimize impacts to stormwater quality in a manner that contributes to improvement of water quality and enhances environmental quality.

**Policy CI 13.1** Utilize site-design, source-control, and treatment control best management practices (BMPs) on applicable projects, to achieve compliance with the County Municipal Stormwater NPDES Permit.

**Policy CI 13.2** Promote the implementation of low impact design principles to help control the quantity and improve the quality of urban runoff.

**Policy CI 13.3** Participate with regional stakeholders in the implementation of Total Maximum Daily Load requirements pursuant to Santa Ana Regional Water Quality Control Board standards.

**Goal D/CI 3** Encourage property maintenance to enhance regional aesthetics with the promotion of water and soil conservation, recycling and proper solid waste disposal.

**Policy D/CI 3.9** The County shall encourage the use of pervious paving materials on all commercial, industrial and institutional parking areas, where feasible. Large parking areas should consider using landscape as depressions to receive and percolate runoff as an alternative.

**Policy D/CI 3.10** Encourage the retention of natural drainage areas unless such areas cannot carry flood flows without damage to structures or other facilities.

## Conservation Element

**Goal CO 5** The County will protect and preserve water resources for the maintenance, enhancement, and restoration of environmental resources.

**Policy CO 5.1** Because the San Bernardino County Flood Control District is responsible for debris basin construction and maintenance at the base of the mountains, development in these areas will be coordinated with that agency.

**Policy CO 5.2** The County Water Masters will continue to monitor the County's adjudicated groundwater basins to ensure a balanced hydrological system in terms of withdrawal and replenishment of water from groundwater basins.

**Policy CO 5.3** The County will promote conservation of water and maximize the use of existing water resources by promoting activities/measures that facilitate the reclamation and reuse of water and wastewater.



**Policy CO 5.4** Drainage courses will be kept in their natural condition to the greatest extent feasible to retain habitat, allow some recharge of groundwater basins and resultant savings. The feasibility of retaining features of existing drainage courses will be determined by evaluating the engineering feasibility and overall costs of the improvements to the drainage courses balanced with the extent of the retention of existing habitat and recharge potential.

**Goal M/CO 3** Conserve and protect surface and groundwater resources to meet the needs of a growing mountain population, to support the mountain environment and forest watershed and to preserve the quality of life for mountain residents and visitors.

**Policy M/CO 3.1** Utilize open space and drainage easements as well as clustering of new development as stream preservation tools.

**Policy M/CO 3.2** Require naturalistic drainage improvements where modifications to the natural streamway are required.

**Policy M/CO 3.3** Prohibit exposed concrete drainage structures. Acceptable designs include combinations of earthen landscaped swales, rock rip-rap lined channels or rock-lined concrete channels. Property owners must provide for the maintenance of underground drainage structures.

**Policy M/CO 3.4** Streams shall not be placed in underground structures in any residential, Neighborhood Commercial or Institutional Land Use Zoning District or zone.

**Policy M/CO 3.5** Development that is found consistent with the Floodway (FW) Land Use Zoning District or zone shall neither alter the natural stream course alignment nor alter natural flows.

**Policy M/CO 3.6** Minimize the runoff of surface water and establish controls for soil erosion and sedimentation.

**Policy M/CO 3.7** Discourage the extraction and exportation of native groundwater for commercial purposes due to limited groundwater resources coupled with the increasing demands on this precious resource.

**Policy M/CO 3.8** Coordinate with Mountain wastewater and water agencies in establishing programs designed to use reclaimed wastewater from Mountain sewage systems to recharge the local groundwater basins when consistent with County public health and environmental standards.

**Goal D/CO 1** Preserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas.

**Policy D/CO 1.1** Encourage the greater retention of existing native vegetation for new development projects to help conserve water, retain soil in place and reduce air pollutants.

## Safety Element

**Goal S 4** The County will minimize damage due to wind and water erosion where possible.

**Policy S 4.2** Apply the provisions of the Revised Erosion and Sediment Control Ordinance countywide.

**Policy S 4.3** Tailor grading, land clearance, and grazing to prevent unnatural erosion in erosion susceptible areas.

**Goal S 5** The County will provide adequate flood protection to minimize hazards and structural damage.

**Policy S 5.1** Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains.

**Policy S 5.2** Update data and maps with newly identified flood hazard areas in the County, as new information becomes available.

**Policy S 5.3** Protect residents and properties from the risk of dam failure as a result of earthquake or other causes.

**Policy S 5.4** Protect existing development in floodways and floodplains.

**Policy S 5.5** Require specific hydrology and hydraulic studies for development proposals to avoid spot flooding from small streams or unmapped areas adjacent to mapped flood areas.

**Policy S 5.6** Prevent flood hazard resulting from drainage from adjacent development.

**Policy S 5.8** Design flood control and drainage measures as part of an overall community improvement program that advances the goals of recreation, resource conservation, preservation of natural riparian vegetation and habitat, and the preservation of the scenic values of the County's streams and creeks.

**Policy S 5.9** Coordinate with local, regional, state, federal, and other private agencies to provide adequate flood protection to County residents.

**Policy S 5.10** Continue to develop local area drainage plans and establish funding mechanisms to provide the backbone drainage system for watershed areas.

**Goal S 6** The County will protect residents from natural and manmade hazards.

**Policy S 6.1** Require development on hillsides to be sited in such a manner that minimizes the extent of topographic alteration required to minimize erosion, to maintain slope stability, and to reduce the potential for offsite sediment transport.

**Policy S 6.2** Utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: flood, fire, geologic, aviation, noise, cultural, prime soils, biological, scenic resources, minerals, agricultural preserves, utility corridors, water supply, and water recharge.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Infrastructure and Utilities, Natural Resources, and Hazards Elements, as noted below.

## Infrastructure and Utilities Element

**Goal IU-1** Water Supply. Water supply and infrastructure are sufficient for the needs of residents and businesses and resilient to drought.

**Policy IU-1.1** Water supply. We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.

**Policy IU-1.2** Water for military installations. We collaborate with military installations to avoid impacts on military training and operations from groundwater contamination and inadequate groundwater supply.

**Policy IU-1.3** Recycled water. We promote the use of recycled water for landscaping, groundwater recharge, direct potable reuse, and other applicable uses in order to supplement groundwater supplies.

**Policy IU-1.4** Greywater. We support the use of greywater systems for non-potable purposes.

**Policy IU-1.5** Agricultural water use. We encourage water-efficient irrigation and the use of non-potable and recycled water for agricultural uses.

**Policy IU-1.6** User fees. For water systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.

**Policy IU-1.7** Areas vital for groundwater recharge. We allow new development on areas vital for groundwater recharge when stormwater management facilities are installed onsite and maintained to infiltrate predevelopment levels of stormwater into the ground.

**Policy IU-1.8** Groundwater management coordination. We collaborate with watermasters, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other “undesirable results” as defined in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater Management Ordinance.

**Policy IU-1.9** Water conservation. We encourage water conserving site design and the use of water conserving fixtures, and advocate for the adoption and implementation of water conservation strategies by water service agencies. For existing County-owned facilities, we incorporate design elements, building materials, fixtures, and landscaping that reduce water consumption, as funding is available.

**Policy IU-1.10** Connected systems. We encourage local water distribution systems to interconnect with regional and other local systems, where feasible, to assist in the transfer of water resources during droughts and emergencies.

**Policy IU-1.11** Water storage and conveyance. We assist in development of additional water storage and conveyance facilities to create a resilient regional water supply system, when it is cost effective for County-owned water and stormwater systems.

**Goal IU-2** Wastewater Treatment and Disposal. Residents and businesses in unincorporated areas have safe and sanitary systems for wastewater collection, treatment, and disposal.

**Policy IU-2.1** Minimum parcel size. We require new lots smaller than one-half acre to be served by a sewer system. We may require sewer service for larger lot sizes depending on local soil and groundwater conditions, and the County's Local Area Management Program.

**Policy IU-2.2** User fees. For wastewater systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.

**Policy IU-2.3** Shared wastewater facilities for recycled water. We encourage an expansion of recycled water agreements between wastewater entities to share and/or create connections between wastewater systems to expand the use of recycled water.

**Goal IU-3** Stormwater Drainage. A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.

**Policy IU-3.1** Regional flood control. We maintain a regional flood control system and regularly evaluate the need for and implement upgrades based on changing land coverage and hydrologic conditions in order to manage and reduce flood risk. We require any public and private projects proposed anywhere in the county to address and mitigate any adverse impacts on the carrying capacity and stormwater velocity of regional stormwater drainage systems.

**Policy IU-3.2** Local flood control. We require new development to install and maintain stormwater management facilities that maintain predevelopment hydrology and hydraulic conditions.

**Policy IU-3.3** Recreational use. We prefer that stormwater facilities be designed and maintained to allow for regional open space and safe recreation use without compromising the ability to provide flood risk reduction.

**Policy IU-3.4** Natural floodways. We retain existing natural floodways and watercourses on County-controlled floodways, including natural channel bottoms, unless hardening and channelization is the only feasible way to manage flood risk. On floodways not controlled by the County, we encourage the retention of natural floodways and watercourses. Our priority is to reduce flood risk, but we also strive to protect wildlife corridors, prevent loss of critical habitat, and improve the amount and quality of surface water and groundwater resources.

**Policy IU-3.5** Fair share requirements. We require new development to pay its fair share of capital costs to maintain adequate capacity of the County's regional flood control systems.

## Natural Resources Element

**Goal NR-2** Water Quality. Clean and safe water for human consumption and the natural environment.

**Policy NR-2.1** Coordination on water quality. We collaborate with the state, regional water quality control boards, watermasters, water purveyors, and government agencies at all levels to ensure a safe supply of drinking water and a healthy environment.

**Policy NR-2.2** Water management plans. We support the development, update, and implementation of ground and surface water quality management plans emphasizing the protection of water quality from point and non-point source pollution.

**Policy NR-2.3** Military coordination on water quality. We collaborate with the military to avoid or minimize impacts on military training and operations from groundwater contamination and inadequate groundwater supply.

**Policy NR-2.4** Wastewater discharge. We apply federal and state water quality standards for wastewater discharge requirements in the review of development proposals that relate to type, location, and size of the proposed project in order to safeguard public health and shared water resources.

**Policy NR-2.5** Stormwater discharge. We ensure compliance with the County's Municipal Stormwater NPDES (National Pollutant Discharge Elimination System) Permit by requiring new development and significant redevelopment to protect the quality of water and drainage systems through site design, source controls, stormwater treatment, runoff reduction measures, best management practices, low impact development strategies, and technological advances. For existing development, we monitor businesses and coordinate with municipalities.

**Policy NR-2.6** Agricultural waste and biosolids. We coordinate with regional water quality control boards and other responsible agencies to regulate and control animal waste and biosolids in order to protect groundwater and the natural environment.

## Hazards Element

**Goal HZ-1** Natural Environmental Hazards. Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

**Policy HZ-1.1** New subdivisions in environmental hazard areas. We require all lots and parcels created through new subdivisions to have sufficient buildable area outside of the following environmental hazard areas:

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, existing and County-identified landslide area

**Policy HZ-1.2** New development in environmental hazard areas. We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

**Policy HZ-1.3** Floodplain mapping. We require any new lots or subdivisions partially in, and any new development partially or entirely in 100-year flood zones or 100-year flood awareness areas to provide detail floodplain mapping for 100- and 200-year storm events as part of the development approval process.

**Policy HZ-1.4** 500-year flood zone. We may collaborate with property owners in the Valley region to establish funding and financing mechanisms to mitigate flood hazards in identified 500-year flood zones.

**Policy HZ-1.5** Existing properties in environmental hazard areas. We encourage owners of existing properties in hazard areas to add design features that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

**Policy HZ-1.6** Critical and essential facility location. We require new critical and essential facilities to be located outside of hazard areas, whenever feasible.

## San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan

The San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (County of San Bernardino 2017) is a document that sets out the hazards present in San Bernardino County, including flood hazards, and provides a description of responsibilities and possible mitigation to reduce hazard risk.

Goal: Provide adequate flood protection to minimize hazards and structural damage. (Complements General Plan, Safety Element, Goal S 5)

- Flood Objective 1: National Flood Insurance Program. Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains.

FL Action 1.1: Update NFIP data and maps with newly identified flood hazard areas in the County, as new information becomes available.

- Flood Objective 2: Alluvial Task Force. Review and analyze the findings and recommendations from the recently released Alluvial Fan Task Force reports, as funding permits.

FL Action 2.1: Determine whether or not additional amendments to development standards or policies are merited, based on the completed analysis.

- Flood Objective 3: Flood Hazard Reduction. Reduce flood hazards through development standards and policies stated in the County of San Bernardino General Plan and County of San Bernardino 2010 Development Code.

FL Action 3.1: Amend the Flood Plain Safety Overlay District through automatic map updates as new data is released and published by FEMA.

FL Action 3.2: Review development plans to ensure compliance with ordinances.

FL Action 3.3: Inspect construction to ensure compliance with approved development plans.

FL Action 3.4: Soil Stabilization on Roadways and Along Roadway Shoulders Soil stabilization on roadway shoulders and dirt roads. This will prevent erosion caused by flood conditions.

FL Action 3.5: Encasing Pipelines Encase water pipelines with specific sized rock, gravel, and road base in natural waterways to prevent continual washout or exposure during heavy storm events/floods.

- Flood Objective 4: Future Flood Mitigation Projects. Improve existing facilities and construct new facilities to mitigate flooding with the County.

FL Action 4.1: In each flood control zone, construct facilities identified in those zones by the Flood Control Advisory Committee.

## County of San Bernardino Code of Ordinances

San Bernardino County Code of Ordinances, Chapter 85.11: Pre-Construction Flood Hazard Mitigation and Erosion Control Inspection, Section 85.11.030, Erosion Control Plan and Inspection Required, states that no construction activity that has that potential to cause erosion may commence without first obtaining approval of erosion-control measures to ensure that erosion would not reasonably be expected to occur. BMPs would be implemented at all land disturbance sites, regardless of the area of disturbance. The required features of the approved Erosion Control Plan will be implemented during the land-disturbing activity and maintained thereafter in accordance with the approved plan.

The County of San Bernardino 2007 Development Code and Zoning Ordinances create a comprehensive and stable pattern of land uses for planning drainage/flood control and other public facilities and utilities. The following chapters of the development code address floodways, flood control, and development:

- Chapter 82.14 Flood Plain Safety (FP) Overlay
- Chapter 85.07 Flood Hazard Development Review
- Chapter 86.04 Flood Plain Management Administrator

The County has also adopted Zoning Ordinances that are not part of the County Code but are part of the General Plan. These ordinances regulate land use and map the official land use and hazard overlay districts to include safety hazard and environmental protection areas.

In addition, San Bernardino County Code of Ordinances, Division 3, Building Regulations, Chapter 1, Section 63.0101, states that San Bernardino County adopts the 2016 California Building Code, contained in Part 2 of Title 24 of the California Code of Regulations.

## County of Riverside General Plan

The County of Riverside General Plan (2016) includes the Multipurpose Open Space and Safety Elements, which address, among other issues, water quality, stormwater management, and flood hazard policies to address countywide hydrology and water quality issues. The following are relevant to the Proposed Plan.

### Multipurpose Open Space Element

**Policy OS 1.3** Provide active leadership in the regional coordination of water resource management and sustainability efforts affecting Riverside County and continue to monitor and participate in, as appropriate, regional activities, addressing water resources, groundwater, and water quality, such as a Groundwater Management Plan, to prevent overdraft caused by population growth.

**Policy OS 3.2** Encourage wastewater treatment innovations, sanitary sewer systems, and groundwater management strategies that protect groundwater quality in rural areas.

**Policy OS 3.3** Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

**Policy OS 3.4** Review proposed projects to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Permits and require them to prepare the necessary Stormwater Pollution Prevention Program (SWPPP).

**Policy OS 3.5** Integrate water runoff management within planned infrastructure and facilities such as parks, street medians and public landscaped areas, parking lots, streets, etc. where feasible.

**Policy OS 3.6** Design the necessary stormwater detention basins, recharge basins, water quality basins, or similar water capture facilities to protect water-quality. Such facilities should capture and/or treat water before it enters a watercourse. In general, these facilities should not be placed in watercourses, unless no other feasible options are available.

**Policy OS 3.7** Where feasible, decrease stormwater runoff by reducing pavement in development areas, reducing dry weather urban runoff, and by incorporating “Low Impact Development,” green infrastructure and other Best Management Practice design measures such as permeable parking bays and lots, use of less pavement, bio-filtration, and use of multi-functional open drainage systems, etc.

**Policy OS 4.2** Participate in the development, implementation, and maintenance of a program to recharge the aquifers underlying the county. The program shall make use of flood and other waters to offset existing and future groundwater pumping.

**Policy OS 4.3** Ensure that adequate aquifer water recharge areas are preserved and protected.

**Policy OS 4.4** Incorporate natural drainage systems into developments where appropriate and feasible.

**Policy OS 4.5** Encourage streets in a vicinity of watercourses to include park strips or other open space areas that allow permeability.

**Policy OS 4.6** Retain storm water at or near the site of generation for percolation into the groundwater to conserve it for future uses and to mitigate adjacent flooding. Such retention may occur through “Low Impact Development” or other Best Management Practice measures.

**Policy OS 4.7** Encourage storm water management and urban runoff reduction as an enhanced aesthetic and experience design element. Many design practices exist to accomplish this depending on site conditions, planned use, cost-benefit, and development interest.

**Policy OS 4.8** Use natural approaches to managing streams, to the maximum extent possible, where groundwater recharge is likely to occur.

**Policy OS 4.9** Discourage development within watercourses and areas within 100 feet of the outside boundary of the riparian vegetation, the top of the bank, or the 100 year floodplain, whichever is greater.

**Policy OS 5.1** Substantially alter floodways or implement other channelization only as a “last resort,” and limit the alteration.

**Policy OS 5.2** If substantial modification to a floodway is proposed, design it to reduce adverse environmental effects to the maximum extent feasible.

**Policy OS 5.3** Based upon site, specific study, all development shall be set back from the floodway boundary a distance adequate to address the following issues: public safety; erosion; riparian or wetland buffer; wildlife movement corridor or linkage; slopes; type of watercourse; and cultural resources.

**Policy OS 5.5** Preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses. Prohibit fencing that constricts flow across watercourses and their banks. Incentives shall be utilized to the maximum extent possible.



**Policy OS 6.3** Consider wetlands for use as natural water treatment areas that will result in improvement of water quality.

## Safety Element

**Policy S 4.1** For new construction and proposals for substantial improvements to residential and nonresidential development within 100-year floodplains as mapped by FEMA or as determined by site specific hydrologic studies for areas not mapped by FEMA, Riverside County shall apply a minimum level of acceptable risk; and disapprove projects that cannot mitigate the hazard to the satisfaction of the Building Official or other responsible agency.

**Policy S 4.4** Prohibit alteration of floodways and channelization unless alternative methods of flood control are not technically feasible or unless alternative methods are utilized to the maximum extent practicable. The intent is to balance the need for protection with prudent land use solutions, recreation needs, and habitat requirements, and as applicable to provide incentives for natural watercourse preservation, including density transfer programs as may be adopted.

**Policy S 4.5** Prohibit substantial modification to watercourses, unless modification does not increase erosion or adjacent sedimentation, or increase water velocities, so as to be detrimental to adjacent property, nor adversely affect adjacent wetlands or riparian habitat.

**Policy S 4.6** Direct flood control improvement measures toward the protection of existing and planned development.

**Policy S 4.7** Any substantial modification to a watercourse shall be done in the least environmentally damaging manner practicable in order to maintain adequate wildlife corridors and linkages and maximize groundwater recharge.

**Policy S 4.8** Allow development within the floodway fringe, if the proposed structures can be adequately flood-proofed and will not contribute to property damage or risks to public safety.

**Policy S 4.9** Within the floodway fringe of a floodplain as mapped by FEMA or as determined by site specific hydrologic studies for areas not mapped by FEMA, require development to be capable of withstanding flooding and to minimize use of fill. However, some development may be compatible within floodplains and floodways, as may some other land uses. In such cases, flood proofing would not be required. Compatible uses shall not, however, obstruct flows or adversely affect upstream or downstream properties with increased velocities, erosion backwater effects, or concentrations of flows.

**Policy S 4.10** Require all proposed projects anywhere in the county to address and mitigate any adverse impacts that it may have on the carrying capacity of local and regional storm drain systems.

**Policy S 4.11** Encourage neighboring jurisdictions to require development occurring adjacent to the County to consider the impact of flooding and flood control measures on properties within unincorporated Riverside County.

**Policy S 4.17** Continue to assess and upgrade inundation risk and protection in the County.

**Policy S 4.18** Require that the design and upgrade of street storm drains be based on the depth of inundation, relative risk to public health and safety, the potential for hindrance of emergency access and regress from excessive flood depth, and the threat of contamination of the storm drain system with sewage effluent. In general, the 10-year flood flows shall be contained within the top of curbs and the 100-year flood flows within the street right-of-way.

**Policy S 4.19** Encourage periodic reevaluation of the 500-year, 100-year and 10-year flood hazard in the county by state, federal, county, and other sources, and use such studies to improve existing protection, to review protection standards proposed for new development and redevelopment, and to update emergency response plans.

**Policy S 4.20** Balance flood control mitigation with open space and environmental protection.

## County of Riverside Code of Ordinances

Riverside County Ordinance No. 754 (as amended through 754.2), known as the Riverside County Stormwater/Urban Runoff Management and Discharge Controls Ordinance, provides regulations related to stormwater, discharges to the storm drain system, and reducing pollutants in stormwater discharges to the maximum extent practicable. Ordinance No. 458 (as amended through 458.15) provides guidance to regulate special flood hazard areas and implement the NFIP.

Riverside County Code of Ordinances, Title 15, Buildings and Construction, Chapter 15.12, Uniform Building Code, Section 15.12.010, states that Riverside County adopts the 2001 California Building Code, adopted by the California Building Standards Commission into the California Code of Regulations as Title 24, Part 2, based upon the 1997 edition of the Uniform Building Code adopted by the International Conference of Building Officials.

## Water Quality Management Plans and Watershed Action Plans

A Water Quality Management Plan (WQMP) is a guidance document that ensures project design is in compliance with Santa Ana Regional Water Board requirements for Priority Development Projects. These requirements are specified in the NPDES MS4 permit issued to the Riverside County Flood Control and Water Conservation District, County of Riverside, and other cities within the Santa Ana River watershed in the 2010 MS4 Permit. The WQMP is implemented by the co-permittees within Riverside County in the Santa Ana Region, in compliance with the Riverside County 2010 MS4 Permit.

The 2010 MS4 Permit, adopted by the Santa Ana Regional Water Board and issued to San Bernardino County, requires all new development and significant redevelopment projects to incorporate LID BMPs to the maximum extent practicable. In addition, the permit requires development of a standard design and post-development BMP guidance for incorporation, where feasible and applicable, of site design/LID, source control, and treatment control BMPs, and hydrologic conditions of concern mitigation measures to the maximum extent practicable for transportation projects to reduce the discharge of pollutants to receiving waters. Prior to project approval, a WQMP and Stormwater Best Management Practices Transfer, Access, and Maintenance Agreement must be prepared, which is administered by the San Bernardino County Department of Public Works for projects within San Bernardino County.

The Watershed Action Plan for the Santa Ana Watershed Region of Riverside County and its permittees is a requirement of the Riverside County 2010 MS4 Permit. The purpose is to coordinate existing watershed approaches to address water quality and hydromodification impacts resulting from urbanization within the SAR. This requirement is to be achieved by evaluating existing programs relating to the integration of water quality, stream protection, stormwater management, and re-use strategies with land planning policies, ordinances, and plans within each jurisdiction to the maximum extent practicable.

## Section 3.10, Land Use

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) was last amended in April 2014 covers a planning period through 2020. The purpose of the General Plan is to express the broad goals and policies, and specific implementation measures, that will guide decisions on future growth, development, and conservation of resources through the year 2020.

The Land Use Element is a guide for the County of San Bernardino's future development. It designates the distribution and general location of land uses, such as residential, retail, industrial, open space, recreation, and public areas. The Land Use Element also addresses the permitted density and intensity of the various land use designations as reflected on the County's General Plan Land Use Diagram. Section II-Land Use Element contains goals, policies, and programs concerning land use. The following includes all the goals from the Land Use Element.

**Goal LU 1** The County will have a compatible and harmonious arrangement of land uses by providing a type and mix of functionally well-integrated land uses that are fiscally viable and meet general social and economic needs of the residents.

**Goal LU 2** Residential land uses will be provided in a range of styles, densities, and affordability and in a variety of areas to live, ranging from traditional urban neighborhoods to more "rural" neighborhoods.

**Goal LU 3** The unincorporated communities within the County will be sufficiently served by commercial land uses through a combination of commercial development within cities and unincorporated communities.

**Goal LU 4** The unincorporated communities within the County will be sufficiently served by industrial land uses.

**Goal LU 5** Reduce traffic congestion and air pollution and improve the quality of life for County residents by providing employment and housing opportunities in close proximity to each other.

**Goal LU 6** Promote, where applicable, compact land use development by mixing land uses, creating walkable communities, and strengthening and directing development towards existing communities.

**Goal LU 7** The distribution of land uses will be consistent with the maintenance of environmental quality, conservation of natural resources, and the preservation of open spaces.

**Goal LU 8** Beneficial facilities, such as schools, parks, medical facilities, sheriff and fire stations, libraries, and other public uses, as well as potentially hazardous sites, will be equitably distributed throughout the County.

**Goal LU 9** Development will be in a contiguous manner as much as possible to minimize environmental impacts, minimize public infrastructure and service costs, and further countywide economic development goals.

**Goal LU 10** Encourage distinct communities with a sense of "place" and identity.

**Goal LU 11** Promote mutually beneficial uses of land to address regional problems through coordination and cooperation among the County, the incorporated cities, Southern California

Association of Governments (SCAG), San Bernardino Associated Governments (SANBAG), the various special districts and other local, state, and federal agencies.

**Goal LU 12** Promote the redevelopment of existing communities through application of state community redevelopment laws, relying on the County's redevelopment agency to assist in the implementation of the General Plan through projects within designated redevelopment project areas.

**Goal V/LU 1** Provide opportunities, where possible, for a rural lifestyle that preserves the unique character within suitable locations of the Valley Region.

**Goal M/LU 1** Retain the existing alpine character of the Mountain Region.

**Goal M/LU 2** Provide opportunities for commercial and industrial development within the region that is compatible with the forest and mountain character and meets the needs of local residents and visitors.

**Goal D/LU 1** Maintain land use patterns in the Desert Region that enhance the rural environment and preserve the quality of life of the residents of the region.

**Goal D/LU 2** Establish locational criteria for future development within the region to ensure compatibility between uses and with the character and vision that is desired for the region.

**Goal D/LU 3** Ensure that commercial and industrial development within the region is compatible with the rural desert character and meets the needs of local residents.

## General Plan Land Use Designations

The land use designations described in the General Plan establish the types and intensity or density of uses that are allowed. There are 18 land use zoning districts that apply only to privately owned lands in the County and not to the lands controlled by other jurisdictions.

The General Plan land use designations in the Planning Area include the following.

**Resource Conservation (RC).** This district comprises the majority (55.98 percent) of the designated land uses in the county. This land use designation covers over 1 million acres, or about 1,500 square miles of land. Most of the land within this designation is publicly owned (federal and state) and includes national parks, military bases, conservation areas, and lands owned by other federal and state agencies.

**Agriculture (AG).** This district provides sites for commercial agricultural operations, agriculture support services, rural residential uses, and similar and compatible uses. Open space and recreation uses may occur on non-farmed lands within this district.

**Rural Living (RL).** This district provides sites for rural residential uses, incidental agricultural uses, and similar and compatible uses.

**Single Residential (RS).** This district provides sites for single-family residential uses and similar and compatible uses.

**Multiple Residential (RM).** This district provides sites for multiple residential uses, mixed residential uses, and similar and compatible non-residential uses and activities.

**Office Commercial (CO).** This district provides sites for professional services, and similar and compatible uses.

**Neighborhood Commercial (CN).** This district provides sites for retail trade and personal services, repair services, professional services, recreation and entertainment services, and similar and compatible uses.

**Rural Commercial (CR).** This district provides sites for retail trade and personal services, repair services, lodging services, recreation and entertainment services, transportation services, and similar and compatible uses. Agriculture and residential uses are also allowed, but are secondary in importance.

**Highway Commercial (CH).** This district provides sites for retail trade and personal services, lodging services, office and professional services, recreation and entertainment services, wholesaling and warehousing, contract/construction services, transportation services, and similar and compatible uses.

**General Commercial (CG).** This district provides sites for retail trade and personal services, lodging services, office and professional services, recreation and entertainment services, wholesaling and warehousing, contract/construction services, transportation services, open lot services, and similar and compatible uses.

**Service Commercial (CS).** This district provides sites for a mixture of heavy commercial uses and light industrial uses including light manufacturing uses, and similar and compatible uses.

**Community Industrial (IC).** This district provides sites for light industrial uses such as light manufacturing uses, wholesale/warehouse services, contract/construction services, transportation services, agriculture support services, incidental commercial and accessing residential uses, and similar and compatible uses.

**Regional Industrial (IR).** This district provides sites for heavy industrial uses that have the potential to generate severe negative impacts, incidental commercial uses, agricultural support services, salvage operations, and similar and compatible uses.

**Institutional (IN).** This district provides sites for public and quasi-public uses facilities, and similar and compatible uses.

**Special Development (SD).** This district provides sites for a combination of residential, commercial, industrial, agricultural, open space and recreation uses, and similar and compatible uses.

**Floodway (FW).** This district provides sites for animal raising, grazing, crop production, and similar and compatible uses.

**Specific Plan (SP).** This district provides sites for a combination of residential, commercial, industrial, agricultural, open space, recreational, and similar compatible uses as determined by the Specific Plan.

**Open Space (OS).** This district provides sites for open space and recreational uses, and similar and compatible uses.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the

county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The Land Use Element identifies 11 land use designations. Covered Activities within San Bernardino County fall within one or more of these land use designations.

**Rural Living (RL).** Allows for rural residential development set in expansive areas of open space that reinforce the rural lifestyle while preserving the county's natural areas.

**Very Low Density Residential (VLDR).** Allows for very low-density residential uses when developed as single-family neighborhoods that can share common infrastructure, public facilities, and services.

**Low Density Residential (LDR).** Promotes conventional suburban residential neighborhoods that support and are served by common infrastructure, public facilities, and services.

**Medium Density Residential (MDR).** Provides areas for a wide range of densities and housing types. Promotes efficient location of higher density residential development and neighborhoods in relation to infrastructure and transit systems, as well as employment opportunities, retail and service businesses, and community services and facilities.

**Commercial (C).** Provides suitable locations for retail, office, and service commercial businesses that serve the needs of local residents, regional markets, and visitors/tourists.

**Limited Industrial (LI).** Provides suitable locations for light or limited industrial activities where operations are totally enclosed in a structure and limited exterior storage is fully screened from public view. Provides suitable locations for employee-intensive uses, such as research and development, technology centers, corporate offices, clean industry, and supporting retail uses.

**General Industrial (GI).** Provides suitable locations for general or heavy industrial activities where all or part of operations take place outside of enclosed structures, exterior storage is not fully screened from public view, or involve large equipment.

**Public Facility (PF).** Provides areas for public and quasi-public uses and facilities to meet current and future needs.

**Resource/Land Management (RLM).** Manages, preserves, and protects natural resources such as agricultural/grazing lands, watersheds, minerals, and wildlife habitat areas, as well as open space areas not otherwise protected or preserved.

**Open Space (OS).** Provides and preserves publicly owned land for parks and open space.

**Special Development (SD).** Allows for a combination of residential, commercial, and/or manufacturing activities that maximize the utilization of natural and human-generated resources.

## County of Riverside General Plan

The County of Riverside General Plan (County of Riverside 2016), updated in 2016, contains the vision and overarching policies for the future development of Riverside County. Both the Land Use

Element and the Circulation Element of the County of Riverside General Plan contain goals and policies associated with land use that are applicable to the Project.

## Land Use Element

The Land Use Element functions as a guide to planners, the general public, and decision-makers as to the ultimate pattern of development. It designates the general distribution, general location, and extent of land uses, such as housing, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses. The Land Use Element also discusses the standards of residential density and non-residential intensity for the various land use designations.

Because the Land Use Element governs how land is to be utilized, many of the issues and policies contained in other plan elements are linked in some degree to this element. The Land Use Element contains goals, policies, and programs concerning land use. The policies in the Land Use Element address countywide issues that are general in nature and may apply to numerous locations and land use designations within the planning area. The policies are grouped by topic and are preceded by a brief discussion of issues pertaining to the topic. The following is a summary of the policies included in the Land Use Element that apply to the Project. Note that policies regarding all Riverside County land use designations have been included.

**Policy LU 2.1** represents the County's preferred patterns of land use in the county.

**Policies LU 3.1 through LU 3.5** are focused on achieving compact, transit-adaptive development, identifying open space separators to provide edges between communities, and enhancing or creating the distinctiveness of each community.

**Policies LU 4.1 through LU 4.6** are intended to address project design and the importance of detail at the parcel and project levels in achieving the vision for Riverside County.

**Policies LU 5.1 through LU 5.4** correlate the provision of infrastructure, utilities, public facilities, and services with the projected increase in population, demands on/for community facilities, and infrastructure.

**Policies LU 7.1 through LU 7.10** provide guidance regarding compatibility, including reducing negative impacts on adjacent uses and the sensitive siting and design of uses.

**Policies LU 9.1 through LU 9.7** relate to preserving and enhancing open space and natural resources through land use-related methods.

**Policies LU 11.1 through LU 11.5** discuss significant areas for development in close proximity to reduce commute times and ease regional congestion to reduce air quality and greenhouse gas emissions, and capitalize on a broadening of choices provided by the regional transportation system, including trails.

**Policy LU 12.1** addresses hillside development and slope areas where development is allowed.

**Policies LU 13.1 through LU 13.7** address land use issues related to circulation. A more detailed discussion and policy direction related to circulation can be found in the Circulation Element.

**Policies LU 14.1 through LU 14.8** address conservation of significant scenic resources along designated scenic highways for future generations and managing development along scenic highways and corridors.

**Policies LU 15.1 through LU 15.9** address airport and land use compatibility to be consistent with the purposes of the Airport Land Use Law.

**Policies LU 17.1 through LU 17.2** address the process in implementing development related to solar energy resources.

**Policies LU 18.1 through LU 18.6** address water conservation and water-efficient landscaping.

**Policies LU 20.1 through LU 20.12** apply to properties designated as Agriculture on the General Plan and area plan land use maps.

**Policies LU 21.1 through LU 21.7** apply to properties with the Rural Residential, Rural Mountainous, and Rural Desert land use designations on the area plan land use maps.

**Policies LU 22.1 through LU 22.8** apply to properties with the Rural Community Area Plan land use designation on the area plan land use maps.

**Policies LU 23.1 through LU 23.2** apply to properties with the Open Space Foundation Component land use designation on the area plan land use maps.

**Policy LU 24.1** applies to properties with the Open Space-Conservation, Open Space Conservation Habitat, or Open Space-Water land use designations on the area plan land use maps.

**Policies LU 25.1 through LU 25.4** apply to properties with the Open Space-Recreation land use designation on the area plan land use maps.

**Policies LU 26.1 through LU 25.6** apply to properties with the Open Space-Rural land use designation on the area plan land use maps.

**Policies LU 27.1 through LU 27.5** apply to properties with the Open Space-Mineral Resources land use designation on the area plan land use maps.

**Policies LU 28.1 through LU 28.12** apply to properties with the Community Development General Plan land use designation on the area plan land use maps.

**Policies LU 29.1 through LU 29.10** apply to commercially designated properties within the Community Development General Plan Foundation Component land use designation on the area plan land use maps.

**Policies LU 30.1 through LU 30.10** apply to Industrial and Business Park designated properties within the Community Development General Plan Foundation Component land use designation on the area plan land use maps.

**Policies LU 31.1 through LU 31.7** apply to Public Facility designated properties within the Community Development General Plan Foundation Component land use designation on the area plan land use maps.

**Policies LU 32.1 through LU 32.12** apply to Community Center designated properties within the Community Development General Plan Foundation Component land use designation on the area plan land use maps.

**Policies LU 33.1 through LU 33.2** apply to Mixed-Use Area land use designations on the area plan land use maps.



**Policies LU 33.1 through LU 33.3** apply to Community Center Overlay land use designations on the area plan land use maps (note that numbers are the same for the first two policies).

**Policies LU 34.1 through LU 34.5** apply to properties designated as Rural Village Overlay or Rural Village Land Use Overlay on the area plan overlays and policy areas maps.

**Policy LU 35.1** applies to properties designated as Closed Landfill Policy Area on an area plan land use map.

## General Plan Land Use Designations

The General Plan Land Use Map depicts the general pattern of the future land use in unincorporated Riverside County. The General Plan Land Use Map consists of five broad Foundation Component land uses: Agriculture, Rural, Rural Community, Open Space, and Community Development. Each of these is subdivided into more detailed land use designations at the area plan level. Land use designations are organized in a two-tiered hierarchy: General Plan Foundation Components and Area Plan land use designations. Covered Activities within Riverside County fall within one or more of these land use designations.

### Agriculture

**Agriculture (AG).** Agricultural land including row crops, groves, nurseries, dairies, poultry farms, processing plants, and other related uses.

### Rural

**Rural Residential (RR).** Single-family residences with a minimum lot size of 5 acres. Allows limited animal keeping and agricultural uses, recreational uses, compatible resource development (not including the commercial extraction of mineral resources), and associated uses and governmental uses.

**Rural Mountainous (RM).** Single-family residential uses with a minimum lot size of 10 acres. Areas of at least 10 acres where a minimum of 70 percent of the area has slopes of 25 percent or greater. Allows limited animal keeping, agriculture, recreational uses, compatible resource development, and associated uses and governmental uses.

**Rural Desert (RC).** Single-family residential uses with a minimum lot size of 10 acres. Allows limited animal keeping, agriculture, recreational, renewable energy uses including solar, geothermal, and wind energy uses, as well as associated uses required to develop and operate these renewable energy sources, compatible resource development (which may include the commercial extraction of mineral resources with approval of a surface mining permit), and governmental and utility uses.

### Rural Community

**Estate Density Residential (RC-EDR).** Single-family detached residences on large parcels of 2 to 5 acres. Limited agriculture, intensive equestrian, and animal-keeping uses are expected and encouraged.

**Very Low Density Residential (RC-VLDR).** Single-family detached residences on large parcels of 1 to 2 acres. Limited agriculture, intensive equestrian, and animal-keeping uses are expected and encouraged.

**Low Density Residential (RC-LDR).** Single-family detached residences on large parcels of 0.5 to 1 acre. Limited agriculture, intensive equestrian, and animal-keeping uses are expected and encouraged.

## Open Space

**Open Space-Conservation (C).** The protection of open space for natural hazard protection, cultural preservation, and natural and scenic resource preservation. Existing agriculture is permitted.

**Open Space-Conservation Habitat (CH).** Applies to public and private lands conserved and managed in accordance with adopted multiple species habitat and other conservation plans and in accordance with related Riverside County policies.

**Open Space-Recreation (R).** Recreational uses including parks, trails, athletic fields, and golf courses. Neighborhood parks are permitted within residential land uses.

**Open Space-Rural (RUR).** One single-family residence allowed per 20 acres. Extraction of mineral resources subject to a surface mining permit may be permissible provided that scenic resources and views are protected.

**Open Space-Water (W).** Includes bodies of water and natural or artificial drainage corridors. Extraction of mineral resources subject to a surface mining permit may be permissible provided that flooding hazards are addressed, and long-term habitat and riparian values are maintained.

**Open Space-Mineral Resources (Min).** Mineral extraction and processing facilities. Areas held in reserve for future mineral extraction and processing.

## Community Development

**Estate Density Residential (EDR).** Single-family detached residences on large parcels of 2 to 5 acres. Limited agriculture and animal keeping is permitted; however, intensive animal keeping is discouraged.

**Very Low Density Residential (VLDR).** Single-family detached residences on large parcels of 1 to 2 acres. Limited agriculture and animal keeping is permitted; however, intensive animal keeping is discouraged.

**Low Density Residential (LDR).** Single-family detached residences on large parcels of 0.5 to 1 acre. Limited agriculture and animal keeping is permitted; however, intensive animal keeping is discouraged.

**Medium Density Residential (MDR).** Single-family detached and attached residences with a density range of 2 to 5 dwelling units per acre. Limited agriculture and animal keeping is permitted; however, intensive animal keeping is discouraged. Lot sizes range from 5,500 to 20,000 square feet; typical 7,200-square-foot lots are allowed.

**Medium High Density Residential (MHDR).** Single-family attached and detached residences with a density range of five to eight dwelling units per acre. Lot sizes range from 4,000 to 6,500 square feet.

**High Density Residential (HDR).** Single-family attached and detached residences, including townhouses, stacked flats, courtyard homes, patio homes, townhouses, and zero lot line homes.

**Very High Density Residential (VHDR).** Single-family attached residences and multi-family dwellings.

**Highest Density Residential (HHDR).** Multi-family dwellings include apartments and condominiums. Multi-storied (3-plus) structures are allowed.

**Commercial Retail (CR).** Local and regional serving retail and service uses. The amount of land designated for Commercial Retail exceeds that amount anticipated to be necessary to serve Riverside County's population at build-out. Once build-out of Commercial Retail reaches the 40 percent level within any Area Plan, additional studies will be required before Commercial Retail development beyond the 40 percent will be permitted.

**Commercial Tourist (CT).** Tourist-related commercial including hotels, golf courses, and recreation/amusement activities.

**Commercial Office (CO).** Variety of office-related uses including financial, legal, insurance, and other office services.

**Light Industrial (LI).** Industrial and related uses including warehousing/distribution, assembly and light manufacturing, repair facilities, and supporting retail uses.

**Heavy Industrial (HI).** More intense industrial activities that generate greater effects such as excessive noise, dust, and other nuisances.

**Business Park (BP).** Employee-intensive uses, including research and development, technology centers, corporate offices, clean industry, and supporting retail uses.

**Public Facilities (PF).** Civic uses such as County of Riverside administrative buildings and schools.

**Community Center (CC).** Includes a combination of small-lot single-family residences, multi-family residences, commercial retail, office, business park uses, civic uses, transit facilities, and recreational open space within a unified planned development area. This also includes Community Centers in adopted specific plans.

**Mixed Use Area.** This designation is applied to areas outside of Community Centers. The intent of the designation is not to identify a particular mixture or intensity of land uses, but to designate areas where a mixture of residential, commercial, office, entertainment, educational, and/or recreational uses or other uses is planned.

## Section 3.11, Mineral Resources

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) provides goals, policies, and programs designed to protect the current and future extraction of mineral resources while minimizing impacts of this use on the public and the environment. The relevant policies are presented in the Land Use and Conservation Elements, as noted below.

## Land Use Element

**Policy LU 7.1** Ensure that land use developments within the state-delineated Mineral Resource Zones (MRZs) are in accordance with adopted mineral resources management policies of the County.

## Conservation Element

**Policy CO 7.1** In areas containing valuable mineral resources, establish and implement conditions, criteria, and standards that are designed to protect the access to, and economic use of, these resources, provided that the mineral extraction does not result in significance adverse environmental effects and that open space uses have been considered for the area once mining operations cease.

**Policy CO 7.2** Implement the State Mineral Resource Zone (MRZ) designations to establish system that identifies mineral potential and economically viable reserves.

**Policy CO 7.3** Mining operators/owners will provide buffers between mineral resources (including access routes) and abutting incompatible land uses. New mineral and non-mineral development in these zones will be designed and reviewed according to the compatibility criteria specified in this policy.

**Policy CO 7.4** Review land development and mining proposals near potentially incompatible land uses with the goal of achieving land use compatibility between potentially incompatible uses.

**Policy CO 7.5** Protect existing mining access routes by giving them priority over proposed alterations to the land, or by accommodating the mining operations with as good or better alternate access, provided the alternate access does not adversely impact proposed open space areas or trail alignment.

**Policy CO 7.6** Provide for the monitoring of mining operations for compliance with the established operating guidelines, conditions of approval and the reclamation plan.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Natural Resource Element, as noted below.

## Natural Resource Element

**Goal NR-6** Mineral resource zones that allow extraction industries to continue supporting the regional and national economy while minimizing negative impacts on the public and natural environment.

**Policy NR-6.1** Mineral resource areas. We prioritize the conservation of land area with mineral resources by prohibiting or discouraging development of land that would substantially preclude the future development of mining facilities in areas classified as Mineral Resource (MRZ) 2a, 2b, 3a.

**Policy NR-6.2** Mining operations and reclamation. We require and monitor mineral extraction activities to ensure that the operation and reclamation of mined lands is consistent with the State Surface Mining and Reclamation Act of 1975 (SMARA).

**Policy NR-6.3** Conservation of construction aggregate. We encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities (consistent with the Policy Plan and other local, state, and federal regulations) to establish aggregate resources that are sufficient to satisfy 50 years of County demand.

## County of San Bernardino Code of Ordinances

### Chapter 82.17 Mineral resources

The Mineral Resources (MR) Overlay established by §§ 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is created with the following intent and objectives.

- (a) Intent.
- (1) The extraction of mineral resources is essential to the economic well being of the County and the needs of the society.
  - (2) Certain privately owned land areas of the County contain significant amounts of mineral resources. Mineral Resources Overlays are created to protect these resources for present and future extractions. Since mineral extraction must take place on the physical site where the minerals naturally occur, special controls are needed to minimize conflicts with other land uses. The Mineral Resources Overlay functions as a “holding district” since the land will be redesignated and reclaimed for other land uses when mining operations cease. Also, the district will insure that land disturbances are minimized through regulations and through the prohibition of any other land uses in these districts that are incompatible with mining.
  - (3) Once the mining activity ceases, the mined lands shall be reclaimed for new uses in order to prevent or minimize adverse effects on the environment and to protect the public health, safety and welfare.
- (b) Objectives. The MR Overlay shall have the following objectives:
- (1) Prevent or minimize all adverse environmental effects.
  - (2) Reclaim mined lands to a usable condition that is readily adaptable for alternative land uses.
  - (3) Encourage the production and conservation of minerals while preserving areas relating to environmental and recreational amenities if such amenities are located within the mining locale.
  - (4) Eliminate residual hazards to the public health and safety.

## County of Riverside General Plan

The County of Riverside General Plan Multipurpose Open Space Element (2015) and Land Use Element (2019) contain various policies relevant to mineral resources. The following are relevant to the Project.

## Land Use Element

**Policy LU 9.6** If any area is classified by the State Geologist as an area that contains mineral deposits and is of regional or statewide significance, and Riverside County either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2761 of the Surface Mining and Reclamation Act, or has otherwise not yet acted pursuant to subdivision (a), then prior to permitting a use which would threaten the potential to extract minerals in that area, Riverside County shall prepare, in conjunction with its project CEQA documentation, a statement specifying its reason for permitting the proposed use, and shall forward a copy to the State Geologist and the State Mining and Geology Board for review.

**Policy LU 9.7** Protect lands designated by the State Mining and Geology Board as being of regional or statewide significance from encroachment of incompatible land uses, such as high-density residential, low-density residential with high values, sensitive public facilities, institutions (e.g., schools, hospitals), etc., by requiring incorporation of buffer zones or visual screening into the incompatible land use.

**Policy LU 27.1** Require that surface mining activities and lands containing mineral deposits of statewide or of regional significance comply with Riverside County Ordinances and the SMARA.

**Policy LU 27.2** Protect lands designated as Open Space-Mineral Resource from encroachment of incompatible land uses through buffer zones or visual screening. (AI 3)

**Policy LU 27.3** Protect road access to mining activities and prevent or mitigate traffic conflicts with surrounding properties.

**Policy LU 27.4** Require the recycling of mineral extraction sites to open space, recreational, or other uses that are compatible with the surrounding land uses.

**Policy LU 27.5** Require an approved reuse plan prior to the issuing of a permit to operate an extraction operation.

## Multipurpose Open Space Element

**Policy OS 14.1** Require that the operation and reclamation of surface mines be consistent with the State Surface Mining and Reclamation Act (SMARA) and County Development Code provisions.

**Policy OS 14.2** Restrict incompatible land uses within the impact area of existing or potential surface mining areas.

**Policy OS 14.3** Restrict land uses incompatible with mineral resource recovery within areas designated Open Space-Mineral Resources and within areas designated by the State Mining and Geology Board as being of regional or statewide significance. (AI 11)

**Policy OS 14.4** The County Geologist shall impose conditions as necessary on proposed mining operations projects to minimize or eliminate the potential adverse impact of mining operations on surrounding properties, and environmental resources.

**Policy OS 14.5** Require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality. The same standards shall apply to non-mining land uses within or adjacent to areas classified by the State Geologist as MRZ-2a.

## County of Riverside Code of Ordinances

### 5.46.170 - Mineral resource protection.

Mine development is encouraged in compatible areas before encroachment of conflicting uses. Mineral resource areas that have been classified by the State Department of Conservation's Division of Mines and Geology or designated by the State Mining and Geology Board, as well as existing surface mining operations that remain in compliance with the provisions of this chapter, shall be protected from intrusion by incompatible land uses that may impede or preclude mineral extraction or processing, to the extent possible for consistency with the General Plan.

In accordance with PRC §2762, the City's General Plan and resource maps will be updated to reflect mineral information (classification and/or designation reports) within 12 months of receipt from the State Mining and Geology Board of such information. Land use decisions within the City will be guided by information provided on the location of identified mineral resource of regional significance. Conservation and potential development of identified mineral resource areas will be considered and encouraged. Recordation on property titles of the presence of important mineral resources within the identified mineral resource areas may be encouraged as a condition of approval of any development project in the impacted area. Prior to approving a use that would otherwise be incompatible with mineral resource protection, conditions of approval may be applied to encroaching development projects to minimize potential conflicts. (Ord. 6476 §1, 1999)

### Chapter 19.490 – Mining and Mineral Extraction

#### 19.490.010 - Purpose.

The purpose of regulating mining/mineral extraction uses is to ensure compatibility of such uses with surrounding uses and properties and compliance with the provisions of the State Surface Mining and Reclamation Act of 1975. (Ord. 7331 §77, 2016; Ord. 6966 §1, 2007)

#### 19.490.020 - Applicability and permit requirements.

Mining/mineral extraction uses are permitted as forth in Article V, Base Zones and Related Use and Development Provisions subject to the provisions contained in the State Surface Mining and Reclamation Act of 1975 and the Public Resources Code. (Ord. 7331 §77, 2016; Ord. 6966 §1, 2007)

## Section 3.12, Noise

### County of San Bernardino General Plan

The County of San Bernardino General Plan includes goals and policies within the Noise Element to limit the exposure of the community to excessive noise levels. A number of these policies (and related programs) pertain to the siting of noise-sensitive receptors, which would not be directly applicable to the Project. However, the following policies from the General Plan Noise Element would be applicable to the Proposed Project.

**Policy N 1.3** When industrial, commercial, or other land uses, including locally regulated noise sources, are proposed for areas containing noise-sensitive land uses, noise levels generated by the proposed use will not exceed the performance standards of Table N-2 within outdoor activity areas. If outdoor activity areas have not yet been determined, noise levels shall not exceed the performance

standards listed in Chapter 83.01 of the Development Code at the boundary of areas planned or zoned for residential or other noise-sensitive land uses.

### Programs

1. Require an acoustical analysis prior to approval of proposed development of new residential or other noise-sensitive land uses in a noise-impacted area or a new noise generating use in an area that could affect existing noise-sensitive land uses. The appropriate time for requiring an acoustical analysis is during the environmental review process so that noise mitigation may be an integral part of the project design. The acoustical analysis shall:
  - a. Be the responsibility of the applicant.
  - b. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
  - c. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions;
  - d. Include estimated noise levels in terms of the descriptors shown in Figures II-8 and II-9 of the Noise Background Report for existing and projected future (20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element.
  - e. Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
  - f. 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, acoustical information to support a statement of overriding considerations for the project must be provided.
2. Develop and employ procedures to ensure that requirements imposed pursuant to the finding of an acoustical analysis are implemented as part of the project review and building permit processes.

**Policy N 1.5** Limit truck traffic in residential and commercial areas to designated truck routes; limit construction, delivery, and through-truck traffic to designated routes; and distribute maps of approved truck routes to County traffic officers.

**Policy N 1.6** Enforce the hourly noise-level performance standards for stationary and other locally regulated sources, such as industrial, recreational, and construction activities as well as mechanical and electrical equipment.

**Policy N 1.7** Prevent incompatible land uses, by reason of excessive noise levels, from occurring in the future.

**Policy N 2.1** The County will require appropriate and feasible on-site noise attenuating measures that may include noise walls, enclosure of noise-generating equipment, site planning to locate noise sources away from sensitive receptors, and other comparable features.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the



county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Hazards Element, as noted below.

**Goal HZ-2** People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

**Policy HZ-2.6** Coordination with transportation authorities. We collaborate with airport owners, [Federal Aviation Administration, California Department of Transportation, San Bernardino County Transportation Authority, Southern California Association of Governments], neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans and projects to minimize noise impacts and provide appropriate mitigation measures.

**Policy HZ-2.7** Truck delivery areas. We encourage truck delivery areas to be located away from residential properties and require associated noise impacts to be mitigated.

**Policy HZ-2.8** Proximity to noise generating uses. We limit or restrict new noise sensitive land uses in proximity to existing conforming noise generating uses and planned industrial areas.

**Policy HZ-2.9** Control sound at the source. We prioritize noise mitigation measures that control sound at the source before buffers, soundwalls, and other perimeter measures.

**Policy HZ-2.10** Agricultural operations. We require new development adjacent to existing conforming agricultural operations to provide adequate buffers to reduce the exposure of new development to operational noise, odor, and the storage or application of pesticides or other hazardous materials.

## County of San Bernardino Code of Ordinances

The County's Code of Ordinances (Title 8, Development Code; Division 3, Countywide Development Standards; Chapter 83.01, General Performance Standards, Section 83.01.080, Noise) establishes interior and exterior noise standards for specific land uses by type of noise source. Noise standards for stationary noise sources are summarized in Table B-1. As shown, the noise standard for residential properties is 55 A-weighted decibels (dBA)<sup>[1]</sup> equivalent sound level ( $L_{eq}$ )<sup>[2]</sup> from 7:00 a.m. to 10:00 p.m. and 45 dBA  $L_{eq}$  from 10:00 p.m. to 7:00 a.m. For offices, the noise standard from stationary noise sources is 60 dBA during any time of the day or night, and for industrial properties, the standard is 70 dBA during any time of the day or night. Areas exposed to noise levels exceeding these standards are considered noise-affected areas. The County's Code of Ordinances exempts noise from construction when construction is limited to between the hours of 7:00 a.m. and 7:00 p.m., except on Sundays or federal holidays.

**Table B-1. Noise Standards for Stationary Noise Sources**

Affected Land Uses (Receiving Noise)	$L_{eq}$ 7:00 a.m. to 10:00 p.m.	$L_{eq}$ 10:00 p.m. to 7:00 a.m.
Residential	55 dBA	45 dBA
Professional Services	55 dBA	55 dBA
Other Commercial	60 dBA	60 dBA

<b>Affected Land Uses (Receiving Noise)</b>	<b>Leq 7:00 a.m. to 10:00 p.m.</b>	<b>Leq 10:00 p.m. to 7:00 a.m.</b>
Industrial	70 dBA	70 dBA

Source: County of San Bernardino Code of Ordinances, Section 83.01.080

With regard to vibration, Section 83.01.090 of the County of San Bernardino's Code of Ordinances prohibits the operation of any device that creates vibration that can be felt without the aid of instruments at or beyond the lot line, or that produces a peak particle velocity (PPV) greater than or equal to 0.2 inch per second (in/sec) measured at or beyond the lot line.

## County of Riverside General Plan

The Noise Element of the County of Riverside General Plan is intended to provide a systematic approach to identifying and appraising noise problems in the community, quantifying existing and projected noise levels, addressing excessive noise exposure, and community planning for the regulation of noise. The County's primary goal with regard to community noise is to ensure that noise-producing land uses would be compatible with adjacent land uses. For this reason, the Noise Element establishes noise/land use compatibility guidelines based on cumulative noise criteria for outdoor noise. The County's noise/land use compatibility guidelines are shown in Table B-2. The County's land use compatibility noise standards are shown in Table B-3.

**Table B-2. County of Riverside Land Use Compatibility For Community Noise Exposure Level ( $L_{dn}$  or CNEL, dBA)**

<b>Land Use</b>	<b>Normally Acceptable<sup>a</sup></b>	<b>Conditionally Acceptable<sup>b</sup></b>	<b>Normally Unacceptable<sup>c</sup></b>	<b>Clearly Unacceptable<sup>d</sup></b>
Single-family, Duplex, Mobile Homes	50-60	55-70	70-75	above 75
Multi-Family Homes	50-65	60-70	70-75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-70	60-70	70-80	above 80
Transient Lodging – Motels, Hotels	50-65	60-70	70-80	above 80
Auditoriums, Concert Halls, Amphitheaters	---	50-70	above 65	---
Sports Arena, Outdoor Spectator Sports	---	50-75	above 70	---
Playgrounds, Neighborhood Parks	50-70	---	68-75	above 74
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	---	70-80	above 80
Office Buildings, Business, Commercial, and Professional	50-70	68-77	---	above 75
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	---	above 75

Source: County of Riverside 2015

<sup>a</sup> Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

<sup>b</sup> Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice. Outdoor environment will seem noisy.

<sup>c</sup> Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

<sup>d</sup> Clearly Unacceptable: New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

**Table B-3. County of Riverside Stationary Source Land Use Noise Standards**

<b>Residential</b>	<b>Interior Standards</b>	<b>Exterior Standards</b>
10:00 p.m. to 7:00 a.m.	40 $L_{eq}$	45 $L_{eq}$
7:00 a.m. to 10:00 p.m.	55 $L_{eq}$	65 $L_{eq}$

Source: County of Riverside 2015

These are only preferred standards; final decision will be made by the Riverside County Planning Department and Office of Public Health.

The County of Riverside General Plan Noise Element contains various policies to address countywide noise issues. The following are relevant to the Proposed Project:

**Policy N 1.1** Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or blockwalls shall be used.

**Policy N 4.1** Prohibit facility-related noise received by any sensitive use from exceeding the following worst-case noise levels: (AI 105)

- a. 45 dBA-10-minute  $L_{eq}$  between 10:00 p.m. and 7:00 a.m.
- b. 65 dBA-10-minute L- between 7:00 a.m. and 10:00 p.m.

**Policy N 4.2** Develop measures to control non-transportation noise impacts.

**Policy N 4.3** Ensure any use determined to be a potential generator of significant stationary noise impacts be properly analyzed and ensure that the recommended mitigation measures are implemented.

**Policy N 4.4** Require that detailed and independent acoustical studies be conducted for any new or renovated land uses or structures determined to be potential major stationary noise sources.

**Policy N 13.1** Minimize the impacts of construction noise on adjacent uses within acceptable practices.

**Policy N 13.2** Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.

**Policy N 13.4** Require that all construction equipment utilizes noise reduction features (e.g. mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.

## County of Riverside Code of Ordinances

Riverside County Ordinance No. 847 regulates noise. The ordinance includes General Sound Level Standards, and includes exemptions for noise from private construction projects located 0.25 mile

or more from an inhabited building, and for private construction projects located within 0.25 mile from an inhabited dwelling, provided that:

- Construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; and
- Construction does not occur between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May.

The ordinance states “this ordinance is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act and no such thresholds are hereby established.” Although the ordinance does not establish California Environmental Quality Act (CEQA) thresholds, it defines noise conditions that the County considers to be acceptable including the exemption of construction noise from numerical thresholds during daytime hours. This exemption indicates that, in the county, noise is generally more disruptive during nighttime hours, and sensitive receptors are generally considered less sensitive to noise during daytime hours than during nighttime hours.

## Section 3.13, Population and Housing

### San Bernardino County

#### County of San Bernardino General Plan

The Housing Element of the County of San Bernardino General Plan (County of San Bernardino 2014) establishes goals and policies the County intends to implement to address housing needs and issues. The goals and policies in the Housing Element are intended to enhance the quality of existing neighborhoods and housing, including affordable housing, and to increase the supply of a diversity of housing types, including special needs housing and affordable housing. The Housing Element includes the following goals and policies for the 2014–2021 Planning Period.

**Goal H-1** A broad range of housing types in sufficient quantity, location, and affordability levels to meet the lifestyle needs of current and future residents, including those with special needs.

**Policy H-1.2** Support the integrated planning and provision of appropriate infrastructure (including water, sewer, and roadways) concurrent with and as a condition of residential development as a means to create more livable communities.

**Goal H-3** Neighborhoods that protect the health, safety, and welfare of the community, and enhance public and private efforts in maintaining, reinvesting in, and upgrading the existing housing stock.

**Policy H-3.1** Support the provision of adequate public services, infrastructure, open space, nonmotorized transportation routes, and public safety for neighborhoods in the unincorporated area that are consistent with community plans.

#### Housing Programs

**Program #14: Homeless Services** – San Bernardino County Homeless Partnership (SBCHP) was formed to provide a focused, coordinated, and cohesive approach to addressing homelessness in the county. The partnership consists of community and faith-based organizations, educational

institutions, non-profit organizations, private industry, and federal, state, and local governments. SBCHP was developed to promote leadership and strong collaboration between agencies to direct the planning, development, and implementation of the County's 10-year Strategy to End Chronic Homelessness. SBCHP and its partners are dedicated to implementing a complete Continuum of Care approach that includes emergency shelters, transitional housing, and permanent (supportive) housing, plus supportive social services being in place to assist homeless persons navigate through the system and remain stably housed. Additional services needed to address the needs of homeless people include outreach, case management, mental health services, medical services, recovery services, transportation, childcare, education, job search and training assistance, and dental care.

**Program #15: Senate Bill 2 Compliance** – Senate Bill 2 mandates that each community play an active role in providing for the housing and supportive needs of the homeless. This includes providing opportunities for housing to meet the needs of homeless people. To address requirements of state law (Government Code § 65583), the County updated its development code to:

- Define emergency shelters, transitional housing, and permanent supportive housing consistent with the definitions and parameters in state law.
- Allow emergency shelters as a by-right use without a discretionary permit, commensurate with unmet need and subject to management and operation standards allowed by state law.
- Allow transitional housing and permanent supportive housing as a by-right use in all residential zones, subject to standards required of the same type of housing in the same zone.
- Draft appropriate management and operations standards allowed for under state law.

## Proposed San Bernardino Countywide Plan Update

In 2017, the County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019a) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 020. The Countywide Plan is designed to accommodate responsible population growth. The proposed land use element states that "when growth occurs, it should do so in a manner that is fiscally sustainable and context-sensitive. New development should be focused in areas where there is potable water, wastewater treatment, roadways, and public services...." The proposed Countywide Plan includes policies to promote the development of housing appropriate for rural and suburban areas served by adequate infrastructure and services.

## County of San Bernardino Code of Ordinances

The County Code of Ordinances, Title 3, Health And Sanitation And Animal Regulations, Division 3, Environmental Health, Chapter 10, Housing and Institutions states that the purpose and intent of Article 1, Regulations of Buildings Used for Human Habitation, is to provide regulation for the maintenance, sanitation, ventilation, use, occupancy, and safety of rental dwelling units, hotels, and motels within this jurisdiction for the public health, safety, and general welfare. An emergency shelter is defined in the code as housing with minimal supportive services for homeless persons that

is limited to occupancy of 6 months or fewer by a homeless person. No individual or household may be denied emergency shelter because of an inability to pay.

## County of San Bernardino Homeless Programs

### Homeless Provider Network

The goal of the Homeless Provider Network is to advocate for the homeless and those at risk of becoming homeless residing in the County of San Bernardino. The Homeless Provider Network provides a forum and environment where collaborative public and private programs can work to improve the current delivery of services and fill identified gaps in services to the homeless and those at risk of becoming homeless in the County of San Bernardino.

### San Bernardino County Office of Homeless Services

Serves as a clearinghouse of homeless issues for all County departments. Any homeless issues encountered by County staff can be referred to this office for resolution. Office of Homeless Services staff plays a vital role in SBCHP as the administrative support unit to the organization. The Office of Homeless Services ensures that the vision, mission, and goals of SBCHP are carried into effect.

### Homeless Management Information System

The County of San Bernardino Homeless Management Information System is a coordinated system of computers that enables service, shelter, and housing providers in different locations across the county to collect and share information about the homeless individuals and families seeking services. This system of computers allows users to collect and store information that can be used to improve service delivery for their consumers as well as generate required reports for different funding sources.

## Riverside County

### County of Riverside General Plan

The County of Riverside General Plan discusses homelessness within the County in the 2017–2021 Housing Element (County of Riverside 2017), which details specific policies and actions that the County is undertaking to solve this issue. The following policies within the General Plan aim to direct the County's actions to provide housing for the homeless population:

**Policy 1.4** Assist in the development of additional housing for the mentally disabled.

**Policy 1.5** Assist in the development of additional emergency, transitional, and permanent supportive housing for homeless persons and families.

**Policy 1.6** Support self-help housing programs (e.g., Habitat for Humanity and Coachella Valley Housing Coalition).

Each policy has one or more associated actions to specify how the policy will be implemented. Each action within the Housing Element was reviewed over the 2013–2017 period to assess the achievements made and provide recommendations where appropriate. The actions associated with the above policies, as well as current progress, are described below:

**Action 1.4a** Maintain a Mental Health Housing Coordinator or services coordination by a nonprofit organization.

- The Housing Opportunities Partnerships and Education program manages services offered to the homeless or those at risk of homelessness, including the mentally ill.

**Action 1.4b** Support current legislation for block grant funding to aid Supportive Housing Program and Shelter Plus Care Program Funds.

- Between 2013 and 2016, the County provided assistance through the Shelter Plus Care Housing Program to 128 qualified units for sheltering homeless persons with disabilities.

**Action 1.4c** Develop design criteria for housing suitable for the mentally disabled for use by affordable housing developers.

- For projects assisting mentally disabled individuals, Mental Health Services Act funds are used to design and build the supportive housing units consistent with the Riverside University Health System – Behavioral Health Community Services and Support Plan. These units are designed to accommodate the homeless or those at risk of homelessness as well as those individuals with severe and persistent mental illness. A total of 15 units of such qualifying housing are integrated into each project using Mental Health Services Act funds. From 2013 through 2016, a total of 60 supportive units were provided.

**Action 1.4d** Promote the integration of special needs housing into affordable housing communities.

- Home Investment Partnership Act (HOME), Redevelopment Agency for the County of Riverside, and CalHome funds have been used to fund projects and activities targeting persons of low- and moderate-income and their families throughout the county, including those in special needs categories such as homeless persons.

**Action 1.4e** Continue to participate in the Continuum of Care Supportive Housing Program and Shelter Plus Care Program. Continue the Shelter Plus Care Program through addition of permanent housing facilities for the mentally disabled, as funding is available, and implement a new program to provide safe havens to the mentally ill.

- The Riverside University Health System – Behavioral Health offers housing programs that utilize a safe haven model in their services, such as The Place and The Path, which are further described under *County of Riverside Homeless Programs* below.

**Action 1.5a** In cooperation with nonprofits and local jurisdictions, assist in the development of transitional housing facilities in established regions of the county where the need is highest.

- No new transitional housing facilities were developed or expanded in 2016.

**Action 1.5b** Assist with the expansions of the number of emergency shelters in identified areas of Riverside County in cooperation with nonprofit organizations and local jurisdictions.

- No new emergency shelters were developed or expanded in 2016.

**Action 1.5c** Process an amendment to Ordinance No. 348 to add the current definition of transitional housing and supportive housing and to permit transitional and supportive housing types as residential uses and subject only to those restrictions that apply to other residential uses of the same type in the same zone.

- Zoning code amendment in progress to ensure that transitional and supportive housing will be permitted by right in residential zones.

**Action 1.6a** Continue to work with nonprofit organizations in providing homeownership opportunities through the Rural Development Self Help program and other self-help construction programs within Riverside County as Community Housing Development Organizations under the HOME program.

- In 2016, the County completed one self-help project in the community of North Shore in the unincorporated area of the county (11 units). In, 2016, the County provided HOME assistance for construction of 22 homes for low-income families to support a developer's self-help program. Each of the 22 households also received assistance from the U.S. Department of Agriculture's Rural Development Self Help Program.

**Action 3.3b** Continue to utilize the following programs to assist special needs households:

1. Housing Choice Voucher Program (Section 8 Certificates)
  2. Family Unification Program
  3. Family Self Sufficiency Program
  4. Housing Opportunities for Persons with AIDS
  5. Veteran's Affairs Supportive Housing Program
  6. Foster Care Youth Program
  7. Tenant Based Rental Assistance Program
- The Veteran's Affairs Supportive Housing Program provided 451 homeless veterans with monthly rental assistance in 2016. The Housing Authority continues to provide rapid re-housing and homeless prevention services to homeless families and families at imminent risk of homelessness. During the 2015–16 fiscal year, 25 persons received rapid re-housing and 81 persons received homeless prevention assistance.

**Action 3.3d** The Housing Authority shall continue its collaborative agreement with Riverside County Department of Mental Health to administer Shelter Plus Care housing assistance for mentally ill homeless persons in the City of Riverside and within western and eastern Riverside County, as funding is awarded. Services should be expanded to include western Riverside County during the planning period.

- The County has continued to administer the Shelter Plus Care Program throughout the county, as further described below.

In addition to the development of affordable housing, the Riverside Sheriff's Department created a Homeless Outreach Team to identify homeless individuals, reduce the homeless population, and coordinate the delivery of resources to the homeless. The Sheriff's Department coordinates homeless outreach with a number of additional agencies including, but not limited to, the City of Jurupa Valley, the Riverside County Department of Social Services, the Probation Department, the U.S. Department of Veterans Affairs (VA), and the Riverside County Flood Control and Water Conservation District.



## County of Riverside Homeless Programs

In addition to the programs listed in the County of Riverside General Plan policies, the County of Riverside implements homeless programs as described below.

### Veterans Administration Supportive Housing Initiative

The VA is working in collaboration with the U.S. Department of Housing and Urban Development to provide targeted housing choice vouchers to homeless veterans throughout the County of Riverside. Locally, the VA Loma Linda is working in collaboration with the Housing Authority of the County of Riverside, the Homeless Street Outreach Team, and other partners to assist homeless veterans with moving off the streets and into permanent supportive housing.

### Riverside Emergency Shelter

A 64-bed facility, operated by Path of Life (POL) Ministries in partnership with the County and City of Riverside, provides a 30-day shelter program coupled with case management services for homeless men and women. Furthermore, between the cold weather months of December and April, an additional 72 beds are provided on a night-by-night basis. The Riverside Access Center is also home to the pet kennel that offers a safe place for Emergency Shelter and Riverside Access Center guests to house their companion animals during their stay, allowing homeless people with pets to access services.

### Shelter Plus Care Program with Operation SafeHouse Harrison House

The Housing Authority of Riverside County, in partnership with Operation SafeHouse, has established a shelter plus care permanent housing project for transitional-age youth program called Harrison House. Harrison House provides six units of permanent supportive housing to serve chronically homeless transitional-age youth (18–23) in the Coachella Valley. These units are funded through Project Based Shelter Plus Care rental certificates and are located at Operation SafeHouse's comprehensive services campus in Thousand Palms, California. The Housing Authority of Riverside County serves as the official project sponsor and directly administers the project-based rental assistance. Operation SafeHouse is the provider and coordinator of supportive services to project participants. This program is not located in the project vicinity and would not likely serve homeless populations adjacent to the Santa Ana River in western Riverside County.

### Transitional Housing Dual Diagnosis

The Transitional Housing Dual Diagnosis program serves homeless individuals affected by co-occurring mental illness and substance abuse and provides a total of 30 beds, 24-hour supervision and security, and supportive services to address mental illness and substance abuse treatment and recovery. The target population is defined as a homeless individual with mental or emotional impairments expected to be of long/continued and indefinite duration that impedes their ability to live independently, compounded by substance abuse (dually diagnosed). The availability of transitional housing and psychiatric care provides a safety net to ensure that dually diagnosed individuals obtain the treatment services necessary to move along the continuum to permanent, affordable housing in the community. The goal of the project is to provide up to 24 months of treatment (relapse prevention) and supportive services to foster the potential for independent living in permanent housing.

### **“The Place” Safe Haven Supportive Housing and Drop-In Center**

The Place is operated by Jefferson Transitional Programs in partnership with the County of Riverside Department of Mental Health, and provides 25 permanent supportive housing beds and a 24-hour drop-in center for chronically homeless individuals with severe mental illness.

### **“The Path” Safe Haven Supportive Housing and Drop-In Center**

The Path, located in the eastern end of the county in north Palm Springs, was opened in 2009 and provides 25 permanent supportive housing beds and a 24-hour drop-in center for chronically homeless individuals with severe mental illness. This program is not located in the project vicinity and would not likely serve homeless populations adjacent to the Santa Ana River in western Riverside County.

### **Path of Life**

POL’s Rapid Re-housing project targets homeless families with children, with or without disabilities, in all of Riverside County. The maximum assistance is up to 18 months. The project provides a comprehensive rapid re-housing intervention for families, which includes: (1) outreach/engagement; (2) housing first approach; (3) Coordinated Assessment with Housing Placement; and (4) home-based case management. Navigators work with existing outreach teams to identify and engage families living in the streets and emergency shelters.

POL received a U.S. Department of Housing and Urban Development Continuum of Care award under the application of Riverside City and County. POL uses a tenant-based rental assistance, which is a rental subsidy that will be used to help homeless families with children afford housing costs such as rent and security deposits. POL provides 80 units (92 beds). Tenant-based rental assistance is offered as long as needed and provides rental costs by making up the difference between what the household can afford and the amount of the unit’s fair market value. Supportive services are available by choice and tenants are encouraged to utilize them in maintaining housing and reaching self-arrived goals. The rental assistance will be up to 18 months with a planned reduction in assistance each quarter. Case management is available by choice of the homeless individual or family. Once tenants are in housing, case managers/navigators provide the sustainability services at the wish of the population addressing barriers that threaten long-term housing like healthcare, financial management, and insufficient income. The supportive services include mainstream benefits, employment placement, and healthcare.

### **Health To Hope Clinics**

Health to Hope provides health care services to the extremely low- to low-income population within the County of Riverside. These services include general primary medical care including health screenings, family planning, immunizations, well child visits, nutrition, and cardiology. They also provide mental health services that include crisis intervention; psychiatric evaluation; medication monitoring; mental health assessment; substance abuse services; education and outreach; individual, couples, and family therapy; case management; and collaboration with hospitals and social service agencies.

## Section 3.14, Public Services

### County of San Bernardino General Plan

The County of San Bernardino 2007 General Plan Circulation and Infrastructure Element (County of San Bernardino 2007) contains goals and policies concerning public service providers.

**Goal CI 10** Ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of current and future County residents.

**Policy CI 10.1** Ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods.

**Policy CI 10.2** Equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life.

**Goal CI 16** The County will protect its residents and visitors from injury and loss of life and protect property from fires through the continued improvement of existing Fire Department facilities and the creation of new facilities, but also through the improvement of related infrastructure that is necessary for the provision of fire service delivery such as water systems and transportation networks.

**Policy CI 16.1** Continue the consolidation efforts of the Fire Department to maintain the continued operation, services, facilities, and current infrastructure but also to ensure the provision of operations, services, facilities, and internal infrastructures into the future.

**Policy CI 16.2** Create a Fire Master Plan that can be used to identify areas in the County that are in need of increased levels of fire service delivery and thereby identify geographic areas that are in need of infrastructure improvements so that those areas can take the necessary steps to improve that infrastructure and eventually can adequately support the commensurate improvement in fire service delivery.

**Policy CI 16.3** Encourage development in areas that have adequate infrastructures for the provision of fire service, which include, but are not limited to, water systems capable of delivering appropriate fire flow, and transportation networks that can provide access for fire apparatus and other emergency response vehicles as well as provide efficient egress for evacuees.

**Policy CI 16.4** Create Community Facilities Districts (CFDs) or other long-term financial instruments within proposed developments and areas available for development to provide a fair-share funding mechanism to support pro-rata increases for the provision of long-term fire protection. The CFDs should be designed to provide sustained long term levels of staffing operations, equipment, and facilities. The CFDs should also be designed specifically to respond to the impacts on the related development and thereby to minimize the impact to the general fund and other existing funding mechanisms that support the Fire Department.

**Goal CI 17** The County will provide adequate law enforcement facilities to deliver services to deter crime and to meet the growing demand for services associated with increasing populations and commercial/industrial developments.

**Policy CI 17.1** Appropriately prioritize calls for service and seek sufficient staffing levels to ensure response times are reasonable and efforts to deter crime are optimized.

**Goal CI 20** The County will work with appropriate agencies to provide for convenient access to K-12 and higher educational opportunities for all, activities for youth, and programs for residents of all ages.

**Policy CI 20.1** Actively work with public school districts to organize educational and community services concurrent with development.

## County of Bernardino Countywide Plan

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected in 2019/2020. This is a planning document that goes beyond the traditional general plan format and takes into account all services provided by the County Government, not just land use planning (County of San Bernardino 2019). Goals and policies found in the Infrastructure and Utilities Element, Personal & Property Protection Element, Natural Resources Element, and Health & Wellness Element are applicable to the Project, although these may change between the public review draft and final, approved versions.

### Personal & Property Protection Element

**Goal PP-1** Law Enforcement. Effective crime prevention and law enforcement that leads to a real and perceived sense of public safety for residents, visitors, and businesses.

**Policy PP-1.1** Law enforcement services. The Sheriff's Department provides law enforcement services for unincorporated areas and distribute resources geographically while balancing levels of service and financial resources with continuously changing needs for personal and property protection.

**Policy PP-1.2** Contract law enforcement. When requested, the Sheriff's Department provide law enforcement services to incorporated jurisdictions by contract at the full cost of services as determined by the County, without direct subsidy by the County.

**Policy PP-1.3** Holistic approach to crime prevention. We recognize that the roots of crime are found throughout a spectrum of psychological, social, economic, and environmental issues, and we coordinate proactive planning and activities among the Sheriff's Department and county and non-county agencies and organizations to intervene and effectively prevent crime.

**Policy PP-1.4** Crime prevention resource allocation. The Sheriff's Department uses crime data analysis, professional expertise, and community input to allocate patrols and other crime prevention resources.

**Policy PP-1.5** Community-based crime prevention. The Sheriff's Department provides a range of outreach, education, and training programs for community-based and school-based crime prevention.

**Policy PP-1.6** Agency partnerships. The Sheriff's Department partners with other local, state, and federal law enforcement agencies and private security providers to enhance law enforcement serviced.

**Policy PP-1.7** Community partnerships. The Sheriff's Department establishes and maintains partnerships to help identify public safety needs, strengthen community confidence, and improve service to our communities.

**Policy PP-1.8** Public awareness. The Sheriff's Department engages the media and our communities to improve the public's perception and awareness of personal and property protection and safety.

**Policy PP-1.9** Periodic needs assessment. The Sheriff's Department periodically assesses their facility, equipment, and staffing needs and use the assessment to allocate funding resources in the annual budget and capital improvement program.

**Policy PP-1.10** Qualified workforce. The Sheriff's Department attracts and retains a qualified workforce of law enforcement and support personnel, reflective of the people they serve, and invest in training and ongoing education.

**Goal PP-2** Law & Justice. An equitable justice system for violations of law in the county, adequate care and effective rehabilitation for inmates in the County's custody, and the holistic rehabilitation and aided reentry and transition of parolees, probationers, and others living in the county engaged by the criminal justice system.

**Policy PP-2.1** Equity. We, in conjunction with the Sheriff's Department, monitor and improve our law and justice functions, including for those accused of violating state and local law, victims, and witnesses, to ensure that individuals and corporations are treated equitably.

**Policy PP-2.2** Capacity. We advocate for and support sufficient capacity in the justice system, including the criminal and civil courts, District Attorney's office, and Public Defender's office, to effectively and efficiently adjudicate violations of law committed in the county.

**Policy PP-2.3** Information sharing. We continually improve the sharing of non-privileged information from the time of arrest through trial, among the Sheriff's Department and city police departments, courts, District Attorney's office, Public Defender's office, and Probation Department.

**Goal PP-3** Fire and Emergency Medical. Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

**Policy PP-3.1** Fire and emergency medical services. We maintain a sufficient number and distribution of fire stations, up-to-date equipment, and fully-trained staff to respond effectively to emergencies.

**Policy PP-3.2** Fire District. We support the expansion of the Fire District to serve additional incorporated jurisdictions, and the use of special funding and financing mechanisms to augment Fire District revenues to improve service and coverage.

**Policy PP-3.3** Search and rescue. We maintain up-to-date equipment and fully-trained staff to provide urban search and rescue and swift water rescue emergency response.

**Policy PP-3.4** Fire prevention services. We proactively mitigate or reduce the negative effects of fire, hazardous materials release, and structural collapse by implementing the California Fire Code, adopted with County amendments.

**Policy PP-3.5** Firefighting water supply and facilities. We coordinate with water providers to maintain adequate water supply, pressure, and facilities to protect people and property from urban fires and wildfires.

**Policy PP-3.6** Concurrent protection services. We require that fire department facilities, equipment, and staffing required to serve new development are operating prior to, or in conjunction with new development.

**Policy PP-3.7** Fire safe design. We require new development in the Fire Safety Overlay to comply with additional site design, building, and access standards to provide enhanced resistance to fire hazards.

**Policy PP-3.8** Fire-adapted communities. We inform and prepare our residents and businesses to collaboratively plan and take action to more safely coexist with the risk of wildfires.

**Policy PP-3.11** Post-burn risks. In areas burned by wildfire, we require new and reconstructed development to adhere to current development standards, and may require additional study to evaluate increased flooding, debris flow, and mudslide risks.

**Policy PP-3.12** Fire protection and emergency medical resource allocation. We use fire and emergency services data analysis and professional expertise to allocate resources, reduce fire risks, and improve emergency response.

**Policy PP-3.13** Periodic needs assessment. We periodically assess our facility, equipment, and staffing needs and use the assessment to allocate funding resources in the annual budget and capital improvement program.

**Policy PP-3.14** Qualified workforce. We attract and retain a qualified workforce of fire fighters, emergency medical technicians, and support personnel, and invest in training and ongoing education.

## Natural Resources Element

**Goal NR-3** Open Space, Parks, and Recreation. A system of well-planned and maintained parks, trails, and open space that provides recreation opportunities for residents, attracts visitors from across the region and around the country, and preserves the natural environment.

**Policy NR-3.1** Open space preservation. We regulate land use and coordinate with public and nongovernmental agencies to preserve open space areas that protect natural resources, function as a buffer against natural hazards or between land uses, serve as a recreation or tourist destination, or are central to the identity of an unincorporated community.

**Policy NR-3.3** Management of designated areas. We coordinate with public and nongovernmental agencies to sustainably manage and conserve land within or adjacent to locally-, state-, or federally-designated open space or resource conservation areas.

**Policy NR-3.6** Regional park land. We coordinate with other jurisdictions and agencies to provide regional park land. We prioritize the maintenance and improvement of existing County parks and trails over their expansion or creation of new facilities.

**Policy NR-3.8** Regional trail system. We coordinate with incorporated jurisdictions, state and federal agencies, and other regional and not-for-profit entities to maintain and improve a regional trail system. We prioritize the maintenance and improvement of the Santa Ana River Trail, followed by the creation of trails in unincorporated areas that connect to existing trails in incorporated areas and to state- and federally-maintained trails.

**Policy NR-3.9** Local parks, trails, and recreation. We support the provision of local and community parks, trails, and recreational programs and facilities in unincorporated areas when a locally-approved funding and financing mechanism is established to pay for acquisition, construction, maintenance, and operations.

**Policy NR-3.10** Joint use facilities. We promote the creation of joint use facilities for local parks and recreation programs through coordination with the County Flood Control District, local school districts, utilities, and other public agencies.

## Health & Wellness Element

**Goal HW-2** Education. A common culture that values education and lifelong learning and a populace with the education to participate and compete in the global economy.

**Policy HW-2.1** Lifelong learning. We collaborate with educators, the business community, students and families, recreation departments and other public agencies, and civic and not-for-profit organizations to foster lifelong learning including early childhood literacy, cradle to career education, English as a second language, career development, and adult enrichment. We encourage approaches to learning that embrace diverse modes of learning for all.

**Policy HW-2.2** Land use compatibility. We prioritize the safety and security of public schools in unincorporated areas by minimizing incompatible land uses near instructional facilities. We encourage school districts to place new schools where existing and planned land uses are compatible.

## Infrastructure and Utilities Element

**Goal IU-3** Stormwater Drainage. A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.

**Policy IU-3.3** Recreational use. We prefer that stormwater facilities be designed and maintained to allow for regional open space and safe recreation use without compromising the ability to provide flood risk reduction.

## County of Riverside General Plan

The County of Riverside General Plan contains the vision and overarching policies for the future development of Riverside County. Both the Land Use Element (County of Riverside 2019) and the Circulation Element (County of Riverside 2017) of the County of Riverside General Plan contain goals and policies associated with public services that are applicable to the Project.

## Land Use Element

**Policy LU 5.1** Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.

**Policy LU 5.2** Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.

## Circulation Element

**Policy C 1.4** Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.

## Section 3.15, Recreation

### County of San Bernardino General Plan

The County of San Bernardino General Plan includes goals and policies within the Open Space Element to protect and preserve open space and recreational resources. The San Bernardino County General Plan serves county residents and attracts visitors as they pursue a wide variety of recreational activities including hiking, camping, off-highway vehicle traveling, fishing, horseback riding, star-gazing, winter sports, youth athletics, performing arts, and other entertainment. The Open Space Element of the General Plan provides a reference to guide the protection and preservation of open space, recreation, and scenic areas (County of San Bernardino 2007). The following goals and policies from the General Plan Conservation and Open Space Elements would be applicable to the Proposed Project.

### Conservation Element

**Goal CO 1** The County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County.

**Policy CO 1.2** The preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas. The County will continue the review of the Land Use Designations for unincorporated areas within one mile of any state or federally designated scenic area, national forest, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

**Goal CO 2** The County will maintain and enhance biological diversity and healthy ecosystems throughout the County.

**Policy CO 2.2** Provide a balanced approach to resource protection and recreational use of the natural environment.

### Open Space Element

**Goal OS 1** The County will provide plentiful open spaces, local parks, and a wide variety of recreational amenities for all residents.

**Policy OS 1.7** When specific projects are reviewed that exhibit natural features worthy of regional park land status, require the dedication of these lands when recommended by the Regional Parks Department and approved by the Board of Supervisors.

**Policy OS 1.9** Ensure that open space and recreation areas are both preserved and provided to contribute to the overall balance of land uses and quality of life.

**Goal OS 2** The County will expand its trail systems for pedestrians, equestrians, and bicyclists to connect with the local, state, and federal trail systems.



**Policy OS 2.1** Provide a regional trail system, plus rest areas, to furnish continuous interconnecting trails that serve major populated areas of the County and existing and proposed recreation facilities through the regional trail system. The purpose of the County regional trails system will be to provide major backbone linkages to which community trails might connect. The provision and management of community and local trails will not be the responsibility of the regional trail system.

**Policy OS 2.4** Use lands already in public ownership or proposed for public acquisition, such as right-of-way for flood control channels, abandoned railroad lines, and fire control roads, for trails wherever possible, in preference to private property.

**Goal OS 3** The County will develop multi-purpose regional open spaces and advocate multi-use access to public lands including national parks, national forests, state parks, and U.S. Bureau of Land Management areas.

**Policy OS 3.4** Seek the conjunctive use of public lands for regional park experiences. Flood control lands are one example, as are lands that have been deemed unsuitable for habitable structures.

**Policy OS 3.6** Consistent with safety and operational considerations, support the use of channels, levees, aqueduct alignments, and similar linear spaces for open space and/or trail use.

**Goal OS 4** The County will preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.

**Policy OS 4.2** The County will preserve and encourage the management of suitable land for greenbelts, forests, recreation facilities and flood control facilities to assist the County's efforts to provide adequate water supply, achieve air quality improvement, and provide habitat for fish, wildlife and wild vegetation.

**Goal OS 6** Improve and preserve open space corridors throughout the County.

**Policy OS 6.1** Support and actively pursue an open space preservation and acquisition program which will create a linked system of both privately and publicly owned open space lands throughout the County.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019. The relevant goals, policies, and programs are presented in the Natural Resources Element, as noted below.

### Natural Resources Element

**Goal NR-3** Open Space, Parks, and Recreation. A system of well-planned and maintained parks, trails, and open space that provides recreation opportunities for residents, attracts visitors from across the region and around the country, and preserves the natural environment.

**Policy NR-3.1** Open space preservation. We regulate land use and coordinate with public and nongovernmental agencies to preserve open space areas that protect natural resources, function as a buffer against natural hazards or between land uses, serve as a recreation or tourist destination, or are central to the identity of an unincorporated community.

**Policy NR-3.3** Management of designated areas. We coordinate with public and nongovernmental agencies to sustainably manage and conserve land within or adjacent to locally-, state-, or federally-designated open space or resource conservation areas.

**Policy NR-3.6** Regional park land. We coordinate with other jurisdictions and agencies to provide regional park land. We prioritize the maintenance and improvement of existing County parks and trails over their expansion or creation of new facilities.

**Policy NR-3.8** Regional trail system. We coordinate with incorporated jurisdictions, state and federal agencies, and other regional and not-for-profit entities to maintain and improve a regional trail system. We prioritize the maintenance and improvement of the Santa Ana River Trail, followed by the creation of trails in unincorporated areas that connect to existing trails in incorporated areas and to state- and federally-maintained trails.

**Policy NR-3.9** Local parks, trails, and recreation. We support the provision of local and community parks, trails, and recreational programs and facilities in unincorporated areas when a locally-approved funding and financing mechanism is established to pay for acquisition, construction, maintenance, and operations.

**Policy NR-3.10** Joint use facilities. We promote the creation of joint use facilities for local parks and recreation programs through coordination with the County Flood Control District, local school districts, utilities, and other public agencies.

## County of Riverside General Plan

The Riverside County General Plan contains two elements that are relevant to this section: the Multipurpose Open Space Element (County of Riverside 2015a) and the Healthy Communities Element (County of Riverside 2015b). Policies contained in the Multipurpose Open Space Element relate to the preservation, use, and development of a comprehensive open space system consisting of passive open space areas, and parks and recreation areas that have recreational, ecological and scenic value. Policies contained in the Healthy Communities Element relate to Riverside County's commitment to providing a sustainable multi-use open space network that is accessible, safe, and enjoyable for all residents. The following policies are relevant to the Proposed Project.

### Multipurpose Open Space Element

**Policy OS 20.1** Preserve and maintain open space that protects County environmental and other nonrenewable resources and maximizes public health and safety in areas where significant environmental hazards and resources exist.

**Policy OS 20.2** Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas.

**Policy OS 20.3** Discourage the absorption of dedicated park lands by non-recreational uses, public or private. Where absorption is unavoidable, replace park lands that are absorbed by other uses with similar or improved facilities and programs.

**Policy OS 21.1** Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.

## Healthy Communities Element

**Policy HC 10.2** Increase access to open space resources by:

- a. Supporting a diversity of passive and active open spaces throughout the County of Riverside.
- b. Facilitating the location of additional transportation routes to existing recreational facilities.
- c. Locating parks in close proximity to homes and offices.
- d. Requiring that development of parks, trails, and open space facilities occur concurrently with other area development.

**Policy HC 10.3** Encourage the expansion of facilities and amenities in existing parks.

**Policy HC 10.9** When feasible, coordinate with public entities to allow easements to be used as parks and trails.

## Section 3.16, Transportation

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007), Circulation and Infrastructure Element, includes goals, policies, and implementation measures that address transportation in the county. The applicable goals and policies are as follows.

#### Circulation and Infrastructure Element

**Policy CI 1.1** The County's comprehensive transportation system will be developed according to the Circulation Policy Map (the Circulation Element Map), which outlines the ultimate multi-modal (non-motorized, highway, and transit) system to accommodate the County's mobility needs and provides the County's objectives to be achieved through coordination and cooperation between the County and the local municipalities in the County, adjacent counties and cities within those counties, Caltrans, and SANBAG.

**Goal CI 2:** The County's comprehensive transportation system will operate at regional, countywide, community, and neighborhood scales to provide connectors between communities and mobility between jobs, residences, and recreational opportunities.

**Goal CI 6:** The County will encourage and promote greater use of non-motorized means of personal transportation. The County will maintain and expand a system of trails for bicycles, pedestrians, and equestrians that will preserve and enhance the quality of life for residents and visitors.

**Goal CI 9:** The County will ensure the quality of life by pacing future growth with the availability of public infrastructures.

**Policy CI 9.1** Control the timing and intensity of future development and ensure that future development is contingent on the provision of infrastructure facilities and public services.

**Policy CI 9.2** Promote the least intensive uses in areas with minimal infrastructure facilities and public services. The more intensive uses are permitted in areas where urban level infrastructure facilities and public services currently exist or can reasonably be extended.

**Policy CI 9.7** The County will continue to identify and update the services that are needed in each planning region in the County to guide the review and approval process for proposed development projects.

**Policy CI 11.7** Assist in the development of additional conveyance facilities and use of groundwater basins to store surplus surface or imported water.

**Policy CI 11.8** Encourage local distribution systems to interconnect with regional and local systems, where feasible, to assist in maximizing use of local ground and surface water during droughts and emergencies.

**Policy CI 11.11** Coordinate with all agencies providing water service and protection to achieve effective local and regional planning.

**Goal V/CI 1:** Ensure a safe and effective transportation system that provides adequate traffic movement.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Transportation and Mobility Element, as noted below.

### Transportation and Mobility Element

**Goal TM-1** Roadway Capacity. Unincorporated areas served by roads with capacity that is adequate for residents, businesses, tourists, and emergency services.

**Policy TM-1.1** Roadway level of service (LOS). We require our roadways to be built to achieve the following minimum level of service standards during peak commute periods (typically 7:00-9:00 AM and 4:00-6:00 PM on a weekday):

- LOS D in the Valley Region
- LOS D in the Mountain Region
- LOS C in the North and East Desert Regions

**Policy TM-1.2** Interjurisdictional roadway consistency. We promote consistent cross-sections along roads traversing incorporated and unincorporated areas.

**Policy TM-1.3** Freeways and highways. We coordinate with Caltrans and regional transportation agencies and support the use of state, federal, and other agency funds to improve freeways and highways.

**Policy TM-1.4** Unpaved roadways. The County does not accept new unpaved roads into the County Maintained Road System, and we require all-weather treatment for all new unpaved roads.

**Policy TM-1.5** Upgrading unpaved roads. We support the paving of unpaved roads when funding is contributed through a local area funding and financing mechanism.

**Policy TM-1.6** Paved roads. For any new development for which paved roads are required, we require the developer to construct the roads and we require the establishment of a special funding and financing mechanism to pay for roadway operation, maintenance, and set-aside reserves.

**Policy TM-1.7** Fair share contributions. We require new development to pay its fair share contribution toward off-site transportation improvements.

**Policy TM-1.8** Emergency access. When considering new roadway improvement proposals for the CIP or RTP, we consider the provision of adequate emergency access routes along with capacity expansion in unincorporated areas. Among access route improvements, we prioritize those that contribute some funding through a local area funding and financing mechanism.

**Policy TM-1.9** New transportation options. We support the use of transportation network companies, autonomous vehicles, micro transit, and other emerging transportation options that reduce congestion, minimize land area needed for roadways, create more pedestrian- and bicycle-friendly streets, reduce VMT, or reduce dependence on privately-owned vehicles.

**Goal TM-2** Road Design Standards. Roads designed and built to standards in the unincorporated areas that reflect the rural, suburban, and urban context as well as the regional (valley, mountain, and desert) context.

**Policy TM-2.1** Context sensitive approach. We maintain and periodically update required roadway cross sections that prioritize multi-modal systems inside mobility focus areas (based on community context), and vehicular capacity on roadways outside of mobility focus areas (based on regional context).

**Policy TM-2.2** Roadway improvements. We require roadway improvements that reinforce the character of the area, such as curbs and gutters, sidewalks, landscaping, street lighting, and pedestrian and bicycle facilities. We require fewer improvements in rural areas and more improvements in urbanized areas, consistent with the Development Code. Additional standards may be required in municipal spheres of influence.

**Policy TM-2.3** Concurrent improvements. We require new development to mitigate project transportation impacts no later than prior to occupancy of the development to ensure transportation improvements are delivered concurrent with future development.

**Policy TM-2.4** Atypical intersection controls. We allow the use of atypical intersection concepts such as roundabouts when they improve traffic flow and safety compared to conventional intersection controls.

**Policy TM-2.5** Context-based features. When making road improvements, we provide feasible, context-based transportation features such as:

- Chain installation and inspection areas in the Mountain Region
- Slow-vehicle turnouts on roadways with steep grades
- Limited on-street parking areas to serve snow-plow or emergency services

- Passing lanes in rural areas
- Vista areas along scenic routes

**Policy TM-2.6** Access control. We promote shared/central access points for direct access to roads in unincorporated areas to minimize vehicle conflict points and improve safety, especially access points for commercial uses on adjacent properties.

**Goal TM-3** Vehicle Miles Traveled. A pattern of development and transportation system that minimizes vehicle miles traveled.

**Policy TM-3.1** VMT Reduction. We promote new development that will reduce household and employment VMT relative to existing conditions.

**Policy TM-3.2** Trip reduction strategies. We support the implementation of transportation demand management techniques, mixed use strategies, and the placement of development in proximity to job and activity centers to reduce the number and length of vehicular trips.

**Policy TM-3.3** First mile/last mile connectivity. We support strategies that strengthen first/last mile connectivity to enhance the viability and expand the utility of public transit in unincorporated areas and countywide.

**Goal TM-4** Complete Streets, Transit, and Active Transportation. On- and off-street improvements that provide functional alternatives to private car usage and promote active transportation in mobility focus areas.

**Policy TM-4.1** Complete streets network. We maintain a network of complete streets within mobility focus areas that provide for the mobility of all users of all ages and all abilities, while reflecting the local context.

**Policy TM-4.2** Complete streets improvements. We evaluate the feasibility of installing elements of complete street improvements when planning roadway improvements in mobility focus areas, and we require new development to contribute to complete street improvements in mobility focus areas.

**Policy TM-4.3** Funding. We partner with SBCTA, Caltrans, and local agencies to fund active transportation systems in the county. We encourage unincorporated communities to apply for funding and cooperate with them in their funding applications for active transportation improvements that are identified in a non-motorized transportation plan that is accepted or adopted by the County.

**Policy TM-4.4** Transit access for residents in unincorporated areas. We support and work with local transit agencies to generate a public transportation system, with fixed routes and on-demand service, that provide residents of unincorporated areas with access to jobs, public services, shopping, and entertainment throughout the county.

**Policy TM-4.5** Transit access to job centers and tourist destinations. We support and work with local transit agencies to generate public transportation systems that provide access to job centers and reduce congestion in tourist destinations in unincorporated areas.

**Policy TM-4.6** Transit access to public service, health, and wellness. In unincorporated areas where public transit is available, we prefer new public and behavioral health facilities, other public facilities and services, education facilities, grocery stores, and pharmacies to be located within one-half mile of a public transit stop. We prefer to locate new County health and wellness facilities within one-half mile of a public transit stop in incorporated jurisdictions. We encourage public K-12 education and court facilities to be located within one-half mile of public transit.

**Policy TM-4.7** Regional bicycle network. We work with SBCTA and other local agencies to develop and maintain a regional backbone bicycle network.

**Policy TM-4.8** Local bicycle and pedestrian networks. We support local bike and pedestrian facilities that serve unincorporated areas, connect to facilities in adjacent incorporated areas, and connect to regional trails. We prioritize bicycle and pedestrian network improvements that provide safe and continuous pedestrian and bicycle access to mobility focus areas, schools, parks, and major transit stops.

**Policy TM-4.9** Bike and pedestrian safety. We promote pedestrian and bicyclist safety by providing separated pedestrian and bike crossings when we construct or improve bridges over highways, freeways, rail facilities, and flood control areas. We monitor pedestrian and bicycle traffic accidents and promote safety improvements in unincorporated high-accident areas.

**Policy TM-4.10** Shared parking. We support the use of shared parking facilities that provide safe and convenient pedestrian connectivity between adjacent uses.

**Policy TM-4.11** Parking areas. We require publicly accessible parking areas to ensure that pedestrians and bicyclists can safely access the site and onsite businesses from the public right-of-way.

**Goal TM-5** Goods Movement. A road, rail, and air transportation system that supports the logistics industry and minimizes congestion in unincorporated areas.

**Policy TM-5.1** Efficient goods movement network. We advocate for the maintenance of an efficient goods movement network in southern California.

**Policy TM-5.2** Intermodal facility. We support the development of an intermodal facility in connection with the Southern California Logistics Airport.

**Policy TM-5.3** High Desert Corridor. We support the development of the High Desert Corridor to improve the regional goods movement network and foster economic development in the North Desert region.

**Policy TM-5.4** Grade separations. We support grade separations to reduce conflicts between rail facilities and roadways, subject to available funding.

**Policy TM-5.5** Countywide truck routes. We support SBCTA's establishment of regional truck routes that efficiently distribute regional truck traffic while minimizing impacts on residents. We support funding through the RTP to build adequate truck route infrastructure.

**Policy TM-5.6** Unincorporated truck routes. We may establish local truck routes in unincorporated areas to efficiently funnel truck traffic to freeways while minimizing impacts on residents.

**Policy TM-5.7** Trucking-intensive businesses. We require trucking-intensive businesses to pay their fair share of costs to build and maintain adequate roads.

## County of San Bernardino Code of Ordinances

San Bernardino County does not have any ordinances relevant to potential transportation impacts of the proposed project.

## County of Riverside General Plan

The Riverside County General Plan, Circulation Element, includes goals, policies, and implementation measures that address transportation in the county. Riverside County's transportation system must be planned, designed, constructed, operated, and maintained in a manner that retains a high level of environmental quality. Transportation system improvements should be implemented to minimize disturbance of the natural environment and other sensitive environmental features covered under CEQA and National Environmental Policy Act guidelines (County of Riverside 2017). The applicable policies are as follows.

### Circulation Element

**Policy C 1.1** Design the transportation system to respond to concentrations of population and employment activities, as designated by the Land Use Element and in accordance with the Circulation Plan.

**Policy C 1.6** Cooperate with and where appropriate lead local, regional, state, and federal agencies to establish an efficient circulation system.

**Policy C 3.8** Restrict heavy duty truck through-traffic in residential and community center areas and plan land uses so that trucks do not need to traverse these areas.

**Policy C 3.17** Ensure dedications are made, where necessary, for additional rights-of-way or easements outside the road rights-of-way that are needed to establish slope stability, or drainage and related structures. These dedications shall be made by land dividers or developers to the responsible agency during the land division and land use review process.

**Policy C 16.4** Require that all development proposals located along a planned trail or trails provide access to, dedicate trail easements or right-of-way, and construct their fair share portion of the trails system. Evaluate the locations of existing and proposed trails within and adjacent to each development proposal and ensure that the appropriate easements are established to preserve planned trail alignments and trail heads.

**Policy C 20.4** New crossings of watercourses by local roads shall occur at the minimum frequency necessary to provide for adequate neighborhood and community circulation and fire protection. Wherever feasible, new crossings shall occur using bridging systems that pass over entire watercourses and associated floodplains and riparian vegetation in single spans. Dip or culvert crossings shall be avoided, but, where their use is unavoidable, they shall be designed to minimize impacts on watercourses.

**Policy C 20.5** In order to protect the watershed, water supply, groundwater recharge, and wildlife values of watercourses, the County of Riverside will avoid siting utility infrastructure and associated grading, fire clearance, and other disturbances within or adjacent to watercourses, if there are feasible alternatives available, and discourage special districts and other governmental jurisdictions outside of Riverside County's authority, from doing so. Where such watershed utility siting locations cannot be avoided, the impacts on watercourses shall be minimized.

## County of Riverside Code of Ordinances

Riverside County does not have any ordinances relevant to potential transportation impacts of the proposed project.



## Section 3.17, Tribal Resources

### County of San Bernardino General Plan

The County of San Bernardino General Plan (County of San Bernardino 2007) expresses the broad goals and policies and specific implementation measures that will guide decisions on future growth, development, and the conservation of resources through the year 2020. The relevant goals and policies are presented in the Conservation Element, as noted below.

**Goal CO 3** The County will preserve and promote its historic and prehistoric cultural heritage.

**Policy CO 3.1** Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.

#### Programs

1. Require a cultural resources field survey and evaluation prepared by a qualified professional for projects located within the mapped Cultural Resource Overlay area.
2. Mitigation of impacts to important cultural resources will follow the standards established in Appendix K of the California Environmental Quality Act Guidelines, as amended to date.

**Policy CO 3.2** Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.

#### Programs

1. Require the Archaeological Information Center at the San Bernardino County Museum to conduct a preliminary cultural resource review prior to the County's application acceptance for all land use applications in planning regions lacking Cultural Resource Overlays and in lands located outside of planning regions.
2. Should the County's preliminary review indicate the presence of known cultural resources or moderate to high sensitivity for the potential presence of cultural resources, a field survey and evaluation prepared by a qualified professional will be required with project submittal. The format of the report and standards for evaluation will follow the "Guidelines for Cultural Resource Management Reports" on file with the San Bernardino County Land Use Services Department.

**Policy CO 3.3** Establish programs to preserve the information and heritage value of cultural and historical resources.

**Policy CO 3.4** The County will comply with Government Code Section 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

#### Programs

1. Site record forms and reports of surveys, test excavations, and data recovery programs will be filed with the Archaeological Information Center at the San Bernardino County Museum, and will be reviewed and approved in consultation with that office.
  - a. Preliminary reports verifying that all necessary archaeological or historical fieldwork has been completed will be required prior to project grading and/or building permits.
  - b. Final reports will be submitted and approved prior to project occupancy permits.

2. Any artifacts collected or recovered as a result of cultural resource investigations will be catalogued per County Museum guidelines and adequately curated in an institution with appropriate staff and facilities for their scientific information potential to be preserved. This shall not preclude the local tribes from seeking the return of certain artifacts as agreed to in a consultation process with the developer/project archaeologist.
3. When avoidance or preservation of an archaeological site or historic structure is proposed as a form of mitigation, a program detailing how such long-term avoidance or preservation is assured will be developed and approved prior to conditional approval.

**Policy CO 3.5** Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.

### **Programs**

1. Consistent with SB 18, as well as possible mitigation measures identified through the CEQA process, the County will work and consult with local tribes to identify, protect and preserve “traditional cultural properties” (TCPs). TCPs include both manmade sites and resources as well as natural landscapes that contribute to the cultural significance of areas.
2. The County will protect confidential information concerning Native American cultural resources with internal procedures, per the requirements of SB 922, an addendum to SB 18. The purpose of SB 922 is to exempt cultural site information from public review as provided for in the Public Records Act. Information provided by tribes to the County shall be considered confidential or sacred.
3. The County will work in good faith with the local tribes, developers/applicants and other parties if the local affected tribes request the return of certain Native American artifacts from private development projects. The developer is expected to act in good faith when considering the local tribe’s request for artifacts. Artifacts not desired by the local tribe will be placed in a qualified repository as established by the California State Historical Resources Commission. If no facility is available, then all artifacts will be donated to the local tribe.
4. The County will work with the developer of any “gated community” to ensure that the Native Americans are allowed future access, under reasonable conditions, to view and/or visit known sites within the “gated community.” If a site is identified within a gated community project, and preferably preserved as open space, the development will be conditioned by the County allow future access to Native Americans to view and/or visit that site.
5. Because contemporary Native Americans have expressed concern over the handling of the remains of their ancestors, particularly with respect to archaeological sites containing human burials or cremations, artifacts of ceremonial or spiritual significance, and rock art, the following actions will be taken when decisions are made regarding the disposition of archaeological sites that are the result of prehistoric or historic Native American cultural activity:
  - a. The Native American Heritage Commission and local reservation, museum, and other concerned Native American leaders will be notified in writing of any proposed evaluation or mitigation activities that involve excavation of Native American archaeological sites, and their comments and concerns solicited.
  - b. The concerns of the Native American community will be fully considered in the planning process.

- c. If human remains are encountered during grading and other construction excavation, work in the immediate vicinity will cease and the County Coroner will be contacted pursuant to the state Health and Safety Code.
- d. In the event that Native American cultural resources are discovered during project development and/or construction, all work in the immediate vicinity of the find will cease and a qualified archaeologist meeting U.S. Secretary of Interior standards will be hired to assess the find. Work on the overall project may continue during this assessment period.
- e. If Native American cultural resources are discovered, the County will contact the local tribe. If requested by the tribe, the County will, in good faith, consult on the discovery and its disposition with the tribe.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Natural Resources and Cultural Resources Elements, as noted below.

### Natural Resources Element

**Goal NR-4** Scenic Resources. Scenic resources that highlight the natural environment and reinforce the identity of local communities and the county.

**Policy NR-4.1** Preservation of scenic resources. We consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs.

**Policy NR-4.2** Coordination with agencies. We coordinate with adjacent federal, state, local, and tribal agencies to protect scenic resources that extend beyond the County's land use authority and are important to countywide residents, businesses, and tourists.

### Cultural Resources Element

**Goal CR-1** Tribal Cultural Resources. Tribal cultural resources that are preserved and celebrated out of respect for Native American beliefs and traditions.

**Policy CR-1.1** Tribal notification and coordination. We notify and coordinate with tribal representatives in accordance with state and federal laws to strengthen our working relationship with area tribes, avoid inadvertent discoveries of Native American archaeological sites and burials, assist with the treatment and disposition of inadvertent discoveries, and explore options of avoidance of cultural resources early in the planning process.

**Policy CR-1.2** Tribal planning. We will collaborate with local tribes on countywide planning efforts and, as permitted or required, planning efforts initiated by local tribes.

**Policy CR-1.3** Mitigation and avoidance. We consult with local tribes to establish appropriate project-specific mitigation measures and resource-specific treatment of potential cultural resources. We require project applicants to design projects to avoid known tribal cultural resources, whenever possible. If avoidance is not possible, we require appropriate mitigation to minimize project impacts on tribal cultural resources.

**Policy CR-1.4** Resource monitoring. We encourage active participation by local tribes as monitors in surveys, testing, excavation, and grading phases of development projects with potential impacts on tribal resources.

**Goal CR-2** Historic and Paleontological Resources. Historic resources (buildings, structures, or archaeological resources) and paleontological resources that are protected and preserved for their cultural importance to local communities as well as their research and educational potential.

**Policy CR-2.1** National and state historic resources. We encourage the preservation of archaeological sites and structures of state or national significance in accordance with the Secretary of Interior's standards.

**Policy CR-2.2** Local historic resources. We encourage property owners to maintain the historic integrity of resources on their property by (listed in order of preference): preservation, adaptive reuse, or memorialization.

**Policy CR-2.3** Paleontological and archaeological resources. We strive to protect paleontological and archaeological resources from loss or destruction by requiring that new development include appropriate mitigation to preserve the quality and integrity of these resources. We require new development to avoid paleontological and archeological resources whenever possible. If avoidance is not possible, we require the salvage and preservation of paleontological and archeological resources.

**Policy CR-2.4** Partnerships. We encourage partnerships to champion and financially support the preservation and restoration of historic sites, structures, and districts.

**Policy CR-2.5** Public awareness and education. We increase public awareness and conduct education efforts about the unique historic, natural, tribal, and cultural resources in San Bernardino County through the County Museum and in collaboration with other entities.

## County of San Bernardino Ordinances

### Chapter 82.12. Cultural Resources Preservation (CP) Overlay

#### § 82.12.010. Purpose.

The Cultural Resources Preservation (CP) Overlay established by §§ 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is intended to provide for the identification and preservation of important archaeological and historical resources. This is necessary because:

- (a) Many of the resources are unique and non-renewable; and
- (b) The preservation of cultural resources provides a greater knowledge of County history, thus promoting County identity and conserving historic and scientific amenities for the benefit of future generations

**§ 82.12.020. Location Requirements.**

The CP Overlay may be applied to areas where archaeological and historic sites that warrant preservation are known or are likely to be present. Specific identification of known cultural resources is indicated by listing in one or more of the following inventories:

- (a) California Archaeological Inventory;
- (b) California Historic Resources Inventory;
- (c) California Historical Landmarks;
- (d) California Points of Historic Interest; and/or
- (e) National Register of Historic Places.

**§ 82.12.030. Application Requirements.**

The application for a project proposed within the CP Overlay shall include a report prepared by a qualified professional that determines through appropriate investigation the presence or absence of archaeological and/or historical resources on the project site and within the project area, and recommends appropriate data recovery or protection measures. The measures may include:

- (a) Site recordation;
- (b) Mapping and surface collection of artifacts, with appropriate analysis and curation;
- (c) Excavation of sub-surface deposits when present, along with appropriate analysis and artifact curation;
- (d) Preservation in an open space easement and/or dedication to an appropriate institution with provision for any necessary maintenance and protection; and/or
- (e) Proper curation of archeological and historical resource data and artifacts collected within a project area pursuant to federal repository standards. Such data and artifacts shall be curated at San Bernardino County Museum. Pursuant to State Historical Resources Commission motion dated February 2, 1992, the repository selected should consider 36 C.F.R. 79, Curation of Federally-owned and Administered Archaeological Collection, Final Rule, as published Federal Register, September 12, 1990, or a later amended for archival collection standards.

**§ 82.12.040. Development Standards.**

- (a) The proposed project shall incorporate all measures recommended in the report required by § 82.12.030 (Application Requirements).
- (b) Archaeological and historical resources determined by qualified professionals to be extremely important should be preserved as open space or dedicated to a public institution when possible.

**§ 82.12.050. Native American Monitor.**

If Native American cultural resources are discovered during grading or excavation of a development site of the site is within a high sensitivity Cultural Resources Preservation Overlay District, the local tribe will be notified. If requested by the tribe, a Native American Monitor shall be required during such grading or excavation to ensure all artifacts are properly protected and/or recovered.

## County of Riverside General Plan

The General Plan for the County of Riverside follows both federal and state laws and guidelines for the definition of significance and sensitivity of cultural resources. Cultural resources may include objects, buildings, structures, sites, area, places, records, or manuscripts. They also may include places that have historic or traditional associations or important for traditional cultural uses.

The cultural history of Riverside County is divided chronologically into time periods associated with European contact, before and after contact. Native American populations that predate European contact extend back over 10,000 years in history, which can be seen from numerous archaeological sites in the county.

The County of Riverside has enacted the following policies in the Multipurpose Open Space Element (2015) to ensure that cultural resources are appropriately considered:

**Policy OS 19.1** Cultural resources (both prehistoric and historic) are a values part of the history of the County of Riverside.

**Policy OS 19.2** The County of Riverside shall establish a cultural resources program in consultation with Tribes and the professional cultural resources consulting community. Such a program shall, at a minimum, address each of the following: application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; and the descendant community consultation requirements of local, state and federal law.

**Policy OS 19.3** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

**Policy OS 19.4** To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state.

**Policy OS 19.5** Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

## County of Riverside Code of Ordinances

### Title 2, Chapter 2.100 – Emergency Management Organization

#### 2.100.020 – Purpose

The declared purpose of this chapter is to provide for the coordination of disaster mitigation, preparation, response and recovery activities for the protection of persons and property within the County of Riverside in the event of an emergency or disaster; the establishment and direction of the emergency management organization; and the coordination of the emergency related activities of the County of Riverside, functioning as the operational area, with all other stakeholders including but not limited to public agencies, tribal partners, private non-government organizations, and the whole community.

**2.100.050 – Emergency Management Organization**

The Riverside County Emergency Management Organization consists of all officers and employees of the County of Riverside, its agencies, cities, tribal governments and special districts of Riverside County, together with all volunteers and all groups, organizations and persons commandeered under the provisions of the act and this chapter, with all equipment and material publicly owned, volunteered, commandeered or in any way under the control of the aforementioned personnel, for the support of the aforementioned personnel in the conduct of emergency operations.

**2.100.060 Disaster Council**

A. The Riverside County Disaster Council is hereby created and shall consist of the following:

(12) The director of emergency services from each tribe within Riverside County as appointed by the tribal council.

**Title 15, Chapter 15.72 Historic Preservation Districts**

§ 15.72.020. Purpose.

The purpose of this chapter is to set forth reasonable and uniform procedures for historic preservation districts that do each of the following:

A. Protect, enhance and perpetuate structures, architectural styles, landmarks and irreplaceable assets that represent past eras, events, and persons important in county history, or which provide significant examples of the physical surroundings in which past generations lived.

B. Safeguard the county's historic heritage, as embodied and reflected in established historic preservation districts.

C. Stabilize and improve property values.

D. Protect and enhance the county's attractiveness to residents, tourists and visitors, and serve as a support and stimulus to business and industry.

E. Strengthen the economy of the county.

F. Promote the use of historic preservation districts for the education, pleasure, prosperity and welfare of the county's residents.

## Section 3.18, Utilities

### County of San Bernardino General Plan

The County of San Bernardino General Plan includes goals and policies within the Circulation and Infrastructure Element to ensure that public facilities and infrastructure are available and adequately maintained within the county. The County of San Bernardino 2007 General Plan Circulation and Infrastructure Element contains goals and policies concerning utility and public service providers (County of San Bernardino 2007).

## Circulation and Infrastructure Element

**Goal CI 10** Ensure timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of current and future County residents.

**Policy CI 10.1** Ensure that adequate facility and service standards are achieved and maintained through the use of equitable funding methods.

**Policy CI 10.2** Equitably distribute throughout the County new public facilities and services that increase and enhance community quality of life.

**Goal CI 11** The County will coordinate and cooperate with governmental agencies at all levels to ensure safe, reliable, and high quality water supply for all residents and ensure prevention of surface and ground water pollution.

**Policy CI 11.1** Apply federal and state water quality standards for surface and groundwater and wastewater discharge requirements in the review of development proposals that relate to type, location and size of the proposed project to safeguard public health.

**Policy CI 11.3** Support the development of groundwater quality management plans with emphasis on protection of the quality of underground waters from non-point pollution sources.

**Policy CI 11.4** Cooperate with sewerage agencies to encourage the development of general sewerage plans that will protect groundwater quality.

**Policy CI 11.7** Assist in the development of additional conveyance facilities and use of groundwater basins to store surplus surface or imported water.

**Policy CI 11.8** Encourage local distribution systems to interconnect with regional and local systems, where feasible, to assist in maximizing use of local ground and surface water during droughts and emergencies.

**Policy CI 11.9** Encourage water conservation, replenishment programs, and water sources in areas experiencing difficulty in obtaining timely or economical water service from existing potential suppliers, or water quality or quantity problems.

**Policy CI 11.10** Because the recharge of groundwater basins is vital to the supply of water in the County, and because these areas can function only when retained in open space, the County will consider retaining existing groundwater recharge and storm flow retention areas as open space lands.

**Policy CI 11.11** Coordinate with all agencies providing water service and protection to achieve effective local and regional planning.

**Policy CI 11.12** Prior to approval of new development, ensure that adequate and reliable water supplies and conveyance systems will be available to support the development, consistent with coordination between land use planning and water system planning.

**Goal CI 12** The County will ensure adequate wastewater collection, treatment, and disposal consistent with the protection of public health and water quality.

**Policy CI 12.1** Require wastewater collection and treatment facilities services in urbanized areas of the County.



**Policy CI 12.2** Support the local wastewater/sewering authorities in implementing wastewater collection and treatment facilities when and where required by the appropriate RWQCB and the County DEHS.

**Policy CI 12.3** Continue to work with local responsible wastewater authorities and verify that suitable arrangements have been made to safely dispose of sewage, septage, or sludge for all new development (subdivisions and conditional use permits).

**Policy CI 12.4** Because community sewage systems are the preferred method of wastewater collection, the County should coordinate with local sewer agencies whenever those agencies are mandated by the appropriate RWQCB or the County DEHS, dry sewers (standard sewer lines to be used for future connection to a community sewer system) or appropriate financial arrangements will be provided per the requirements of the serving wastewater agency (if any) or proposed subdivisions of five (5) or more lots and conditional use permits when any of the following conditions exist:

- a. The wastewater collection agency has a master plan and the proposed project lies within 600 feet of a sewer line to be constructed within 10 (ten) years;
- b. The wastewater collection agency has a sewer line within 600 feet of the proposed project but has refused service because the project is currently outside the boundaries of the agency; and
- c. The appropriate RWQCB requires dry sewers as a condition of the waste discharge permit.

**Policy CI 12.5** Because there are areas in the County where it is unlikely that community sewerage systems will be installed, WTPs may be approved by the appropriate RWQCB, the local wastewater/sewering authority (if any), and the County DHES subject to the following:

- a. The proposed project site must be located in an area approved by the local wastewater/sewering authority providing service to the project, DEHS and the appropriate RWQCB.
- b. In the IVDA area, WTPs are permitted under all circumstances where such plants are approved and operated by any applicable County Service Area.

**Policy CI 12.7** Coordinate and cooperate with neighboring jurisdictions and interested agencies in efforts to explore the feasibility of sludge use and disposition.

**Policy CI 12.8** Control importations of sludge to critical groundwater basins and food production areas and ensure appropriate siting and proper and safe sludge land-spreading practices as reviewed and approved by the County DEHS.

**Policy CI 12.11** Prior to approval of new development, ensure that adequate and reliable wastewater systems will be available to support the development, consistent with coordination between land use planning and wastewater system planning.

**Policy CI 12.12** Cooperate with local wastewater/sewering authorities to monitor future development to ensure that development will proceed only when sufficient capacity or approved alternative wastewater treatment systems can be provided.

**Policy CI 12.13** Cooperate with special districts (board-governed, independent wastewater agencies) and the cities, as applicable to a particular development, to assist in the planning and construction of sewage collection and treatment facilities on the basis of the County's adopted growth forecast.

**Goal CI 14** The County will ensure a safe, efficient, economical, and integrated solid waste management system that considers all wastes generated within the County, including agricultural,

residential, commercial, and industrial wastes, while recognizing the relationship between disposal issues and the conservation of natural resources.

**Policy CI 14.1** Utilize a variety of feasible processes, including source reduction, transfer, recycling, land filling, composting, and resource recovery to achieve an integrated and balanced approach to solid waste management.

**Policy CI 14.2** Explore the feasibility and environmental impacts of reopening inactive landfills where there is useful capacity remaining.

**Policy CI 14.3** Carefully plan and oversee the siting of solid waste disposal facilities to ensure equitable distribution of these facilities throughout the County, and protect the viability of waste disposal sites from encroaching on incompatible land uses.

**Policy CI 14.5** Coordinate with agencies at the state level, including the California Integrated Waste Management Board, counties and cities within the southern California region, and other interested agencies or persons in the public or private sectors to ensure effective solid waste management.

**Goal CI 18** The County will ensure efficient and cost effective utilities that serve the existing and future needs of people in the unincorporated areas are provided.

**Policy CI 18.1** Coordinate with Southern California Edison and other utility suppliers to make certain that adequate capacity and supply exists for current and planned development in the County.

## Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (County of San Bernardino 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The relevant goals, policies, and programs are presented in the Infrastructure and Utilities Element as noted below.

### Infrastructure and Utilities Element

**Goal IU-1** Water Supply. Water supply and infrastructure are sufficient for the needs of residents and businesses and resilient to drought.

**Policy IU-1.1** Water Supply. We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.

**Policy IU-1.2** Water for military installations. We collaborate with military installations to avoid impacts on military training and operations from groundwater contamination and inadequate groundwater supply.

**Policy IU-1.6** User fees. For water systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.

**Policy IU-1.7** Areas vital for groundwater recharge. We allow new development on areas vital for groundwater recharge when stormwater management facilities are installed onsite and maintained to infiltrate predevelopment levels of stormwater into the ground.

**Policy IU-1.8** Groundwater management coordination. We collaborate with watermasters, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other “undesirable results” as defined in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater.

**Policy IU-1.10** Connected systems. We encourage local water distribution systems to interconnect with regional and other local systems, where feasible, to assist in the transfer of water resources during droughts and emergencies.

**Policy IU-1.11** Water storage and conveyance. We assist in development of additional water storage and conveyance facilities to create a resilient regional water supply system, when it is cost effective for County-owned water and stormwater systems.

**Goal IU-2** Wastewater Treatment and Disposal. Residents and businesses in unincorporated areas have safe and sanitary systems for wastewater collection, treatment, and disposal.

**Policy IU-2.1** Minimum parcel size. We require new lots smaller than one-half acre to be served by a sewer system. We may require sewer service for larger lot sizes depending on local soil and groundwater conditions, and the County’s Local Area Management Program.

**Policy IU-2.2** User fees. For wastewater systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.

**Policy IU-2.3** Shared wastewater facilities for recycled water. We encourage an expansion of recycled water agreements between wastewater entities to share and/or create connections between wastewater systems to expand the use of recycled water.

**Goal IU-3** Stormwater Drainage. A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.

**Policy IU-3.1** Regional flood control. We maintain a regional flood control system and regularly evaluate the need for and implement upgrades based on changing land coverage and hydrologic conditions in order to manage and reduce flood risk. We require any public and private projects proposed anywhere in the county to address and mitigate any adverse impacts on the carrying capacity and stormwater velocity of regional stormwater drainage systems.

**Policy IU-3.2** Local flood control. We require new development to install and maintain stormwater management facilities that maintain predevelopment hydrology and hydraulic conditions.

**Policy IU-3.3** Recreational use. We prefer that stormwater facilities be designed and maintained to allow for regional open space and safe recreation use without compromising the ability to provide flood risk reduction.

**Policy IU-3.4** Natural floodways. We retain existing natural floodways and watercourses on County-controlled floodways, including natural channel bottoms, unless hardening and channelization is the only feasible way to manage flood risk. On floodways not controlled by the County, we encourage the retention of natural floodways and watercourses. Our priority is to reduce flood risk, but we also

strive to protect wildlife corridors, prevent loss of critical habitat, and improve the amount and quality of surface water and groundwater resources.

**Policy IU-3.5** Fair share requirements. We require new development to pay its fair share of capital costs to maintain adequate capacity of the County's regional flood control systems.

**Goal IU-4** Solid Waste. Adequate regional landfill capacity that provides for the safe disposal of solid waste, and efficient waste diversion and collection for unincorporated areas.

**Policy IU-4.1** Landfill capacity. We maintain a minimum ongoing landfill capacity of 15 years to serve unincorporated waste disposal needs.

**Policy IU-4.2** Transfer stations. We locate and operate transfer stations based on overall system efficiency.

**Policy IU-4.3** Waste diversion. We shall meet or exceed state waste diversion requirements, augment future landfill capacity, and reduce greenhouse gas emissions and use of natural resources through the reduction, reuse, or recycling of solid waste.

**Policy IU-4.4** Landfill funding. We require sufficient fees for use of County landfills to cover capital costs; ongoing operation, maintenance, and closure costs of existing landfills; the costs and liabilities associated with closed landfill.

**Goal IU-5** Power and Communications. Unincorporated area residents and businesses have access to reliable power and communication systems.

**Policy IU-5.1** Electricity and natural gas service. We partner with other public agencies and providers to improve the availability and stability of electricity and natural gas service in unincorporated communities.

**Policy IU-5.3** Underground facilities. We encourage new and relocated power and communication facilities to be located underground when feasible, particularly in the Mountain and Desert regions.

**Policy IU-5.4** Electric transmission lines. We support the maintenance of existing and development of new electric transmission lines along existing rights-of-way and easements to maintain the stability and capacity of the electric distribution system in southern California.

## County of San Bernardino Countywide Integrated Waste Management Plan

The County of San Bernardino Countywide Integrated Waste Management Plan, which consists of four elements and a summary, was adopted on November 13, 1995. Two elements of the plan, the Countywide Summary Plan and the Countywide Siting Element, were revised in 2018 (County of San Bernardino 2018a, 2018b). The Countywide Integrated Waste Management Plan was developed in accordance with AB 939 to ensure adequate disposal capacity and to establish strategies for the reduction of solid waste. Pursuant to AB 939, the Countywide Integrated Waste Management Plan provides four elements and a summary to address waste disposal issues: the Source Reduction and Recycling Element, Household Hazardous Waste Element, Non-disposal Facility Element, and Countywide Siting Element (County of San Bernardino 2018a). The three general strategies for waste reduction are recycling, composting, and source reduction.

## County of Riverside General Plan

The County of Riverside General Plan contains the vision and overarching policies for the future development of Riverside County. Both the Land Use Element (County of Riverside 2019a) and the Circulation Element (County of Riverside 2017) of the County of Riverside General Plan contain goals and policies associated with utilities and public services that are applicable to the Project.

### Land Use Element

**Policy LU 1.6** Coordinate with local agencies, such as LAFCO, service providers and utilities, to ensure adequate service provision for new development.

**Policy LU 5.1** Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers transportation systems, and fire/police/medical services.

**Policy LU 5.2** Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.

**Policy LU 5.3** Review all projects for consistency with individual urban water management plans.

**Policy LU 5.4** Ensure that development and conservation land uses do not infringe upon existing essential public facilities and public utility corridors, which include county regional landfills, fee owned rights-of-way and permanent easements, whose true land use is that of public facilities. This policy will ensure that the public facilities designation governs over what otherwise may be inferred by the large-scale general plan maps.

**Policy LU 18.4** Coordinate Riverside County water-efficiency efforts with those of local water agencies. Support local water agencies' water conservation efforts.

**Policy LU 18.5** Emphasize and expand the use of recycled water in conjunction with local water agencies. Recycled water determined to be available pursuant to Section 13550 of the California State Water Code shall be used for appropriate non-potable uses whenever it: a) provides a beneficial use to the customer; b) is economically and technically feasible; c) is consistent with applicable regulatory requirements; and d) is in the best interests of public health, safety, and welfare. With the exception of non-common areas of single-family home residential developments, all other irrigation systems must be designed and installed to accommodate the current or future use of recycled water for irrigation. If no recycled water availability exists or is imminent in the vicinity of a project (as determined by prevailing water agency), all subsurface piping shall be installed as "recycled water ready" to reduce future retrofit costs. Such irrigation plans shall be developed in accordance with standards and policies of the applicable recycled water purveyor. Recycled water systems shall be designed to meet regulatory requirements of the California Department of Public Health and the local recycled water purveyor.

### Circulation Element

**Policy C 1.4** Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.

## Riverside Countywide Integrated Waste Management Plan

The Riverside Countywide Integrated Waste Management Plan (County of Riverside 1996) was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095, also referred to as AB 939. The Countywide Integrated Waste Management Plan identifies waste management issues in the jurisdiction, and identifies strategies and programs to meet and maintain the diversion mandates.

### 3.19, Wildfire

#### County of San Bernardino General Plan

The County of San Bernardino General Plan, updated in 2007 and last amended in 2014, provides a vision for the future of the County of San Bernardino. The Safety Element identifies potential hazards and contains goals and policies pertaining to the management and minimization of risk or danger to residents and property in San Bernardino County (County of San Bernardino 2007a). The policies relevant to wildfire are listed below.

#### Safety Element

**Policy S 3.2** The County will endeavor to prevent wildfires and continue to provide public safety from wildfire hazards.

**Policy S 3.3** Minimize the fire hazard posed by expanding development in WUI.

#### Programs

1. Apply the regulations of the Fire Safety Overlay Ordinance, as found in the Development Code; to all County areas subject to WUI fire hazards including all mountain and foothill areas.

#### Proposed San Bernardino Countywide Plan Update

In 2017, County of San Bernardino began an update of the County's General Plan and Community Plans to address the physical, social, and economic issues facing the unincorporated portions of the county. The County only has land use authority over approximately 12 percent of unincorporated lands (the balance is primarily under federal control). The Policy Plan component of the Countywide Plan (San Bernardino County 2019) started in 2017, a public review draft was published in August 2018, and the revised plan was published in May 2019. The Policy Plan was evaluated through a programmatic EIR in summer 2019, with adoption expected later in 2020. The goals and policies in the Hazards and Personal and Property Protection Elements relevant to wildfire are described below.

#### Hazards Element

**Goal HZ-1 Natural environmental hazards.** Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

***Policy HZ-1.2 New development in environmental hazard areas.*** Requires all new development to be located outside of the environmental hazard areas listed for flood, geologic, and fire (specifically, high or very high fire hazard severity zones). For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, adequate mitigation is required, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

***Policy HZ-1.5 Existing properties in environmental hazard areas.*** Encourages owners of existing properties in hazard areas to add design features that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

***Policy HZ-1.6 Critical and essential facility location.*** Requires new critical and essential facilities to be located outside of hazard areas, whenever feasible.

***Policy HZ-1.7 Underground utilities.*** Requires that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.

***Policy HZ-1.9 Hazard areas maintained as open space.*** Minimizes risk associated with flood, geologic, and fire hazard zones or areas by encouraging such areas to be preserved and maintained as open space.

## Personal and Property Protection Element

***Policy PP-3.7 Fire safe design.*** Requires new development in the Fire Safety Overlay to comply with additional site design, building, and access standards to provide enhanced resistance to fire hazards.

***Policy PP-3.11 Post-burn risks.*** In areas burned by wildfire, new and reconstructed development are required to adhere to current development standards, and may require additional study to evaluate increased flooding, debris flow, and mudslide risks.

## County of San Bernardino Multi-Jurisdictional Hazard Mitigation Plan

The Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) was developed to reduce or eliminate loss of life and property for unincorporated areas of the County of San Bernardino and within areas managed by the Flood Control District, Fire District, and Special District Departments. The MJHMP was developed in accordance with the Disaster Mitigation Act and was approved by FEMA on July 13, 2017. The MJHMP provides coordinated goals and objectives for the partner organizations to support an effective mitigation program. The MJHMP addresses hazards associated with geologic hazards, wildfire, floods, drought, terrorism, and climate change.

## San Bernardino County Emergency Operations Plan

The San Bernardino County Emergency Operations Plan (EOP) addresses the County's response to emergencies associated with natural disasters or human-caused emergencies. The EOP provides a comprehensive, single source of guidance and procedures for the County to prepare for and respond to significant or catastrophic natural, environmental, or conflict-related risks that produce situations requiring coordinated response. It further provides guidance regarding management concepts relating to response and abatement of various emergencies, identifies organizational structures and relationships, and describes responsibilities and functions necessary to protect life and property.

## County of San Bernardino Code of Ordinances

### Title 2, Division 3, Chapter 3: Abatement of Fire Hazards and Hazardous Trees

The Duty to Abate Fire Hazards or Hazardous Trees ordinance (Ord. 23.0301) mandates property owners in the unincorporated county to abate all fire hazards and hazardous trees through disposal of flammable vegetation or other combustible growth, fuel breaks, and other fuel modification methods. All such fire hazards and hazardous trees are declared to be a public nuisance for which the costs of abatement may be assessed pursuant to Government Code § 25845.

### Title 8, Division 2, Chapter 82.01: Land Use Plan, Land Use Zoning Districts, and Overlays

The Fire Safety Overlay is established by the San Bernardino County Development Code Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays). The Fire Safety Overlay is mapped based on distinct geographic areas and the associated wildland fire hazard. The purpose of the Fire Safety Overlay is to establish general development standards to provide greater public safety in these areas associated with greater wildland fire hazard.

The Fire Safety Overlay includes areas within the mountains, valley foothills, and desert regions designated by the Fire Authority as a wildfire risk area. It includes all the land generally characterized by areas varying from relatively flat to steeply sloping terrain and with moderate to heavy fuel loading contributing to high fire hazard conditions.

Projects located in the Fire Safety Overlay must include fuel modification plans submitted concurrently with the development application to the County for review in conjunction with the project design review. Final plans shall be reviewed and approved by the responsible Fire Authority. Projects within the overlay must also comply with applicable standards required by the responsible Fire Authority, including the standards and provisions of the CBSC Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) and California Residential Code Chapter 327.

## County of Riverside General Plan

The County of Riverside General Plan Safety Element, last updated in 2016, provides a framework for considering safety issues in the land use planning process, and presents policies for identifying hazards and reducing exposure to hazardous conditions. The following goals and policies in the Safety Element that are relevant to the Project.

### Safety Element

**Policy S 5.1.** Develop and enforce construction and design standards that ensure that proposed development incorporates fire prevention features through the following:

- a. All proposed development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire and Building and Safety departments.
- b. All proposed development and construction shall meet minimum standards for fire safety as defined in the Riverside County Building or County Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency based on building type, design, occupancy, and use.



- c. In addition to the standards and guidelines of the CBSC and California Fire Code fire safety provisions, continue to implement additional standards for high-risk, high occupancy, dependent, and essential facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Protection Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.
- d. Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County Ordinances.
- e. Proposed development and construction in Fire Hazard Severity Zones shall use single loaded roads to enhance fuel modification areas, unless otherwise determined by the Riverside County Fire Chief.
- f. Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, and constructed that provide adequate defensibility from wildfires.

**S 5.4** Limit or prohibit development or activities in areas lacking water and access roads.

**S 5.5** Encourage proposed development in Fire Hazard Severity Zones to develop where fire and emergency services are available or planned.

**S 5.6** Demonstrate that the proposed development can provide fire services that meet the minimum travel times identified in the Riverside County Fire Department Fire Protection and Emergency Medical Services Strategic Master Plan.

**S 5.8** Design to account for topography of a site and reduce the increased risk from fires in the Fire Hazard Severity Zones located near ridgelines, plateau escarpments, saddles, hillsides, peaks, or other areas where the terrain or topography affect its susceptibility to wildfires by:

- a. Providing fuel modification zones with removal of combustible vegetation, but minimizing visual impacts and limiting soil erosion.
- b. Replacing combustible vegetation with fire resistant vegetation to stabilize slopes.
- c. Submitting topographic map with site specific slope analysis.
- d. Submitting erosion and sedimentation control plans.
- e. Providing a minimum 30 foot of setback from the edge of the fuel modification zones.
- f. Minimizing disturbance of 25% or greater natural slopes.

## County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan

The *County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan* (MJLHMP) was developed in conformance with Title 44 Code of Federal Regulations Part 201.6, *Local Mitigation Plans*, and was adopted by the County on June 5, 2012. The MJLHMP identifies hazards present in the county, assesses previous disaster occurrences, and sets goals and objectives to mitigate potential risks to reduce or eliminate the risk of loss of life or property due to natural or human-made hazards. Wildfire is one of the natural hazards identified.

## County of Riverside Code of Ordinances

### Title 8, Chapter 8.32 – Fire Code

The Fire Code Standards ordinance (Ord. 787) addresses implementation of the CBSC, based on the International Conference of Building Officials. The codes prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection and include WUI fire area building standards established by CAL FIRE. Collectively, the ordinance establishes the requirements and standards for fire hazard reduction regulations within Riverside County (including additions and deletions to the California Fire Code) to fully protect the health, safety, and welfare of existing and future residents and workers of Riverside County.

### Title 8, Chapter 8.56 – Hazardous Vegetation

Ordinance No. 695 requires property owners in areas of substantial fire risk to reduce fire danger through mowing and other fuel modification methods. This ordinance affects anyone who “owns, leases, controls, operates or maintains any building or structure in, upon or adjoining any mountainous area or forest-covered lands, brush-covered lands or grass-covered lands or any land covered with flammable material.”

Among other measures, Ordinance No. 695 requires the abatement of “hazardous vegetation,” which is defined as vegetation that is flammable and endangers the public safety by creating a fire hazard. The type of abatement can depend on the location, terrain, and vegetation present, but typically includes the mowing or disking (plowing up) of vegetation, such as seasonal and recurrent weeds, stubble, brush, dry leaves, and tumbleweeds. Abatement is generally required along roadways and habitable structures either on or adjacent to the property.

Prior to development, the County of Riverside requires a development within a high fire hazard area (SRA or VHFHSZ LRA) to design and implement fuel modification programs for the interface between developed and natural areas within and adjacent to the proposed project area. Such fuel modification plans shall be subject to approval by the Riverside County Fire Department. The fuel modification programs shall be achieved through graduated transition from native vegetation to irrigated landscape. The program shall also establish parameters for the percentage, age, extent, and nature of native plant removal necessary to achieve Riverside County fire prevention standards to protect human lives and property, while preserving as much natural habitat as practicable.

Appendix C  
**Covered Activities Programmatic Environmental  
Evaluation**

---

# Appendix C

## Covered Activities Programmatic Environmental Evaluation

---

This appendix provides a programmatic evaluation of the Covered Activities included as part of the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP).

### Relationship Between the Covered Activities and the HCP Project Implementation Actions

The Proposed Project is an HCP that aims to restore quantity, quality, and function of vulnerable habitats; conserve land; and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species and prevent colonization by nonnative plants and animals, in order to offset impacts from Covered Activities in the Permit Area. The Covered Activities would occur within the Planning Area, but only within the portion of the Planning Area that is also the Permit Area.

The Upper SAR HCP describes two types of activities: (1) construction of new or expanded facilities planned in the Permit Area, and (2) activities related to the operations and maintenance (O&M) of existing facilities or associated with new or expanded facilities constructed as a Covered Activity. Covered Activities include specific projects (e.g., new construction) and ongoing or reasonably foreseeable operations and maintenance, management, and monitoring activities. They are described below.

- *Capital Projects* are well-defined actions that occur in a discrete location (e.g., construction of new facilities, infrastructure development, capital improvement projects).
- *Operations* are activities that occur continuously or repeatedly in a discrete area that affect hydrologic conditions (e.g., diversions or discharges).
- *Maintenance activities* are routine activities that may occur repeatedly in one area or over a wide area (e.g., bank stabilization, storm-damage repair, maintenance of facilities).
- *Management activities* are routine activities that occur in natural habitats as a part of general land stewardship (e.g., trash removal, access control and signage) or habitat management (e.g., habitat conservation, invasive species control, vegetation management and fire break/fuel management).
- *Monitoring activities* are routine activities that occur in protected habitat areas (e.g., conservation areas, mitigation areas, mitigation banks) to monitor the status and condition of natural habitats and species populations (e.g., species surveys, live trapping and marking, related research activities, vegetation surveys) to detect the effectiveness of conservation actions and to inform adaptive management.

As described in Chapter 2, Covered Activities could include the development of water reuse projects, groundwater recharge, wells and water conveyance infrastructure, and solar energy development,

as well as routine operations and maintenance. Covered Activity implementation is grouped into four phases for a permit term of 50 years: Phase 1 (0-5 years), Phase 2 (6-10 years), Phase 3 (11-15 years) and Phase 4 (>15 years). The Upper SAR HCP assumes that the Covered Activities will be implemented by the Permittees and SCE by the phases identified in Section 2.4.3, *Covered Activities*, and Table 2.3, *Summary of Covered Activities*.

Covered Activities that would occur within the Permit Area covered by the Upper SAR HCP include all actions to be covered by federal Endangered Species Act Section 10 and California Endangered Species Act 2081(b) permits. Covered Activities include both specific projects and ongoing activities, such as O&M actions. Covered Activities in the Permit Area could result in impacts related to noise and vibration through their implementation.

The Covered Activities would give the Permittees and Southern California Edison (SCE) clearance under the federal and state endangered species laws for Covered Activities that would affect endangered species and require two incidental take permits (ITPs). This EIR focusses on impacts to listed species, and the impacts on hydrology and biological resources of the conservation activities that are include within the Project. This EIR evaluates the impacts of providing incidental take coverage to the Covered Activities, and other aspects of the Upper SAR HCP. This EIR will not evaluate the construction and operational impacts associated with the Covered Activities in relation to direct impacts.

## Foreseeable Impacts Related to Covered Activities

The incidental take permit could facilitate construction and operations of the Covered Activities described in Chapter 2. These individual projects could result in a variety of impacts that would be evaluated in their own separate environmental review but have been included below at a programmatic level as reference.

### Section 3.1, Aesthetics

#### Substantially Degrade the Existing Visual Character or Quality of Public Views

The Covered Activities in the Permit Area would involve construction and operation of water reuse projects (treatment facilities), groundwater recharge (i.e., water diversions and recharge basins), wells and water conveyance infrastructure, solar energy development, habitat improvement, management, and monitoring, and supporting infrastructure such as access roads, fencing, and utilities (e.g., transmission lines). Construction and operations activities for individual projects considered as Covered Activities would be completed using tools ranging from hand-operated tools to heavy equipment such as bulldozers or excavators. In addition, construction staging areas would be visible to nearby viewers from scenic vistas (listed above). Covered Activities could involve painting, cleaning, and repair of structures; sediment removal at recharge basins; vegetation removal and care along embankments; facilities inspections; and vegetation removal within transmission line rights-of-way. The implementation of Covered Activities would require temporary roadway closures, and detours may be needed. Construction signaling and signage would also be visible to direct traffic, signifying lane shifts and closures. The presence of construction and operations activities and associated equipment could affect views of and from a given project area. Some Covered Activities would be perceived as temporary or minor, but major construction projects

could negatively affect the visual character and quality views of the affected area. Construction and operations activities could also be visible in scenic vista views.

Implementation of Covered Activities in the Permit Area would also result in vegetation removal, earthwork, and construction of built features that could remove existing visual resources, introduce new features into the landscape, and ultimately alter the visual landscape. Many features, such as water pipelines, would be constructed underground and would result in minimal street resurfacing or soil disturbances. However, some underground pipelines may result in greater visual impacts if trees need to be removed to facilitate construction of the pipelines. Features such as wells are a common visible feature but are not conspicuous; most often they are housed and secured in low-profile cabinets that are painted green so that they recede into the landscape. The recharge basins would consist of water infiltration depressions and diversion structures or pipelines to transport water. These basins would be low-profile, earthen basins that would generally not substantially alter the visual landscape because such basins are common in developed areas, they would be sunken landscape features, and they would not introduce notable infrastructure besides chain-link perimeter fencing. However, recharge basins could alter the visual landscape if a large amount of vegetation is removed to accommodate the basin. Water storage tanks and booster pump stations are generally located next to one another and would be constructed at the same time. These facilities could include a tall, cylindrical water tank; a building that encloses the pump; security lighting; and perimeter walls or fencing with a safety gate. These facilities are utilitarian looking in nature and could stand out if not properly designed because the large-scale, round tanks would contrast against other features within the built environment. These changes would convert more natural-looking corridors that have riparian vegetation to more utilitarian water transport facilities. All the Covered Activities could be visible in and could affect scenic vista views.

Solar facilities could result in visual impacts because panels would be arranged in rows that would run north to south across the rolling terrain, with the panels facing east to west, and this would create repetitive lines by the form and layout of the panels. The panels would appear to be in straight lines when viewed in a 90-degree direction and looking directly north, east, south, or west toward a site or staggered diagonally when viewed in a 45-degree direction and looking directly northeast, northwest, southeast, or southwest toward a site. Rolling terrain would make the linear pattern of an array more pronounced, compared to installation on level ground, because viewers would be able to clearly see the array pattern on the undulating terrain. In addition, power conditioning stations, project substations, control rooms, transmission lines, and access roads would also be visible. Construction of concentrated solar power generation facilities would introduce a considerable source of infrastructure and human-made features; alter the existing visual character of the landscape from undeveloped to more industrial in nature; be seen by sensitive viewers; and reduce the existing scenic quality with the intrusion of human-made elements on land that is largely undeveloped.

Impacts could result where Covered Activities introduce built features that may detract from the existing visual character and quality views and where built features detract from the quality of scenic vista views or where such elements act to obscure scenic vista views. If required, consistent with the provisions of CEQA Guideline 15168 for subsequent review following a program EIR, if required, a Covered Activity would undergo an individual CEQA analysis and be subject to approval by the Permittees. Implementation of Best Practice (BP)-1 would ensure that the facilities built as Covered Activities in the Permit Area complement and blend in with the local development and that features associated with the facilities are screened. Overall, however, it should be noted that any potential visible construction and operations activities impacts on visual character and quality,

including scenic vistas, associated with the variety of Covered Activities might not be sufficiently addressed by this Best Practice.

### **Substantially Damage Scenic Resources Along a Scenic Highway**

Construction and operations of Covered Activities in the Permit Area have the potential to introduce visually discordant features as viewed from scenic highways, if they are within the viewshed of a scenic highway (listed above). Negative changes to the visual environment could result from Covered Activities that would introduce built structures and discordant features into the landscape if they are not properly designed. These features could affect scenic highways if they occur within view of a scenic highway. Changes to the visual environment could result from vegetation removal that could be noticeable to travelers along these routes.

O&M activities of the Covered Activities in the Permit Area would be required periodically and would involve painting, cleaning, and repair of structures; sediment removal at recharge basins; vegetation removal and care along embankments; facilities inspections; and vegetation removal within transmission line rights-of-way. O&M activities for Covered Activities could be visible from scenic highways if they are in proximity to these features. The activities would maintain the visual character of the facilities, once built, and would not act to further change the visual quality or character of the facilities or surrounding visual landscape during operations. This includes cleaning and maintaining the colors of the facilities and keeping transmission line rights-of-way cleared of vegetation; recharge basins would appear the same after sediment removal is complete. Therefore, the physical act of maintaining the facilities would be the primary element visible from scenic highways during operation. These activities would require equipment ranging from machine-operated to hand-held tools to maintain facilities. In addition, maintenance activities are anticipated to occur within a short period of time and cease when complete.

New infrastructure, such as access roads and transmission lines, could detract from views available from scenic highways. As described in more detail above, changes to the existing visual character and quality of views could result in a range of impacts. Impacts could result where Covered Activities introduce built features that may detract from the existing visual character and quality views seen from scenic highways and where built features could detract from the quality of views from scenic highways. Implementation of BP-1 would ensure that the facilities constructed under Covered Activities complement and blend in with the local development and that features associated with the facilities are screened to lessen impacts on scenic highways. Overall, there could be impacts on scenic resources, including scenic highways, associated with the variety of Covered Activities might not be sufficiently addressed by this Best Practice.

### **Create a New Source of Substantial Light or Glare that Would Adversely Affect Views**

As described above, construction and O&M implementation of the Covered Activities in the Permit Area would be required and include construction lighting, vegetation removal, facilities construction and maintenance (painting, cleaning, and repair of structures), new solar facilities, and sediment removal at recharge basins, among other activities. These activities would likely occur during the day. However, evening and nighttime construction and maintenance activities, if required, could result in the use of extremely bright lights that would negatively affect adjacent viewers and nighttime views of and from work areas. Implementation of BP-2 and BP-3 would reduce this impact

by helping to prevent nuisance light spill during construction and ensuring that sensitive residential receptors are not disrupted by nighttime construction activities.

Vegetation removal from construction and maintenance activities could increase glare by removing sources of shade. New facilities could create new sources of daytime glare if infrastructure (e.g., water tanks and buildings) are lightly colored or they have reflective surfaces (e.g., windows and metal surfaces) and there is no vegetation to serve as a buffer for the glare created by the surfaces. In addition, new solar facilities would introduce considerable sources of glare from the reflective surfaces of the solar collectors. While the panels would typically be dark blue or black in color, with minimal light reflection, the panels have a microscopically irregular surface designed to trap the incident rays of sunlight. However, any incident radiation that is not absorbed and transmitted would be reflected. A typical untreated silicon solar cell absorbs two-thirds of the sunlight reaching the panel's surface and reflects one-third. Solar projects would be installed in rows that run north to south and may be stationary or use a tracking system. Fixed solar panels would be oriented to face in a southerly direction to maximize solar gain. Tracking panels follow the sun's path from east to west across the sky as the day progresses. When the sun is high in the sky (close to noon or in the summer), panels would be low to the ground and the law of reflection indicates that light rays would be reflected in an upward direction toward the light source and back into the atmosphere, away from terrestrial-based receptors. This reduces the potential for glare. However, when the sun is low on the horizon (near dawn or dusk or in the winter), panels would be raised higher and more vertical. Therefore, the potential for fugitive glare on terrestrial-based receptors increases. Consequently, glare effects on receptors could generally result during the early morning and late afternoon. Depending on time of year and the receptors' location in respect to the solar arrays, these impacts can be expected to last from a half an hour to more than an hour. In addition, rolling terrain has the ability to increase glare resulting from a project because the slopes would expose more panel faces and, essentially, create variable facets for the sun to reflect off compared to a flat installation that generally creates one uniform facet (i.e., a uniform and even panel orientation). Viewers close to the panels may experience disruptive glare. If oriented toward a roadway, glare from solar arrays has the potential to create dangerous driving conditions. Implementation of BP-4 would ensure that the glare from solar development projects does not create hazardous conditions for viewers.

In addition, new security lighting could create a significant source of glare if light-emitting diode (LED) lighting is used. LED lights can negatively affect humans by increasing nuisance light and glare that disrupts sleep patterns, in addition to increasing ambient light glow, if shielding is not provided and blue-rich white light lamps are used (American Medical Association 2016; International Dark-Sky Association 2010a, 2010b, 2015). Studies have found that a 4,000-Kelvin white LED light causes approximately 2.5 times more light pollution than high-pressure sodium lighting with the same lumen output, affecting sensitive receptors and more than doubling the perceived brightness of the night sky (Aubé et al. 2013; Falchi et al. 2011, 2016). If such light sources were used, this could result in a substantial source of nighttime light and glare that could adversely affect nighttime views in the area. Light spill radiating out from the interiors of new buildings through windows could also create new, unnecessary sources of light that could contribute to light pollution. Implementation of BP-1 would ensure that the new or expanded facilities in the Permit Area refrain from using brightly colored infrastructure that could increase glare while providing landscaping that can provide shade and screen new sources of light and glare. Implementation of BP-5 would ensure that the lighting does not negatively affect nighttime views or sensitive viewers by reducing the effects associated with security and interior lighting. Light and glare impacts associated with the variety of Covered



Activities from construction and operations might not be sufficiently addressed by these Best Practices, depending on the location, type of facility, and activity that is being implemented in the Permit Area.

## **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

The following best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to aesthetics:

### **Recommended Best Practices BP-1: Implement Project Design Aesthetics for Covered Actions**

Permittees shall implement aesthetic design treatments for new and expanded facilities that are built as a result of Covered Activities in compliance with individual city and county codes.

- At a minimum, surfaces will be colored to blend and recede into the landscape. Choosing earth-toned colors for the surfaces would be less distracting to viewers than light or brightly colored surfaces. Studies have shown that structures 2 to 3 degrees darker than the color of the general surrounding area create less of a visual impact than matching or lighter hues. In general, whites and very light buff/tan, brown, or gray colors stand out more than darker colors such as darker browns, greens, and warm grays that have the ability to complement the surrounding vegetation.
- Paints will be of a dull, flat, or satin finish only. Appropriate paint type will be selected for the finished structures to ensure long-term durability of the painted surfaces. The Permittees will maintain the paint color over time.
- For surfaces that would be visible to adjacent viewers, design motifs may also be applied that reflect an architectural treatment to reduce visual monotony, soften verticality, reduce glare, and be more visually pleasing to viewers than plain surfaces.
- Enclosures, such as for pump station houses, will be designed using an architectural treatment that is aesthetically pleasing so that these facilities blend well with nearby architectural styles.
- Chain-link fences will be plastic- or vinyl-coated with colors selected using the color selection techniques described above to make chain-link fences to appear more see-through than non-treated, light gray fencing.
- Roughened wall surfaces will soften the verticality of the wall faces by providing visual texture and reducing the amount of smooth surface that can reflect light.
- Finishes will be selected for their ability to achieve the correct color selection, durability, and environmental safety.

Furthermore, trees shall be planted within the facilities' perimeter walls to provide visual screening for larger structures such as water tanks and pump houses, to aid in reducing the apparent scale of such features, and to block light and glare coming from the facilities. Prior to approval of the facility design, the project designers will work with staff from the individual Permittees, as applicable, to review project designs to ensure that the following elements are implemented in the project landscaping plans.

- The majority of the species composition will reflect species that are native and indigenous to the Planning Area and California. Native plant species can be used to create attractive spaces, high in aesthetic quality, that are not only drought tolerant but attract more wildlife than traditional landscape plant palettes. Use of native species promotes a visual character of California that is being lost through development and reliance on nonnative ornamental plant species. Non-invasive, nonnative plant species may be used where native plant species will not achieve the desired design intent.
- The species list will include trees and shrubs of varying heights, as well as both evergreen and deciduous types. Plant variety will increase the effectiveness of the planting areas by providing multiple layers for effective screening, seasonality, and reduced susceptibility to disease. Evergreen groundcovers or low-growing plants, such as *Ceanothus* spp., and an herbaceous understory may also be used along the exterior of the perimeter walls to create a more formal landscaping design.
- Special attention should be paid to plant choices near residences to ensure that species chosen are of an appropriate height and rely on evergreen species to provide year-round light screening from nuisance light.
- Vegetation will be planted within the first 3 months following facility completion.

#### **Recommended Best Practices BP-2: Minimize Fugitive Light from Portable Sources Used for Construction**

At a minimum, the Permittees or its designated construction contractor shall minimize the light and glare in the Permit Area to the maximum extent feasible for any Covered Activity that requires the use of portable lights to complete. Color-corrected halide lights will be used. Portable lights will be operated at the lowest allowable wattage and height and will be raised to a height no greater than 20 feet. All lights will be screened and directed downward toward work activities and away from the night sky and roadway users and highway neighbors to the maximum extent possible. The number of nighttime lights used will be minimized to the greatest extent possible.

#### **Recommended Best Practices BP-3: Limit Construction and Maintenance Near Residences to Daylight Hours**

Construction and maintenance of Covered Activities in the Permit Area by the Permittees shall occur during daylight hours, usually 7 a.m. and 6 p.m. (seasonally adjusted), or as otherwise in compliance with local ordinances for that jurisdiction. This will reduce the amount of construction experienced by viewer groups, because most construction activities would be occurring during business hours (when most viewer groups are likely at work) and eliminate the need to introduce high-wattage lighting sources to operate in the dark near residences.

#### **Recommended Best Practices BP-4: Remediate the Potential for Hazard Glare**

The Permittees shall design new solar facilities in a manner that does not create hazard glare. Solar panels will be selected for their ability to minimize glare and specular highlighting and may include using deeply textured modules, rather than smooth modules, to reduce the potential for hazard glare. Permittees for the Covered Activities shall also evaluate the use of stationary versus tracking panel designs and the appropriate design type will be chosen for its potential to prevent hazard glare. Terrain will be evaluated and panels will be sited in a manner

that does not create hazard glare. In addition, planned operational adjustments will be provided, if necessary, so that panels can be tilted away from roadways at critical times when glare is an issue and would be a hazard for drivers. Landscape buffers, berming, and fencing or walls may be used, independently or in combination with one another, to help block glare. Additional glare modeling may be required to determine if a particular design would create hazard glare. If a particular site is not conducive to development with a solar facility because the potential for hazard glare could result in dangerous driving conditions, the site will not be developed.

### **Recommended Best Practices BP-5: Apply Minimum Lighting Standards**

Permittees shall apply the following minimum lighting standards.

For building construction adjacent to sensitive reviewers in the Permit Area, the Permittees shall limit all artificial outdoor lighting for all new and existing facilities to safety and security requirements, designed using the Illuminating Engineering Society's design guidelines and in compliance with International Dark-Sky Association-approved fixtures. All lighting is designed to have minimum impact on the surrounding environment and will use downcast, cut-off type fixtures that direct the light only toward objects requiring illumination. Shielding will be utilized, where needed, to ensure light pollution is minimized. Therefore, lights will be installed at the lowest allowable height and cast low-angle illumination while minimizing incidental light spill onto adjacent properties, open spaces, or backscatter into the nighttime sky. The lowest allowable illuminance level will be used for all lighted areas and the amount of nighttime lights needed to light an area will be minimized to the highest degree possible. Light fixtures will have non-glare finishes that will not cause reflective daytime glare. Lighting will be designed for energy efficiency and have daylight sensors or be timed with an on/off program. Lights will provide good color rendering with natural light qualities with the minimum intensity feasible for security, safety, and personnel access. Lighting, including light color rendering and fixture types, will be designed to be aesthetically pleasing.

LED lighting will avoid the use of blue-rich white light lamps and use a correlated color temperature that is no higher than 3,000 Kelvin (International Dark-Sky Association 2010a, 2010b, 2015). Wherever possible and pragmatic, the Permittees or its designated construction contractor will use fixtures and lighting control systems that conform to International Dark-Sky Association's Fixture Seal of Approval program. In addition, LED lights will use shielding to ensure nuisance glare and light spill do not affect sensitive residential viewers.

Lights along pathways and safety lighting at building entrances and loading areas will employ shielding to minimize off-site light spill and glare and be screened and directed away from residences and adjacent uses to the highest degree possible. The amount of nighttime lights used along pathways will be minimized to the highest degree possible to ensure that spaces are not unnecessarily over-lit, while still maintaining minimum adequate lighting to provide necessary visibility for security. For example, the amount of light can be reduced by limiting the amount of ornamental light posts to higher-use areas and by using hooded wall mounts or bollard lighting on travel way portions of pathways.

Technologies to reduce light pollution evolve over time and design measures that are currently available may help but may not be the most effective means of controlling light pollution once the Covered Activities are designed. Therefore, all design measures used to reduce light pollution will employ the technologies available at the time of individual project design to allow for the highest potential reduction in light pollution.

## Section 3.2, Agricultural and Forestry Resources

### Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to Non-agricultural Use

All Covered Activities are subject to approval by the appropriate authority for each Permittee. The Project would not restrict existing agricultural uses on adjacent properties, nor would it prohibit or unreasonably restrict activities essential to irrigation, equipment operation, cultivation, or the raising of farm animals.

The Upper SAR HCP identifies Covered Activities, which include the construction of water reuse projects (i.e., treatment facilities), water diversions, recharge basins, wells and water conveyance infrastructure, solar energy facilities, and habitat improvement, management, and monitoring, and supporting infrastructure such as access roads, fencing, and utilities (e.g., transmission lines). Both construction and the O&M phase of these Covered Activities could be located on land that is currently designated Important Farmland.

#### Construction

The Covered Activities could require construction, as well as temporary construction access and staging areas, within the Permit Area. Construction on agricultural uses would preclude the use of agricultural land during the construction period; however, at the end of the construction period, any temporary construction areas would be returned to their original use. However, if after the temporary construction the land is not returned to its original, preconstruction condition, it could affect the ability of the land to function adequately as agricultural land.

Implementation of the Covered Activities would include the construction of water reuse projects (i.e., treatment facilities) groundwater recharge facilities, wells and water conveyance infrastructure, solar energy facilities, and habitat improvement, management, and monitoring, and supporting infrastructure such as access roads, fencing, and utilities (e.g., transmission lines). As currently proposed, Covered Activities could affect a total of 775 acres of Important Farmland. This includes 134 acres of Farmland of Local Importance, 7 acres of Farmland of Statewide Importance, 17 acres of Unique Farmland, 21 acres of Prime Farmland, and 595 acres of Grazing Land.

The County of San Bernardino General Plan includes policies regarding development on agricultural land. For example, Policy CO 6.2 allows development of areas of prime agricultural to urban only when it can be demonstrated that there is no long-term viability of the agricultural uses. Also, Policy D/C 4.2 states that conversion of agricultural land to non-agricultural uses shall be discouraged unless the proposed use can be demonstrated to be preferable in terms of economic development, resource availability, and resource conservation. Under the new Countywide Plan, Policy NR-7.2 requires project applicants seeking to develop 20 or more acres of agricultural land (classified as Prime, of Statewide Importance, or Unique) to non-agricultural uses to prepare an agricultural resource evaluation prior to project approval. The evaluation shall use generally accepted methodologies to identify the potential impacts of the loss of agricultural land as well as the economic viability of future agricultural use of the property. If the conversion is deemed significant, the County of San Bernardino requires mitigation at a 1:1 ratio of converted to preserved acreage through conservation easements, payment of its valuation equivalent if a fee mitigation program is established, or inclusion in a regional agricultural preservation program. County of Riverside General Plan policies like LU 20.1, LU 20.2, LU 20.4, and OS 7.4 encourage retaining agriculturally

designated lands and protecting them. Compliance with San Bernardino and Riverside County general plan policies would protect agricultural lands from conversion to other uses and reduce impacts on agricultural lands.

Temporary use of land designated as Important Farmland for construction access and staging areas could be restored, but if not restored could constitute a potential impact. Implementation of Recommended Best Practice BP-6 is recommended to ensure potential impacts are minimized by requiring restoration of land to preconstruction conditions. Any permanent conversion of Important Farmland could constitute a impact. While some Covered Activities could provide a potential benefit to agricultural uses with projects proposing sustainable agricultural development, specifically Covered Activity Conserv.7 (Phase 1) for the Louis Rubidoux Nature Center and Sunnyslope Creek conservation project, other Covered Activities could result in the permanent conversion of farmland to nonfarmland uses. The Louis Rubidoux Nature Center and Sunnyslope Creek project would involve a number of park improvements and the opportunity for construction and operation of sustainable agriculture. Community engagement opportunities resulting from this Covered Activity are anticipated to include events such as the Annual Pecan Festival and regular farmer's markets. Furthermore, the Project would facilitate water sustainability in the Planning Area and, even though some agricultural lands could be converted to nonfarmland uses, the Covered Activities could also increase water supplies to help with current and future agricultural water consumption and long-term sustainability of water resources for agricultural uses. Also, lands currently designated for agricultural uses are not necessarily in agricultural production, and conversion of any lands to nonfarmland uses may not result in the conversion of lands used for agriculture. As other Covered Activities could involve new construction on land designated as Important Farmland, the amount of Important Farmland that could be permanently converted under the Project would vary and could likely be small, representing only a fraction of the Important Farmland within the Permit Area.

## Operation

Many of the projects considered as Covered Activities are in areas currently used for infrastructure or previously allocated for such uses with development of many of the treatment plants, diversions, recharge basins, wells and water conveyance infrastructure, and solar energy development already programmed and included in long-term capital improvement programs for the Permittees. Covered Activities including routine O&M are proposed on developed sites currently being utilized for public infrastructure projects in the Permit Area. Covered Activities involving habitat enhancements are proposed generally in areas where natural resources are considered for conservation and not designated for future construction. Periodic and intermittent impacts are not expected to convert designated farmland to other uses as a result of maintenance and repair activities that are part of infrastructure project operations, including maintenance vehicles entering and exiting the Covered Activities project areas or from staging and stockpile areas in the Permit Area. While O&M activities for most Covered Activities are expected to be short term and/or relatively minor, the anticipated disturbance that would be caused would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

## Conflict with Existing Zoning for Agricultural Use or Conflict with a Williamson Act Contract

### Construction

There is potential for some designated Williamson Act land to be affected by Covered Activities in the Permit Area. Agricultural uses and production would remain as they are at present; however, individual projects could have an impact on lands zoned for agricultural use, including lands under Williamson Act contract. The proposed Covered Activities that would occur within Williamson Act lands include pipeline maintenance, patrol road maintenance, right-of-way maintenance, maintenance and repair, pipeline rehabilitation/replacements, new tanks, new access road, water delivery, and wastewater collection system operation (collectively termed wells and water conveyance infrastructure). The Covered Activities that would occur within Williamson Act lands would total approximately 42 acres, all associated with wells and water conveyance infrastructure. As described above, Covered Activities could affect a total of 775 acres of Important Farmland. This includes 134 acres of Farmland of Local Importance, 7 acres of Farmland of Statewide Importance, 17 acres of Unique Farmland, 21 acres of Prime Farmland, and 595 acres of Grazing Land.

These activities could result in the conversion of land currently zoned for agricultural uses to non-agricultural uses and may occur on lands that are currently under a Williamson Act contract. However, Williamson Act lands would remain in agricultural production under contract, unless the individual property owners request non-renewal of the Williamson Act contract as contracts expire. Any land within the Permit Area that would be acquired under the Project would be acquired for Covered Activities. However, the Williamson Act generally prohibits public agencies from acquiring Prime Farmland covered under the act for public improvement projects if there is other land within or outside the Planning Area on which it is reasonably feasible to locate the public improvement project. In accordance with the Williamson Act, this prohibition does not apply to the acquisition of a fee interest or conservation easement for a term of at least 10 years in order to restrict the land to agricultural or open space uses. If required, the Covered Activities would be required to comply with CEQA on an individual basis and to avoid or minimize impacts on agricultural resources to the extent feasible.

The Upper SAR HCP's conservation strategy was developed with the intent of allowing habitat preservation and enhancement to occur without precluding existing agricultural use. Under the Project, lands currently zoned for agriculture or under Williamson Act contract may be purchased through conservation easement or in fee title, or donated in lieu of payment, for conservation purposes. Preservation of lands under an easement within areas zoned for agricultural use would not conflict with the permitted uses of the Williamson Act or agriculturally zoned lands. However, as described above, the Covered Activities that would be implemented could result in the conversion of land currently zoned for agricultural uses to non-agricultural uses. Temporary use of land with Williamson Act contracts for construction easements and staging areas could be restored, but if not restored could constitute a potential impact. Implementation of Recommended BP-6 would minimize potential impacts by requiring restoration of land to preconstruction conditions. As other Covered Activities could involve new construction on land with Williamson Act contracts, the amount of permanently converted land with the Covered Activities would vary and could likely be small, representing only a fraction of the Important Farmland within the Permit Area, although the total is unknown.

## Operation

As stated in above, many of the projects considered as Covered Activities in the Permit Area are in areas currently used for infrastructure or previously allocated for such uses already programmed and included in long-term capital improvement programs for the Permittees. Covered Activities including routine O&M are proposed on developed sites currently being utilized for public infrastructure projects. Covered Activities involving habitat enhancements are proposed generally in areas where natural resources are considered for conservation and not designated for future construction. Periodic and intermittent impacts are not expected to convert designated farmland to other uses as a result of maintenance and repair activities that are part of infrastructure project operations, including maintenance vehicles entering and exiting the Covered Activities project areas or from staging and stockpile areas. While O&M activities for most Covered Activities are expected to be short term and/or relatively minor, the anticipated disturbance that would be caused would not conflict with existing zoning for agricultural use or conflict with a Williamson Act contract.

## Conflict with Existing Zoning for, or Cause Rezoning of Forest Land, Timberland, or Timberland Zoned Timberland Production

The implementation of Covered Activities could require rezoning of forest land. There are no active timberland operations within the Permit Area. Covered Activities are expected to occur over approximately 37 acres of forest land within the San Bernardino National Forest. Implementation of the Covered Activities would include the construction of treatment facilities, water diversions, recharge basins, wells and water conveyance infrastructure, and supporting infrastructure such as access roads, fencing, and utilities (e.g., transmission lines). Temporary use of land designated as forest land for construction easements and staging areas could be restored, but if not restored could constitute a potential impact. Implementation of Recommended Best Practice AG-1 is recommended to ensure impacts are minimized by requiring restoration of land to preconstruction conditions. Because the locations of construction and O&M activities are not precisely known at this time, it is not known if the Covered Activities would result in a need for zoning change in forest lands. Any permanent location on forest land could constitute a potential impact. The individual Permittees would be required to coordinate with local jurisdictions and forest resource landowners for any land use change regarding forest lands; the outcome of that coordination is currently unknown. As other Covered Activities could involve new construction on land designated as forest land, the amount of forest land to be developed with the Covered Activities would vary and could likely be small, representing only a fraction of the forest land within the Permit Area, although the total is unknown.

## Result in the Loss of Forest Land or Conversion of Forest Land to Non-forest Use

As described above, implementation of the Covered Activities could result in the loss of forest land or conversion of forest land to non-forest use. Approximately 37 acres of forest land would be affected by implementation of the Covered Activities. Covered Activities within forest land would include the construction of treatment facilities, water diversions, recharge basins, wells and water conveyance infrastructure, and supporting infrastructure such as access roads, fencing, and utilities (e.g., transmission lines). Because the locations of construction and O&M activities are not precisely known at this time, it is not known if the Covered Activities would result in conversion or loss of forest lands. Temporary use of forest land for construction easements and staging areas could be restored, but if not restored could constitute a potential impact. Any permanent location on forest

land could constitute a potential impact. As implementation of Covered Activities in the Permit Area could involve new construction on land designated as forest land, the amount of land that could be permanently converted under the Covered Activities would vary and could likely be small, representing only a fraction of the forest lands within the Permit Area, although the total is unknown.

### **Involve Other Changes in the Existing Environment that Could Result in Conversion of Farmland or Forest Land to Non-agricultural or Non-forest Use**

The Covered Activities could result in other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use or forest land to non-forest use. As discussed above, the proposed Covered Activities include the construction of treatment facilities, water diversions, recharge basins, wells and water conveyance infrastructure, solar energy development, and habitat improvement, management, and monitoring, and supporting infrastructure such as access roads, fencing, and utilities (e.g., transmission lines). Complete details on the types, precise locations, and durations of construction activities for individual future projects and activities are not currently known. However, these activities could result in the conversion of land currently zoned for agricultural uses to non-agricultural uses or forest land to non-forest use. The Covered Activities would be required to comply with CEQA on an individual basis and to avoid or minimize impacts on agricultural and forestry resources to the extent feasible. Compliance with Recommended Best Practice BP-6 and general plan policies would help to reduce potential impacts on agricultural and forestry resources.

Some Covered Activities could provide a potential benefit to agricultural uses with projects proposing sustainable agricultural development, specifically Covered Activity Conserv.7 (Phase 1) for the Louis Rubidoux Nature Center and Sunnyslope Creek conservation project, although other Covered Activities could result in the permanent conversion of farmland to nonfarmland uses. The Louis Rubidoux Nature Center and Sunnyslope Creek project would involve a number of park improvements and the opportunity for construction and operation of sustainable agriculture. Community engagement opportunities resulting from this Covered Activity are anticipated to include events such as the Annual Pecan Festival and regular farmer's markets. Other conservation projects could also involve the addition of new and/or improved habitat, a positive change to the existing environment that would not involve the conversion of farmland to non-farmland use or conversion of forest land to non-forest use. Additional positive changes could include the conservation and provision of additional water sources within the Permit Area, which would create and maintain water sources that benefit agricultural use and forest resources.

As other Covered Activities could involve new construction on land designated as Important Farmland, Williamson Act contract land, or forest lands, the amount that could be permanently converted under the Project would vary and could likely be small, representing only a fraction of the resources within the Permit Area, although the total is unknown.

### **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

The following best practice measure is recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to agricultural and forestry resources:



### **Recommended Best Practice BP-6: Restore Impacts from Temporary Construction Areas on Farmland to Pre-construction Conditions**

All construction access, mobilization, material laydown, and staging areas located on land designated as Important Farmlands or under Williamson Act contracts shall be returned to a condition equal to the pre-construction staging condition for any Covered Activity. First, the Permittee will confirm if its future Covered Activity is located on Important Farmland or on a site containing Williamson Act contracts. If it is determined that the Covered Activity would affect Important Farmland or Williamson Act contracts, the Permittee will require as future mitigation the preparation of a conservation plan addressing specific actions, sequence of implementation, parties responsible for implementation, and successful achievement of restoration for temporary impacts. Before construction begins on sites designated as Important Farmland or under Williamson Act contracts, the Permittee or its designated contractor shall prepare and submit the conservation plan to the Permittee's approving body for review and approval prior to any ground-disturbing activities at the site of a temporary construction area on Important Farmland or on land under Williamson Act contract.

## **Section 3.2, Air Quality**

### **Conflict with or Obstruct Implementation of the Applicable Air Quality Plans**

The types of emissions that could result from Covered Activities have been qualitatively analyzed under *Cumulative Considerable Net Increase of any Criteria Pollutant*, below. As described below, emissions from the Covered Activities could exceed thresholds adopted by SCAQMD and MDAQMD. Therefore, the Covered Activities could cause or contribute to a violation of ambient air quality standards, which may delay regional attainment goals. Implementation of Recommended Best Practices BP-7, BP-8, BP-9, and BP-10 would reduce emissions, but they may not be sufficient to reduce emissions from some of the Covered Activities below adopted thresholds.

Population, housing, and growth trends used to develop emissions projections for the air quality attainment plans are based on assumptions in SCAG's 2016–2040 RTP/SCS. Covered Activities would have no direct effect on population or regional housing, and they are not anticipated to result in substantial new regional employment opportunities. The Covered Activities would comply with all applicable regulatory standards (e.g., SCAQMD Rule 403, Fugitive Dust) as required by SCAQMD and MDAQMD. For instance, compliance with SCAQMD Rule 403 may include, but is not limited to, application of water to prevent the generation of dust, application of soil binders to uncovered areas, re-establishment of ground cover, utilization of a wheel-washing system, limitation of vehicle speeds on unpaved roads to 15 miles per hour, and maintenance of effective cover over exposed areas. However, there is the potential for some Covered Activities may require land use or zoning amendments to local land use policies for new construction projects, although the Covered Activities are generally included within each Permittee's capital improvement plan or program, which specifically plan for the proposed infrastructure improvements and are programmed into air quality plans based on those uses.

Without specific details on the circumstances of the Covered Activities, the magnitude of emissions and potential reductions achieved by required mitigation cannot be precisely quantified. Required land use modifications (if any) are also currently unknown but would be assessed as part of subsequent environmental analysis. Accordingly, Covered Activities may conflict with or obstruct implementation of applicable air quality plans.

## Cumulatively Considerable Net Increase of any Criteria Pollutant

Covered Activities could result in the generation of criteria pollutants from on-road vehicle movement, use of mobile and stationary equipment, painting and asphalt paving, and earthmoving (e.g., grading) in the Permit Area. Emissions would vary substantially depending on the level of activity, length of the activity, specific operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Operational activities typically include inspection, monitoring, testing, facility upkeep and maintenance, excavations and cleanups, and other components. These activities could generate emissions from mobile and stationary equipment, earthmoving, and on-road vehicles.

The specific types and amounts of construction and O&M activities would differ depending on the Covered Activity. The following sections generally describe the anticipated construction and O&M emissions expected for each of the Covered Activity categories. Table 3.3-13 summarizes potential construction and O&M emissions that may be generated by the Project. Covered Activities with the greatest potential to have short- or long-term air quality effects are denoted with an asterisk (\*).

### Water Reuse Projects

The Covered Activities could include the construction and operation of water reuse projects including new treatment plants and associated facilities (e.g., conveyance pipelines, pumps, access roads). The Project would also maintain existing treatment plants and facilities in the Permit Area.

Construction of new treatment plants and associated facilities may require vegetation management, grading, structure construction, installation of above- and below-ground utilities, paving, and architectural coatings. These activities would generate emissions of fugitive dust (PM<sub>2.5</sub> and PM<sub>10</sub>) from ground disturbance and material handling; exhaust emissions (e.g., VOC, NO<sub>x</sub>, CO) from fuel combustion in construction equipment, trucks, and worker vehicles; and VOCs from architectural coatings and paving.

New water reuse projects like treatment facilities would require similar types of O&M and result in similar emissions levels as existing facilities. Specifically, O&M may include periodic vegetation removal, vector control, facility painting and upkeep, and excavations. Off-road equipment, work trucks, and employee vehicles would generate exhaust and fugitive dust emissions during these activities. Emissions from employee vehicles and facility operations would occur daily and would likely be relatively minor. Emissions from more intensive activities, such as excavations, would occur on an as-needed basis.

### Groundwater Recharge

The Covered Activities could include the construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins.

The Covered Activities could include the construction and operation of new diversion structures (e.g., gates, levees, canals, channels, pipelines). The Covered Activities could also maintain existing structures in the Permit Area. Construction of new diversion structures would require similar equipment and vehicles as those described above for water reuse projects, resulting in similar types of fugitive dust and combustion exhaust emissions.

O&M at diversions typically requires debris, vegetation, and sediment removal. The Covered Activities would not increase O&M at existing diversions relative to existing conditions. However, new diversions constructed would require O&M, which would result in similar emissions levels as existing facilities. Most emissions would likely be generated by haul trucks required to transport the debris, vegetation, and sediment. If dredging is required to extract sediment, heavy-duty off-road equipment would also generate exhaust-related criteria pollutants. Depending on the structure, maintenance activities could occur from an as-needed basis to once every 5 years.

The Covered Activities could include the reconstruction of existing and construction of new recharge basins and associated facilities (e.g., drain outlets and culverts, canals, berms, dams, meters, flow measuring stations, gates, pipelines). Typically, geotechnical drilling and testing, involving bores or drill rigs, would take place for approximately 2 weeks prior to construction at each project site. Construction activities, such as vegetation management, grading, excavation, and basin, facility, and access road construction would occur over a period of 12 to 18 months at any given location. Similar types of construction equipment and vehicles as described above for water reuse projects would be required, resulting in similar types of fugitive dust and combustion exhaust emissions.

O&M activities may include maintenance of levees and access roads; repair of banks, berms, and concrete structures; and removal of debris, sediment, and vegetation. These activities normally require the use of heavy-duty construction equipment and vehicles, typically on an annual basis prior to the wet season. Emissions may also be generated by work trucks and employee commute vehicles. New recharge basins would require similar types of O&M and result in similar emissions levels as existing recharge basins. Required activities and associated emissions at existing recharge basins would generally remain the same as under existing conditions. However, at some existing recharge basins, operations would increase, as higher flows would be diverted into the basins more frequently for longer durations to capture additional stormwater into the basins. This may require additional annual maintenance, such as sediment removal, which would result in more emissions compared to existing conditions.

## **Wells and Water Conveyance Infrastructure**

The Covered Activities could include the construction of new wells, storage facilities, pipelines, and ancillary facilities (e.g., access roads). Construction activities would include, vegetation management and grading; trenching; and physical construction of pipelines, tanks, pumps, electrical equipment, and buildings. Like water reuse projects, these Covered Activities would generate fugitive dust (PM<sub>2.5</sub> and PM<sub>10</sub>) from ground disturbance and exhaust emissions (e.g., VOC, NO<sub>x</sub>, CO) from fuel combustion in construction equipment, trucks, and worker vehicles.

O&M activities generally include visual inspections, cover repairs, vegetation management, and access road management. These activities may generate minor amounts of emissions from employee commute and worker truck trips. Cover repairs and vegetation management may also require off-road equipment, such as backhoes or chainsaws.

## **Solar Energy Development**

The Covered Activities could include the construction of solar projects on land owned by the City of Riverside. Construction activities would consist of vegetation management, grading, creation of ingress and egress access paths, and installation of solar panels and electrical equipment. Similar types of construction equipment and vehicles as described above for water reuse projects would be required, resulting in similar types of fugitive dust and combustion exhaust emissions.

O&M may include vegetation removal and panel washing. Criteria pollutants would be generated by haul trucks used to transport water for the panel washing, as well as any off-road equipment required to remove vegetation (e.g., chainsaws).

### **Routine Operations and Maintenance**

The Covered Activities would carry out routine O&M activities in the Permit Area. Activities are generally performed periodically and include actions such as minor construction, earth moving, vegetation management, and monitoring of structures and facilities. Activities that involve repairs and replacements are typically conducted in-kind. Construction equipment, including excavators, applicators and compressors, mowers, tractors, and trails, and vehicle use are anticipated, which would result in criteria pollutants from equipment and vehicle exhaust. Earth-moving activities may also generate fugitive dust emissions.

O&M activities generally include visual inspections, repairs, vegetation management, and access road management. These activities may generate minor amounts of emissions from employee commute and worker truck trips. Repairs and vegetation management may also require off-road equipment, such as backhoes or chainsaws.

### **Summary**

While construction activities required for some Covered Activities (e.g., routine operations and maintenance for existing facilities) may be relatively minor, more intensive construction may be required for new or expanded facilities, including water reuse project and solar energy developments, which may generate emissions in excess of adopted thresholds. The exact details as to location and types of construction equipment required for each activity is not reasonably foreseeable. Likewise, the levels of potential long-term O&M activities that may result from implementation of individual Covered Activities are also not reasonably foreseeable. While some Covered Activities (e.g., routine operations and maintenance for existing facilities) may not increase O&M activities relative to existing conditions, other activities would install entirely new facilities representing a new long-term source of emissions that could exceed adopted thresholds. If pollutant emissions for a Covered Activity are below the threshold levels, the impacts from an air contaminant are not considered to be cumulatively considerable. Because specific implementation details are not currently available, a quantified analysis of potential criteria pollutant emissions is not possible, and the potential magnitude of emissions above thresholds cannot be precisely identified. The impact of increases in emissions during construction or O&M in excess of SCAQMD or MDAQMD thresholds could be significant and cumulatively considerable. Implementation of Recommended Best Practice BP-7, BP-8, BP-9, and BP-10 would reduce emissions, but the extent of the reductions is unknown.

## **Exposure of Sensitive Receptors to Substantial Pollutant Concentrations**

Heavy-duty equipment and vehicles required for construction and O&M activities in the Permit Area would generate DPM and criteria pollutants that could expose nearby receptors to increased health risks. Health risks from DPM exposure are generally assessed over a period of 30 years. The specific duration of construction at each site is currently unknown, but it is anticipated to be far less than 30 years, which is typically associated with chronic health impacts. For example, construction of recharge basins typically requires 12 to 18 months at any given location. Routine O&M may occur daily, but emissions associated with this type of activity are typically from employee and work trucks, which are expected to be relatively minor and spread throughout the Permit Area. Emissions

from more intensive maintenance activities, such as dredging and/or sediment removal, would occur on an as-needed basis, annually, or even less frequently. In addition, most of the Covered Activities would occur in or adjacent to land with suitable land use designations and zoning for infrastructure (e.g., water reuse projects). Therefore, there is a low probability that sensitive receptors would be in proximity to Covered Activities. In addition, emissions dissipate as a function of distance; therefore, pollutant concentrations and associated health risks would be lower at the nearest sensitive receptors.

While construction and O&M activities for most Covered Activities in the Permit Area are expected to be short term and/or relatively minor, sensitive receptors near individual project sites and haul roads could be exposed to increased DPM concentrations. Similarly, these receptors may be exposed to increased criteria pollutant concentrations in excess of SCAQMD's LSTs. Health risks from exposure to increased pollution are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For example, ozone can be formed through complex chemical reactions over long distances and, as such, emissions of ROG and NO<sub>x</sub> in one area may not equate to a specific ozone concentration in that same area. SCAQMD (2015b) acknowledges that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels." For example, SCAQMD's analysis of its 2012 Air Quality Attainment Plan showed that modeled NO<sub>x</sub> and ROG reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 parts per billion. Analysis of SCAQMD's Rule 1315 showed that emissions of NO<sub>x</sub> and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absences (SCAQMD 2015b). Directly emitted particulate matter and DPM also do not always equate to a specific localized health impact because emissions can be transported and dispersed. Ultimately, because the extent of construction and operational activities is not known at this time, a correlation of project-generated emissions to specific health risks based on a quantitative analysis is not possible.

Activities shown in Table 3.3-13 with the greatest potential to have criteria pollutant impacts are also anticipated to have the greatest potential to result in health risks. The impact would vary according to the equipment used, the location and timing of the actions, the meteorological and air quality conditions at the time of implementation, and the location of receptors relative to the emission source. However, note that SCAQMD (2015b) acknowledges that a project emitting NO<sub>x</sub> or ROG below its threshold of 10 tons per year "is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models" and it would "not be feasible to directly correlate project emissions of VOC or NO<sub>x</sub> with specific health impacts from ozone."

The impact of exposing sensitive receptors to health risks in excess of SCAQMD or MDAQMD thresholds would be significant. Implementation of Recommended Best Practice BP-7, BP-8, BP-9, BP-10, and BP-11 would reduce health risks, but the extent of the reductions is unknown.

### **Other Emissions (Leading to Odors) Affecting a Substantial Number of People**

Construction activities (e.g., water reuse projects, diversions, recharge basins) would require the use of diesel-powered equipment and haul trucks. Asphalt paving, application of architectural coatings, and excavation of organic matter may also result in odors during construction. Potential odors generated during asphalt paving and architectural coatings would be addressed through mandatory compliance with air district rules, such as SCAQMD Rule 1108, which limits the number of VOCs from cutback asphalt. Odors from diesel-powered equipment and sediment excavation would be

temporary and intermittent, and would dissipate rapidly as a function of distance. Odors associated with soil excavation are likewise anticipated to be minor and localized. The Permit Area is composed primarily of well-aerated sandy and gravel soils and, as such, any decomposition of excavated organic material would occur under aerobic conditions, which does not typically result in hydrogen sulfide or other malodorous emissions. Therefore, it is not anticipated that construction activities would emit objectionable odors.

CARB (2005) acknowledges that odors from commercial activities are the most common sources of odor complaints and public concern. They specifically identify the following land uses as having the highest potential for odor emissions:

- Sewage treatment plants
- Landfills
- Recycling facilities
- Petroleum refineries
- Biomass operations
- Auto body shops
- Coating operations
- Fiberglass manufacturing
- Foundries
- Rendering plants
- Livestock operations

Only wastewater treatment facilities operated as Covered Activities meet any of these land use categories. All other Covered Activities may generate minor odors from diesel equipment during routine O&M, but these emissions would be minor and localized, and would often occur infrequently and be addressed in the context of SCAQMD and MDAQMD Rule 402 in absence of quantitative odor thresholds. Accordingly, O&M activities from all Covered Activities except water reuse projects like wastewater treatment facilities are not anticipated to result in nuisance odors or complaints.

Most odor emissions at wastewater treatment facilities occur in the collection systems under anaerobic conditions. The anaerobic decay of organic material in the wastewater can generate gases, specifically hydrogen sulfide, which is commonly described as having a foul or “rotten egg” smell. The intensity of odors generated at wastewater treatment facilities depends on a number of variables, including the volume of processed wastewater, the types of treatment processes, and facility controls. Weather conditions (e.g., wind speed, wind direction, ambient recapture) also affect the dispersion of odors and whether they may or may not be perceptible at specific receptor locations.

While no guidance from MDAQMD is available for wastewater treatment facilities, SCAQMD has recommended that special care needs to be given to the initial siting and design and operation of these facilities (SCAQMD 2005). Several air districts throughout the state recommend a buffer distance of 2 miles to avoid the potential for odor complaints from new wastewater treatment facilities. However, it is important to note that certain facilities within 2 miles of receptors may not generate odor complaints, depending on their size and treatment controls. Without more detailed

information on specific facilities proposed, the extent to which they could result in nuisance odors that violate SCAQMD and MDAQMD rules cannot be precisely determined and are potentially significant. Potential odors would be further evaluated and identified in the subsequent project-level environmental analysis conducted for individual water reuse projects like wastewater treatment facilities.

## Recommended Best Practices to Reduce Potential Covered Activities Impacts

The following best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to air quality:

### Recommended Best Practice BP-7: Apply Dust Control Measures During Construction of Covered Activities

Grading can generate fugitive dust, including PM10 and PM2.5. Covered Activities that involve site grading, excavation, or substantial material movement will implement the following dust control measures during construction, as applicable, in compliance with applicable air district rules and regulations, including SCAQMD Rules 403, 474, and 1401–1472 and MDAQMD Rules 403.2 and 404.

- Water the grading areas a minimum of twice daily to minimize fugitive dust.
- Stabilize graded areas as quickly as possible to minimize fugitive dust.
- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence.
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 miles per hour.
- Cover/water onsite stockpiles of excavated material.
- Enforce a 15-mile-per-hour speed limit on unpaved surfaces.
- On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather.
- Hydroseed, landscape, or develop as quickly as possible all disturbed areas and as directed by the applicable air district
- Limit the daily grading volumes/area.

**Recommended Best Practice BP-8: Reduce Construction Equipment and Vehicle Exhaust Emissions During Construction and Operation of Covered Activities**

Construction projects typically require equipment such as bulldozers, graders, loaders, scrapers, backhoes, and heavy trucks. Permittees will utilize clean-diesel, alternative fuel, or other engine controls to reduce equipment and vehicle exhaust emissions during construction of the Covered Activities. Permittees will implement the following control measures, as applicable, to reduce equipment and exhaust related emissions.

- Require equipment to be maintained in good tune and to reduce excessive idling time.
- Utilize alternative fuels, such as compressed natural gas, renewable diesel, and diesel.
- Require the use of equipment that meets EPA Tier 4 or higher (as promulgated) emission standards.
- Require older equipment be retrofitted with advanced engine controls, such as diesel particulate filters, selective catalytic reduction, or cooled exhaust gas recirculation.

**Recommended Best Practice BP-9: Use Low-VOC Coatings on Buildings During Construction and Operation of Covered Activities**

Building construction (e.g., treatment facilities) may result in off-gassing of ROG from architectural coatings and paints that exceed the applicable threshold. Permittees will reduce ROG emissions related to architectural coatings through the use of low-VOC coatings (VOC content less than or equal to 50 grams per liter).

**Recommended Best Practice BP-10: Evaluate Feasibility of Offsets After All Feasible Mitigation Has Been Applied for Covered Activities**

The Permittees will evaluate the feasibility of offsets as a project-specific mitigation measure should impacts remain significant following the implementation of all feasible onsite mitigation (as described under BP-7, BP-8, and BP-9) for the Covered Activities. Offsets may include procurements through local air district incentive programs.

**Recommended Best Practice BP-11: Prepare a Health Risk Assessment**

For the Covered Activities, including but not limited to treatment plants and other large scale projects, a HRA will be prepared by the Permittees if sensitive receptors are located within 1,000 feet of individual project activities and if air quality impacts are estimated to exceed thresholds. The half-mile buffer represents the farthest distance at which air districts recommend performing an HRA, as pollutant concentrations dissipate as a function of distance from the emission source. The site-specific HRA will evaluate potential health risks to nearby sensitive receptors from exposure to DPM. If the HRA identifies health risks in excess of applicable air district health risk thresholds, additional measures beyond BP-7 through BP-10 (e.g., vegetation buffers, receptor filters) and/or site design changes will be incorporated into the site-specific environmental review to reduce health risks to the greatest extent feasible.



### **Recommended Best Practice BP-12: Implement Odor Control Mechanisms and Odor Compliance Monitoring Program for Wastewater Treatment**

For Covered Activities future wastewater treatment facilities, the potential for odor emissions and public complaints shall be assessed by the Permittees. Facilities within 2 miles of receptors must include odor-control mechanisms and implement an odor complaint monitoring program. Odor control should target the primary odor sources: headworks, primary treatment processes, and sludge dewatering facilities. Odor-control technologies may include but are not limited to: sealed and scrubbed headworks, chemical treatment of influent prior to entrance at the headworks, enclosed sludge-handling areas, and use of deodorizing misting systems. All facilities shall prohibit the stockpiling of dewatered sludge in outdoor open areas. The monitoring program shall consist of a standard complaint logging procedure, including date, time, and origin of complaint along with a description of the atmospheric conditions present during the time of the complaint. The complaints shall be followed by an inspection of the treatment plant to determine the source of the nuisance odor and any actions that should be taken to remedy the problem.

## **Section 3.4, Biological Resources**

The analysis of Covered Activities is provided in Section 3.4.

## **Section 3.5, Cultural Resources**

### **Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.**

The Permit Area contains more than 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, as well as many resources that have been recorded but not evaluated for listing as a California Historical Landmark, or in the NRHP or CRHR.

Covered Activities associated with construction could potentially impact historical resources. These potential impacts could occur through physical disturbance such as construction of new facilities, infrastructure development, and capital improvement projects. Impacts from Covered Activities in the Permit Area could potentially be substantial because ground-disturbing construction activities could demolish or damage historical resources, resulting in a substantial adverse change to their significance. Implementation of Best Practices BP-13, and BP-14 would require that the project applicant retain a qualified architectural historian to reduce the potential for impacting historical resources; and conduct a cultural resources inventory and assessment of resources present in the area of each Covered Activity.

There is a strong likelihood that additional unrecorded NRHP-or CRHR-eligible historical resources exist within the Permit Area. Until the lands have been completely inventoried and the resources located there evaluated for their potential NRHP and CRHR eligibility, it must be assumed that historical resources may be present and that they may be eligible for inclusion in the NRHP and CRHR.

Operations and maintenance related to the Covered Activities likely would not result in demolition or other changes to potential historic resources because the actual operation and maintenance of a facility or project, once constructed, may not in and of itself result in any impacts. Therefore, O&M

impacts to potential historic resources likely wouldn't be substantial with the implementation of the Best Practices described above.

### **Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.**

The Planning Area contains over 75 properties listed on the NRHP (and, by extension, the CRHR) and 28 registered California Historical Landmarks, as well as many resources that have been recorded but not evaluated for listing as a California Historical Landmarks or in the NRHP or CRHR.

Covered Activities associated with construction could potentially impact archaeological resources. These potential impacts could occur through physical disturbance such as construction of new facilities, infrastructure development, and capital improvement projects. Covered Activities in the Permit Area could potentially be substantial because ground-disturbing construction activities could demolish or damage unknown or unrecorded archaeological resources resulting in an adverse change to their significance. Implementation of Mitigation Measures CR-1 through CR-6 of the EIR would require that the Covered Activity applicant retain a qualified archaeologist to implement all mitigation; define environmentally sensitive areas; conduct an archaeological assessment; and provide Native American and Archaeological monitoring where appropriate in the area of each Covered Activity. These mitigation measures would reduce impacts in accordance, which include, data recovery or preservation in place, as appropriate, and are generally accepted measures to address impacts on archaeological resources.

There is a strong likelihood that additional unrecorded NRHP- or CRHR-eligible archaeological resources exist within the Permit Area. Until the lands have been completely inventoried and the resources located there evaluated for their potential NRHP and CRHR eligibility, it must be assumed that archaeological resources may be present and that they may be eligible for inclusion in the NRHP and CRHR.

Depending on the specific Covered Activity associated with O&M or construction, impacts may remain substantial following mitigation. However, it is anticipated that there would be fewer constraints to avoiding substantial impacts that could result from permit and Upper SAR HCP implementation; therefore, impacts to archaeological resources could be reduced with the mitigation described above, however, that is currently unknown and all activities or projects seeking coverage under the Proposed Plan would undergo individual CEQA analysis to determine project-specific impacts and are subject to approval by the partner agencies.

### **Disturb any human remains, including those interred outside of dedicated cemeteries.**

Humans have occupied Southern California for over 12,000 years, and human remains in archaeological contexts have been discovered in the Permit Area. These remains are sometimes isolated and not associated with archaeological sites, which makes it hard to predict where they would occur. Internments are often unmarked and can consist of cremations and informal and formal burials. Human remains are protected under NEPA, CEQA, NAGPRA, and various local statutes. Covered Activities associated with construction activities have the potential to encounter human remains and result in potential impacts, through physical disturbances associated such as construction of new facilities, infrastructure development, and capital improvement projects.

Covered Activities associated with construction or O&M in the Permit Area have the potential to impact human remains through physical disturbances associated such as construction of new facilities, infrastructure development, capital improvement projects, or through operations and maintenance activities. Impacts from Covered Activities in the Permit Area could potentially be substantial because ground-disturbing construction activities could demolish or damage unknown or unrecorded human remains.

These activities are expected to be conducted in accordance with the regulatory processes and measures described in the paragraph above. These requirements provide an effective mechanism to ensure that potential impacts to properties possessing human remains and are appropriately addressed. Compliance with local regulatory requirements which require the county coroner to be contacted for a determination of origin and disposition consistent with California Health and Safety Code Section 7050.5, and the NAHC to be consulted for prehistoric remains to determine a Most Likely Descendant, and would reduce the potential for disturbance of previously undiscovered human remains.

## Section 3.6, Geology, Soils, Seismicity, and Paleontological Resources

### Surface Fault Rupture

As shown in Table 3.6-3, multiple faults that are recognized by the state to have risk of surface fault rupture—the Alquist-Priolo-zoned faults—exist in the Permit Area (California Geological Survey 2008).

Covered Activity construction and habitat improvement activities could be exposed to surface fault rupture depending on where these activities are sited. Surface fault rupture could damage foundations and linear projects such as water infrastructure. However, construction would adhere to existing laws and regulations, which include the state Alquist-Priolo Act, which prohibits structures intended for human habitation from being sited in a zoned earthquake fault zone and adopted building standards code. Furthermore, construction would not exacerbate risk of surface fault rupture.

### Strong Seismic Ground Shaking

As described in Section 3.6.1.2 under *Strong Seismic Ground Shaking*, there is a high likelihood of strong ground shaking in the Permit Area in the future.

Under the Covered Activities, construction, habitat improvement and routine monitoring, management and maintenance activities needed to implement the conservation strategy would be exposed in the future to strong seismic ground shaking. Strong seismically induced ground shaking could result in substantial loads to structures supported on the ground during construction and present a risk to workers and temporary and permanent structures. However, because of the relatively short construction period, a large earthquake during the construction period is unlikely. In addition, construction would adhere to applicable laws and regulations, including the adopted building standards code. All of the proposed structures and infrastructure are likely to be exposed to strong ground shaking during the lifetime of the permit term. Strong ground shaking can damage structures and linear facilities. However, construction would adhere to applicable laws and regulations, including the adopted building standards code, which would reduce the potential for

seismic related impacts to structures in the plan area. Furthermore, construction of these facilities would not exacerbate strong seismic ground shaking.

## Seismic-Related Ground Failure

As described in Section 3.6.1.2 *Liquefaction* above, the Permit Area includes areas subject to potential liquefaction. Covered Activity construction could destabilize the ground through placing new loads on soils that are vulnerable to seismic-related ground failure.

It is possible, depending on where these structures are sited, that the load that new structures would place on the ground could exacerbate risk of liquefaction, lateral spreading, seismic densification, and differential settlement. Liquefaction can cause ground settlement that may result in differential movement of temporary structures, large construction equipment, or permanent structures. Liquefaction can also result in lateral spreading. Seismic densification can result in differential settlement across a project site. Differential settlement and lateral movement could lead to permanent damage to structures or equipment, which could cause an increased risk of injury to construction workers or building inhabitants.

Compliance with all agency regulations and adherence to all established design standards for project implementation of the Covered Activities would reduce impacts for geologic hazards

Other routine monitoring, management and maintenance activities would not place a new load on the ground because no new structures would be involved, and therefore would not exacerbate the risk of liquefaction, lateral spreading, seismic densification, and differential settlement.

## Landslides

The Permit Area includes areas mapped as subject to potential landslide. The Covered Activities construction, habitat improvement and routine monitoring, management and maintenance activities involve structures and infrastructure or earth grading that could destabilize slopes and existing landslide deposits through excavation and through placing new loads on slopes that are vulnerable to landslide.

It is possible, depending on where these construction, habitat improvement and routine monitoring, management and maintenance activities are sited, that new structures could exacerbate existing landslide risk or cause a new landslide. Undercutting a slope and placing additional loads at the top of a slope can cause the slope to fail, depending on the geologic and soil units and degree of water present, and seismic ground shaking can also cause an unstable slope to fail by destabilizing the cohesion between particles, allowing gravity to play a greater role in the position of the slope materials, allowing them to move downhill. Risk of slope failure is greatest where the soil is unconsolidated and saturated, such as at natural waterbody crossings. The consequences of slope failure can be either loss of bearing support or increased load on structures that are in the path of the slope failure, which can lead to risk of injury and loss of life for construction personnel and building inhabitants. Compliance with applicable laws and regulations would reduce impacts geological hazards. BMPs such as "Prepare a Geotechnical Report to Identify Geologic, Soils, and Seismic Hazards" would further reduce potential impacts.

## Result in substantial soil erosion or the loss of topsoil

The Covered Activities include areas that are subject to severe and very severe risk of water erosion and severe risk of wind erosion, it is possible that ground-disturbing activities associated with construction and operations needed for implementation of the conservation strategy could result in increased risk of water or wind erosion. Construction and grading associated would remove the vegetative or other cover that otherwise intercepts and slows water as it reaches the ground, which slows potential water erosion and reduces wind speed along the soil surface. Without protective vegetative or other cover, soils can be subject to scouring high-speed winds and moving water. Erosion can remove topsoil resources and result in sedimentation in waterways. Some soils are more easily eroded than others. Soils in the Planning Area that have a high potential for water or wind erosion.

However, during ground-disturbing or construction activities for Covered Activities, stormwater BMPs would be implemented as required by federal, county, and local policies to minimize erosion and loss of topsoil. In addition, construction and maintenance activities would be in compliance with local stormwater and grading and erosion control ordinances and stormwater requirements established by the respective county's MS4 requirements. As part of compliance with the NPDES Construction General Permit, for instance, standard erosion and sediment control measures and other housekeeping BMPs would be identified in the required SWPPP. Other measures in the SWPPP would include a range of stormwater control BMPs (e.g., installing silt fences, staked straw wattles, or geofabric to prevent silt runoff to storm drains or waterways). Furthermore, efforts would be made to conduct the majority of land-disturbing work outside of the typical wet season and minimize the potential for large rain events to mobilize loose sediment during construction. Operation would be in compliance with the Santa Ana Watershed Action Plan (County of Riverside 2017), local water quality management plans, County stormwater management ordinances, local grading and erosion control ordinances, stormwater requirements established by each county's MS4 requirements, and regional waste discharge requirements. Measures instituted to minimize water erosion would be effective against wind erosion.

Covered Activities construction, habitat improvement and routine monitoring, management and maintenance activities could be located in areas where the soil has not been previously disturbed, depending on soil resources present, there is potential for loss of topsoil associated with ground-disturbing activities. The impact on topsoil resources in areas of previously undisturbed topsoil could be potentially significant without the use of standard topsoil salvage BMPs to reduce the loss of topsoil.

This practice provides the proper means for salvaging and storing topsoil at construction sites. Salvaged topsoil can be reused in revegetating soils later on. Natural undisturbed soil is rich in organic material; it absorbs rainwater and supports dense, healthy plant growth. It provides important stormwater management functions including efficient water infiltration and storage, adsorption of excess nutrients, filtration of sediments, biological decomposition of pollutants, and moderation of peak flows and temperatures. Healthy soil that supports vigorous plant growth intercepts rainfall, returning some of it to the atmosphere through evaporation and transpiration. Healthy soil also stores water and nutrients for plants to use in dry times.

Soil stockpiling involves removing the topsoil with heavy equipment and then storing it in piles and stabilizing with erosion control BMPs for the duration of the construction activities. When the project construction is complete, the soil is re-spread to allow for the establishment of plants. The

storage period for stockpiled soil ranges from a few months to several years. The depth of the stockpile and the length of time it is stored affect the quality of the soil at replacement. Stockpiling and the subsequent reapplication of the topsoil allows for planting conditions that are closer to the pre-disturbance condition than planting on the subsoil layers that remain. Topsoil that has been salvaged from a site should be replaced only in close proximity to the location was it was removed. Topsoil stockpiles should be located where they will not be easily disturbed, erode, block drainage structures, or interfere with work on site.

### **Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse**

Unstable soils exist in the Planning Area. Covered Activities construction, habitat improvement and routine monitoring, management and maintenance activities involve structures that could destabilize the ground through placing new loads on soils that are vulnerable to hydroconsolidation or through construction dewatering that could result in localized subsidence.

It is possible that structures implemented by the Covered Activities could exacerbate risk of hydroconsolidation or subsidence. (Liquefaction, seismic densification, and lateral spreading are discussed above.) Hydroconsolidation and subsidence can result in damage to building foundations and structures. Hydroconsolidation can result in rapid settlement or collapse, which in itself can damage foundations and structures; furthermore, settlement can be differential, placing additional stresses on foundations and structures. Subsidence can also result in differential settlement. Ground failure can result in temporary impacts from construction, habitat conservation and maintenance and operational activities needed to implement the conservation strategy for the Upper SAR HCP.

### **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**

Some soils in the Planning Area are moderately to highly expansive. Covered Activities construction, habitat improvement and routine monitoring, management and maintenance activities needed for the conservation strategy involve structures that could exacerbate expansive soils by placing rigid structures on soils that undergo expansion and contraction when soil moisture content varies.

It is possible that they could exacerbate the damaging effects of expansive soils. Expansive soils can damage building foundations, which could cause the structure to become unstable, endangering people both within and outside the building and the nearby environment; as well as infrastructure, which could potentially result in rupture of pipelines or other utilities, exposing the environment to the contents of the utility and causing erosion, contamination, or other environmental effects.

Development of Covered Activities would need to comply with all agency regulations for the Covered Activities sites and adhere all established design standards to reduce potential damaging effects of expansive soils.

### **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature**

Geologic units known to contain fossils occur in the Planning Area. Covered Activities construction, habitat improvement and routine monitoring, management and maintenance activities could disturb

significant paleontological resources, depending on where they are sited, include construction of new water treatment facilities and associated facilities, new structures associated with water diversion, new recharge basins, new wells and associated infrastructure, and new solar projects; and grading and excavation associated with habitat improvement, management, and monitoring.

Ground-disturbing activities specifically could disturb previously undisturbed geologic units with undetermined or high paleontological sensitivity that are exposed at ground surface, or that are below ground surface but within the depth disturbed by construction. Ground-disturbing activities associated with construction generally involve grading, excavating, and drilling and placing piles. Of these, grading and excavating can unearth, damage, or destroy paleontological resources. Drilling and placing piles disturb a relatively small area and is not considered substantial enough to disturb paleontological resources. Depending on where construction, maintenance and operations needed for the conservation strategy are located within the Planning Area, impacts on significant paleontological resources would be potentially significant.

Development would need to comply with all agency regulations for the Covered Activities sites and adhere all established design standards. Implementation of BMPs would reduce impacts of construction associated with Covered Activities that involve excavation or ground disturbance to less-than-significant levels by requiring a paleontologist to monitor site grading activities for any ground disturbance where paleontological resources may be present, halt grading to collect uncovered paleontological resources, curate the resources, and file a report outlining a recovery plan with the respective Permittees documenting any paleontological resources found during site grading.

## Section 3.7, Greenhouse Gas Emissions and Energy

### Generation of Greenhouse Gas Emissions

Covered Activities in the Permit Area could result in the generation of GHG emissions from use of heavy-duty equipment, on-road vehicle movement, processing activities (e.g., water reuse projects), energy and water consumption, and biological processes (e.g., changes in CO<sub>2</sub> sequestration rates). Emissions would vary substantially depending on the level of activity, length of the activity, specific operations, types of equipment, and number of personnel. Operational emissions-generating activities may include site inspections, monitoring, facility upkeep and maintenance, excavations and cleanups, and other components.

The specific types and amounts of construction and O&M activities would differ depending on the Covered Activity. The following sections generally describe the anticipated construction and O&M GHG emissions expected for each of the Covered Activity categories. Table 3.7-13 summarizes potential construction and O&M GHG emissions that may be generated by the Project. Covered Activities in the Permit Area with the greatest potential to have short- or long-term GHG effects are denoted with an asterisk (\*).

### Water Reuse Projects

The same types of construction and O&M activities that would generate criteria pollutants would also generate GHG emissions (refer to Section 3.3, *Air Quality*). In addition, energy and water consumption (e.g., electricity, natural gas), as well as waste generation, during O&M would generate

GHG emissions. Treatment facility operations (e.g., chemical reactions with organic matter, processing activities) would also release process and fugitive GHG emissions, such as CH<sub>4</sub>.

### **Groundwater Recharge**

The same types of construction and O&M activities that would generate criteria pollutants would also generate GHG emissions (refer to Section 3.3, *Air Quality*). In addition, electricity consumed during O&M to operate the gates and canals would generate GHG emissions, although these activities and associated emissions are generally expected to remain the same for all existing facilities. New diversions constructed under the Project would require O&M, which would result in similar emissions levels as those of existing facilities on a per-facility basis.

In addition, electricity consumed during O&M to operate water pumps, flow-measuring stations, and/or meters would generate GHG emissions, although these activities and associated emissions are generally expected to remain the same for existing facilities. However, at some existing recharge basins, operations would increase as higher flows would be diverted into the basins more frequently for longer durations to capture additional stormwater into the basins. New recharge basins constructed under the Project would require O&M, which would result in similar emissions levels as those of existing facilities on a per-facility basis.

### **Wells and Water Conveyance Infrastructure**

The same types of construction and O&M activities that would generate criteria pollutants would also generate GHG emissions (refer to Section 3.3, *Air Quality*). In addition, electricity consumed during construction and O&M to operate water pumps, tanks, and/or electrical equipment would generate GHG emissions.

### **Solar Energy Development**

The same types of construction and O&M activities that would generate criteria pollutants would also generate GHG emissions (refer to Section 3.3, *Air Quality*). Once operational, new solar developments would increase renewable energy generation that could offset electricity produced by the statewide grid, which is currently generated in part by fossil-fueled sources (e.g., natural gas facilities). Depending on the facility size, this energy displacement may offset any GHG emissions generated during construction and O&M.

### **Routine Operations and Maintenance**

The Project would carry out routine O&M activities in the Permit Area. These activities are similar in nature to the general property and facility maintenance activities described above. Therefore, similar types of GHG emissions are anticipated.

### **Habitat Improvement, Management, and Monitoring**

The same types of construction and O&M activities that would generate criteria pollutants would also generate GHG emissions (refer to Section 3.3, *Air Quality*). Habitat enhancement and management may affect long-term carbon sequestration rates and GHG flux. Different types of vegetation have varying rates of carbon sequestration and respiration depending on several factors, including the vegetation type, climate, soil content, and rainfall. Converting land from one type to another can also change the rate of sequestration and decomposition. Similarly, enhancing land uses



and restoring them to more productive ecosystems can affect these rates. Initial habitat changes can result in a loss of carbon storage during construction, but over time newly restored lands can increase carbon sequestration capacity. Conversely, some land types like wetlands release carbon and CH<sub>4</sub>, which may result in a net increase in GHG emissions, relative to existing conditions.

## Summary

While construction activities required for some Covered Activities (e.g., habitat enhancement) may be relatively minor, more intensive construction may be required for new facilities, including treatment facilities and solar energy developments. While some Covered Activities (e.g., O&M for existing facilities) may not increase O&M activities relative to existing conditions, other activities would install entirely new facilities representing a new long-term source of GHG emissions.

Depending on the types and combination of construction and operational activities, emissions from some Covered Activities may be included in local and regional CAPs, indicating that if these projects are consistent with the underlying assumptions of the CAP and implement all applicable GHG reduction measures, GHG impacts may be reduced. Some Covered Activities may generate emissions below SCAQMD or MDAQMD bright-line thresholds, or result in an emissions reduction, such as potentially would be the case for new solar developments. However, because specific implementation details are not reasonably foreseeable, neither the potential magnitude of total emissions above thresholds nor potential conflicts with adopted GHG reduction plans can be precisely determined. Implementation of Recommended Best Practice BP-15, in conjunction with Recommended Best Practice BP-7, BP-8, BP-9, and BP-10 as described in Section 3.3, would reduce GHG emissions, but the extent of the reductions is unknown.

## Conflict with Applicable Plan, Policy, or Regulation for Reducing Greenhouse Gas Emissions

AB 32 and SB 32 outline the state's GHG emissions reduction targets for 2020 and 2030, respectively. While not legislatively adopted, EO S-03-05 establishes the state's long-term goal to reduce GHG emissions 80 percent from 1990 levels by 2050. EO B-55-18 sets a more ambitious state goal of net zero GHG emissions by 2045.

In 2008 and 2014, CARB adopted the Scoping Plan and First Update, respectively, as a framework for achieving AB 32. The Scoping Plan and First Update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted the Climate Change Scoping Plan in November 2017 as a framework to achieve the 2030 GHG reduction goal described in SB 32. There is no state plan for addressing GHG reductions beyond 2030. As discussed above, many jurisdictions in the Permit Area have adopted local CAPs that include measures and policies to reduce local emissions consistent with the state's GHG reduction targets.

Based on CARB's 2017 Scoping Plan, many of the reductions needed to meet the 2030 target will come from state regulations, including cap-and-trade, the requirement for increased renewable energy sources in California's energy supply, updates to Title 24, and increased emission reduction requirements for mobile sources. The Scoping Plan indicates that reductions would need to come in the form of changes pertaining to vehicle emissions and mileage standards, changes pertaining to sources of electricity and increased energy efficiency at existing facilities, and state and local plans, policies, or regulations that will lower GHG emissions relative to BAU conditions. The 2017 Scoping Plan carries forward GHG reduction measures from the First Update, as well as new potential

measures to help achieve the state's 2030 target across all sectors of the California economy, including transportation, energy, and industry.

The purpose of the Project is to balance the effects of water supply management activities in the Permit Area with the conservation needs of special-status plants and wildlife and their habitats. Covered Activities under the Project would not involve any land use development that would directly result in population growth and, as such, the GHG reduction measures in the 2017 Scoping Plan and regional and local CAPs (e.g., public transit expansion, travel demand strategies, waste diversion, land use planning) largely do not apply. The Project would be affected by the scoping plan and CAP measures related to fuel and clean vehicle standards because activities would involve the use of equipment required for construction and O&M activities. These measures would lead to cleaner vehicles and equipment for the Covered Activities and thus lower GHG emissions.

Most GHG emissions generated by the Covered Activities would be short term and would cease once construction is complete. O&M for the Covered Activities in the Permit Area would be long term, but emissions from minor amounts of equipment and vehicles would be generally be limited and infrequent. Declining emission factors associated with vehicles, equipment, and energy would further reduce emissions intensities over time. Furthermore, some Covered Activities may be covered by CAPs while others (e.g., solar energy developments) would reduce emissions and assist the state with meeting SB 100 and its carbon neutrality goal under EO B-55-18. Therefore, most of the Covered Activities are not anticipated to result in substantial GHG emissions or impede attainment of state or local reduction targets. However, new facilities (e.g., water reuse projects including treatment facilities), that have the potential to generate more substantial and long-term emissions, are proposed. The GHG emissions associated with these future facilities is not reasonably foreseeable, and therefore it cannot be precisely determined whether emissions from these facilities would conflict with state or local GHG reduction plans. Implementation of Recommended Best Practice BP-15, in conjunction with Recommended Best Practice BP-7, BP-8, BP-9, and BP-10 as described in Section 3.3, would reduce GHG emissions, but the extent of the reductions is unknown.

### **Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources**

Covered Activities include construction and O&M of public infrastructure facilities in the Permit Area, utility construction and maintenance, and other activities as noted in Chapter 2, *Project Description*. Construction and O&M activities associated with the implementation of Covered Activities would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling, and materials delivery truck trips; operation of off-road construction equipment; and electricity for lighting and other intermittent sources. In addition, diesel-fueled portable generators may be necessary to provide supplemental electricity for temporary on-site lighting, welding, and supplying energy to areas of the site where energy supply cannot be met by way of a hookup to the existing electricity grid.

While construction activities required for some Covered Activities may be relatively minor, more intensive construction may be required for new or expanded facilities, including water reuse projects and solar energy developments. The exact details as to location and types of construction equipment required for each activity is not reasonably foreseeable. However, appropriate project-specific best practice measures are recommended during construction to reduce impacts from construction equipment that would be utilized for the Covered Activities. As stated in Section 3.3, it would be recommended that Permittees would utilize clean-diesel, alternative fuel, or other engine controls during construction. Covered Activities would generate a minimal amount of energy use

during construction and would comply with local general plan policies in order to avoid inefficient and unnecessary energy use. Electricity use associated with construction of Covered Activities within the Permit Area would not be considered an inefficient, wasteful, and unnecessary consumption of energy. Additionally, the implementation of the recommended best practices would reduce impacts on electricity resources.

Likewise, Covered Activities would generate a minimal amount of energy use during operation and would comply with local general plan policies and plans to avoid inefficient and unnecessary energy use. Energy consumption of potential long-term O&M, activities that may result from implementation of individual Covered Activities may not substantially increase O&M activities relative to existing conditions, and other activities that require installation of entirely new facilities representing a new long-term source of energy use may result in larger amounts of energy consumption. As included to reduce GHG emissions, implementation of Recommended Best Practice BP-15 would reduce energy consumption during operation, specifically by reducing energy use of treatment facilities by optimizing pumping schedules to prevent unnecessary pump usage; managing facility fleet logistics to reduce miles driven; replacing the motor fleet with more energy-efficient vehicles; building new pumping and storage facilities to reduce pumping requirements; or installing more energy-efficient treatment technologies. Recommended Best Practice BP-15 would also require application of additional control measures, including increasing energy efficiency of new buildings, planting trees for shade, utilizing cool roof materials, installing solar water heaters, maximizing interior daylight and utilizing high-efficiency lighting, increasing roof/ceiling insulation in new facilities, incorporating on-site renewable energy production, and others.

In summary, the Covered Activities that would result in a commitment of energy resources in the form of diesel fuel, gasoline, and electricity during construction and operation. However, the Covered Activities would not result in the wasteful, inefficient, or unnecessary consumption of energy with implementation of Recommended Best Practice BP-8 and BP-12, and BP-15 and compliance with local general plan policies and plans. Energy consumption during construction and operation would not substantially contribute to an increase in energy consumption or be any different than any other similar public infrastructure project, and therefore would not substantially affect local and regional energy supplies or result in wasteful or inefficient use of energy.

### **Conflict with or Obstruct a State or Local Plan for Renewable Energy Efficiency**

As described above, the Covered Activities would consume energy during construction and O&M and, with recommended best practice measures incorporated, would not substantially contribute to an increase in energy in a regional context. As stated previously, the purpose of the Project is to balance the effects of water supply management activities in the Permit Area with the conservation needs of special-status plants and wildlife and their habitats. Covered Activities under the Project would not involve any land use development that would directly result in population growth and, as such, the GHG reduction measures in the 2017 Scoping Plan and regional and local CAPs (e.g., public transit expansion, travel demand strategies, waste diversion, land use planning) largely do not apply. Covered Activities would be affected by the scoping plan and CAP measures related to fuel and clean vehicle standards because activities would involve the use of equipment required for construction and O&M activities. These measures would lead to cleaner vehicles and equipment for the Covered Activities and thus lower GHG emissions and energy use. Implementation of Recommended Best Practice BP-15, in conjunction with Recommended Best Practices BP-7 through BP-10 as described in Section 3.3, would reduce energy use. Because exact details as to all the Covered Activities is not reasonably foreseeable, the extent of the reductions is unknown.

## Recommended Best Practices to Reduce Potential Covered Activities Impacts

The following best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to GHG emissions and energy:

Implement Recommended Best Practice BP-7 through BP-10 as described in Section 3.3, *Air Quality*.

### **Recommended Best Practice BP-15: Implement Greenhouse Gas Emissions Control Measures**

Permittees shall implement the following control measures, as applicable, to reduce GHG emissions.

- Reduce energy use of treatment facilities by optimizing pumping schedules to prevent unnecessary pump usage; manage facility fleet logistics to reduce miles driven; replace the motor fleet with more energy-efficient vehicles; build new pumping and storage facilities to reduce pumping requirements; or install more energy-efficient treatment technologies.
- Comply with the construction and demolition debris management ordinance.
- Require new construction to use building materials containing recycled content.
- Increase energy efficiency of new buildings by at least 10 percent beyond the Title 24 standard in place at the time of construction, unless demonstrated to be infeasible.
- Plant shade trees within 40 feet of the south side or within 60 feet of the west side of new properties.
- Utilize cool roof materials (albedo greater than or equal to 30) or install green roofs in new facilities.
- Install solar water heaters in new facilities.
- Maximize interior daylight and utilize high-efficiency lighting in new facilities.
- Increase roof/ceiling insulation in new facilities beyond the American Society of Heating, Refrigeration and Air Conditioning Engineers Standard 90.1-2010.
- Install low-water use appliances and fixtures in new facilities to reduce indoor water consumption by a minimum of 10 percent relative to the 2008 Plumbing Code baseline.
- Design and install a backbone recycled water system in new facilities to supply to landscaped spaces.
- Install weather-based irrigation controllers to reduce outdoor water consumption.
- Compost food waste and other forms of organic waste, as feasible.
- Incorporate onsite renewable energy production, including installation of photovoltaic cells or other options.
- Purchase GHG offsets to reduce construction and/or O&M emissions.

## Section 3.8, Hazardous Materials

### **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials**

#### **Construction**

Construction associated with the Covered Activities in the Permit Area would involve the transport, use, and disposal of hazardous materials such as solvents, paints, oils, and fuels, which are used as construction materials as well as for operation of necessary construction equipment. Construction would not require the use of acutely hazardous materials. The transport of hazardous materials is regulated by the U.S. Department of Transportation Hazardous Materials regulations, as described in Section 3.8.1.1, *Federal Regulations*, and the implementation of any Covered Activity by Permittees would be required to comply with all U.S. Department of Transportation Hazardous Materials regulations. The use and disposal of hazardous materials is regulated by several federal, state, and local regulations, as described in Section 3.8.1, *Regulatory Setting*. All construction activities associated with the Covered Activities would be conducted in conformance with the applicable hazardous materials regulations. In addition, the use of hazardous materials during construction is generally in small amounts, and for short time periods due to the nature of construction, which generally occurs in phases. Compliance with the existing regulatory framework would reduce potential impacts from construction activities associated with the transport, use, or disposal of hazardous materials.

#### **Operations**

Routine O&M activities at existing and new facilities, as well as throughout the Permit Area, would require the transport, use, and disposal of hazardous materials such as paint, solvents, oils, and fuels. These hazardous materials would generally be used in small amounts and acutely hazardous materials would not be required for operational activities. These hazardous materials would be used for routine activities and would be compliant with the applicable regulations described in Section 3.8.1, *Regulatory Setting*.

### **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**

Construction activities in the Permit Area could occur on properties previously used for agriculture, industrial, or other land uses that may have historically utilized hazardous materials. Ground-disturbing construction may disturb buried hazardous materials (for example, legacy pesticides or USTs) and release these contaminants into the environment. Properties that have known historical or current documented releases of hazardous materials can be identified on statewide databases, including the National Priorities List, EnviroStor (maintained by DTSC), GeoTracker (maintained by the State Water Resources Control Board), and the Cortese List (maintained by Cal/EPA), and can be screened before initiation of a project. If record of historical releases is found, appropriate mitigation and/or remediation activities must be performed to prevent disturbing the contamination or releasing it into the environment during ground-disturbing construction activities.

Because it is possible future development sites could have historical releases of hazardous materials on site, and construction activities have the possibility of disturbing contaminated soil or groundwater.

## Operations

Routine O&M at newly constructed and existing facilities in the Permit Area would include the use, transport, and disposal of typical hazardous materials used for equipment, cleaning, or repair, such as paints, solvents, oil, and fuels. These materials would generally be used in small quantities and in short durations and would not include the use of acutely hazardous materials. The use of such materials would be compliant with applicable regulations described in Section 3.8.1, *Regulatory Setting*, intended to prevent the spill or release of hazardous materials. Additionally, Covered Activities may include operational activities including, but not limited to, bank stabilization and storm-damage repair, which may require earth-moving and other ground-disturbing actions. If these activities were to occur on a property with a historical or ongoing release of hazardous materials to the environment, the ground disturbance could expose contamination to the public or the environment.

## **Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school**

### Construction

The general location of approximately 70 Covered Activities is generally known at this time. The Covered Activities are intended to provide a coordinated approach to permitting for the term of the permit, or 50 years, and therefore despite the fact that the general location of the Covered Activities is known, the precise location of all Covered Activities are not reasonably foreseeable. There are 20 school districts in the County of San Bernardino and nine school districts in the County of Riverside that are entirely within or overlap with the boundaries of the Planning Area. It is possible a Covered Activity in the Permit Area would be located within 0.25 mile of a school. However, construction would not involve the use of acutely hazardous materials, and the use of other hazardous materials, such as paint, solvent, oil, and fuel, would be regulated by the existing regulatory framework, described in Section 3.8.1, *Regulatory Setting*. In addition, hazardous materials used during construction are generally used in small quantities and for a limited time.

If a Covered Activity site has had a historical spill or release of a hazardous material, ground-disturbing construction activities could inadvertently disturb contaminated soils or groundwater, which could lead to a release of a hazardous material within 0.25 mile of a school. As discussed in earlier, the disruption of buried soil or groundwater contamination that was previously contained underground could expose hazardous contaminants to the environment or the public. As such, the Covered Activities could result in a release of hazardous materials within 0.25 mile of a school, and the impact would be potentially significant. However, potential impacts would be reduced by the implementation of BMPs. The implementation of Recommended Best Practice BP-16 would screen out known sites of historical or current contamination, and BP-17 would ensure any discovered contamination would be handled appropriately. Implementation of the Recommended Best Practices would ensure compliance with the recommendations of a qualified environmental

professional in the avoidance, mitigation, or remediation of potential soil or groundwater contamination.

## Operations

The use of hazardous materials would comply with the existing regulatory framework described in Section 3.8.1, *Regulatory Setting*. Additionally, Covered Activities may involve operational activities including, but not limited to, bank stabilization and storm-damage repair, which may require earth-moving and other ground-disturbing actions. If these activities were to occur on a property with a historical or ongoing release of hazardous material to the environment, the ground disturbance could expose contamination to the public or the environment within 0.25 mile of a school. Similar to construction, implementation of Recommended Best Practices BP-16 and BP-17 would ensure listed sites with historical contamination would be screened, and potential contamination discovered on site during O&M activities would be properly and safely managed to prevent the exposure of contamination within 0.25 mile of a school.

### **Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment**

#### Construction and Operations

The Covered Activities in the Permit Area may be located on a site on the Cortese List. Implementation of a Covered Activity on a site on the Cortese List could result in the release of contaminated groundwater or soil to the environment, which could adversely affect on-site workers or the general public. However, potential impacts would be reduced by the implementation of Recommended Best Practices BP-16 and BP-17 by screening out potentially contaminated sites, or sites with active hazardous waste facilities, and ensuring the proper characterization and necessary remediation by a qualified environmental professional.

### **Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area**

#### Construction

There are nine airports within the Planning Area: one military air base and seven municipal airports. Construction of Covered Activities could occur within 2 miles of an airport. However, construction activities are generally temporary and do not include features that would conflict with the operations of an airport and result in a safety hazard to the general public. In some cases, a crane may be used during construction, which could potentially result in a conflict with airport operations. If construction of Covered Activities occur within 2 miles of an airport and would require a crane or other equipment that would be obtrusive to airport operations, the project would inform the Federal Aviation Administration and appropriate Airport Land Use Commission, pursuant to Recommended Best Practice BP-18, described below.

## Operations

There are nine airports within the Planning Area, and Covered Activities could occur with an airport land use plan area or within 2 miles of an airport. The Covered Activities do not include development that generally results in people living or working on site, such as residential, commercial, or institutional development. A few types of Covered Activities are infrastructure projects that would require staff working on site, including new treatment plants and associated facilities. Covered Activities could occur within an airport land use plan area or within 2 miles of an airport, and thereby exacerbate the risk of safety hazards or excessive noise for workers within the project site. The Covered Activities would be required to comply with the policies of the General Plans and ordinances of San Bernardino and Riverside Counties, which prevent incompatible land uses to be developed that could cause conflict. In addition, the implementation of Recommended Best Practice BP-18 would reduce this potential impact by ensuring coordination with the appropriate Airport Land Use Commission, and, if necessary, the Federal Aviation Administration, prior to project implementation.

## Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

### Construction

The Planning Area encompasses several jurisdictions with coordinated emergency response strategies. The EOP, the MJHMP, and the Disaster Recovery Plan, Phase I, provide a coordinated framework for the Operational Area of the County of San Bernardino. The Riverside County Operational Area MJLHMP as well as the Riverside County General Plan provide strategy and regulation for emergency response in the County of Riverside. Construction of the Covered Activities in the Permit Area may include features that could result in impacts on emergency response, such as temporary traffic stops or road closures. This could result in a potential conflict with existing emergency response or evacuation plans. All Covered Activities in the Permit Area would be required to comply with the regulations outlined in the applicable documents. As necessary, the Permittees would coordinate with the appropriate agencies (e.g., San Bernardino County Fire Department's Office of Emergency Services, Riverside County Emergency Management Department, police departments) as part of the CEQA process for each Covered Activity involving longer term projects that may affect the nearby roadways (i.e., treatment plants and associated facilities). Implementation with this coordination would reduce potential impacts related to conflicts with existing emergency response plans by requiring coordination with appropriate emergency management agencies.

### Operations

The Covered Activities would provide a coordinated permitting process for the Permittees in the Permit Area. The Covered Activities would include infrastructure improvements and routine O&M at Permittees facilities. The Covered Activities would not result in residential or commercial development that would directly result in increased population growth beyond estimated growth, nor would it result in indirect population growth by increasing capacity of existing water and wastewater facilities or extending the service area of utility providers. (See Section 3.13, *Population and Housing*, for further discussion on population). Population growth is generally a main factor in interference with the implementation of an emergency response plan or evacuation plan. In addition, any associated development of the Covered Activities would be required to comply with



state and federal regulations related to emergency response, as well as local land use policies, and emergency response plans. As necessary, the Permittees would coordinate with the appropriate agencies (e.g., San Bernardino County Fire Department's Office of Emergency Services, Riverside County Emergency Management Department, police departments) as part of the CEQA process for each Covered Activity involving longer term projects in the Permit Area that may affect the nearby roadways (i.e., treatment plants and associated facilities). Compliance with applicable regulations, policies, and guidelines would reduce impacts related to interference with emergency response and evacuation plans.

## **Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires**

### **Construction and Operations**

The Covered Activities would not include any residential, commercial, or institutional development or other facilities that would increase population or prompt more people to live in an area with high risk for wildland fires. Development could include wastewater treatment facilities, which would require workers on site. Development could occur in Very High Fire Hazard Severity Zones, mapped by CAL FIRE (discussed in Section 3.8.2.5, *Wildland Fires*). If development of a structure would occur within a Very High Fire Hazard Severity Zone, the Covered Activity would comply with the policies of the County of Riverside General Plan, the County of San Bernardino General Plan or Draft Countywide Plan, the MJHMP, and/or the MJLHMP, whichever is applicable to the location of the Covered Activity. The County of San Bernardino General Plan includes policies requiring development within wildfire-prone areas comply with the regulations of the Fire Safety Overlay Ordinance, as found in the Development Code. The San Bernardino Draft Countywide Plan includes policies requiring new development to avoid areas of environmental hazard, and if they cannot be avoided, sufficient mitigation must be implemented. The County of Riverside General Plan outlines policies regulating development in Fire Hazard Severity Zones and requires all proposed construction within a Fire Hazard Severity Zone be reviewed by the Riverside County Fire and Building and Safety departments. In addition, all future development associated with the Covered Activities would be required to comply with the standards and guidelines of the California Building Code and the California Fire Code, which would ensure structures are designed and built to the proper safety standards to reduce risk to occupants.

Compliance with the listed policies and regulations would reduce the potential impact of the Covered Activities related to exposure of people or property to significant loss, injury, or death involving wildfire.

## **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

The following best practice measure are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to hazardous wastes and materials:

### **Recommended Best Practice BP-16: Database Review and Retention of Hazardous Materials Specialist**

For any Covered Activities that would involve development or ground-disturbing projects within the Permit Area, where substantial amounts of on-site soil or groundwater would be disturbed, such as trenching and excavation, the National Priorities List, Cal/EPA Cortese List,

the DTSC EnviroStor database, and the State Water Resources Control Board GeoTracker database shall be reviewed prior to commencement of construction. If sites with releases or contamination are discovered during this process, the services of a qualified environmental professional specializing in contamination characterization and remediation shall be retained, and the recommendations from the qualified environmental professional shall be followed.

#### **Recommended Best Practice BP-17: Prepare a Soil Investigation and/or Soil Management Plan**

If contaminated soil is identified by the Permittee in the Permit Area prior to construction, or is discovered during construction, and the Covered Activities would include substantial ground-disturbing activities, a soil investigation shall be conducted by a qualified environmental professional. If contaminated soils are identified, and if deemed necessary by the qualified environmental professional, a soil management plan shall be prepared to address the nature of the on-site contamination and the proper remediation and disposal process. Likewise, if contaminated groundwater is identified prior to or during construction, and the project would expose contaminated groundwater to the public or the environment, a groundwater investigation shall be conducted by a qualified environmental professional. If deemed necessary by the qualified environmental professional, a groundwater management plan shall be prepared to address the potential spread of contaminated groundwater.

#### **Recommended Best Practice BP-18: Obtain Airport Land Use Commission and Federal Aviation Administration Formal Review and Determination**

If Covered Activities occur within an airport land use plan area or within 2 miles of an airport, and includes features that could be incompatible with the airport land use plan, the Permittees shall obtain Federal Aviation Administration approval and Airport Land Use Commission review and determination for construction equipment and operational structures. An incompatible use is defined by each airport land use plan, but generally includes a use that conflicts with policies identified within the plan, or a building with a height that creates an obstruction or hazard.

### **Section 3.9, Hydrology**

The analysis of Covered Activities is provided in Section 3.9.

### **Section 3.10, Land Use**

#### **Physically Divide an Established Community**

Disturbance to adjacent land uses could result from construction and operational activities associated with Covered Activities, including the construction of new water reuse projects (i.e., treatment facilities), groundwater recharge (i.e., diversions and recharge basins), wells and water conveyance infrastructure, solar energy development, and routine O&M in the Permit Area.

Many of the projects considered as Covered Activities are in areas currently used for infrastructure or previously allocated for such uses with development of many of the treatment plants, diversions, recharge basins, wells and water conveyance infrastructure, and solar energy development included within long-term capital improvement programs for the Permittee Agencies. Covered Activities including routine O&M are proposed on already developed sites currently being utilized for public

infrastructure projects. In some cases, the Covered Activities' water conveyance infrastructure (e.g., pipelines) is located in public rights-of-way, and associated facilities are in areas where they would not displace existing development or housing. The design of the Permit Area considered the land uses and the types of development proposed by the Permittee Agencies.

The Covered Activities would not result in the physical separation of a community because the distribution of the Permit Area accommodates the physical integrity of the communities by designing and locating facilities in areas to minimize potential impacts from existing and planned projects. Because the Covered Activities would not change development activity already allowed by applicable general plans within the Permit Area as well as those included in the Permittee Agencies' capital improvement programs, the Covered Activities would not result in the physical division of any established communities. The Covered Activities would occur outside currently developed areas or within areas designated for such uses and would not displace or divide any existing or planned urban development. Furthermore, the Covered Activities would not result in construction or demolition activities that have not been anticipated by the local agencies' general plans and would focus conservation efforts related to the conservation strategy in non-urbanized, more natural areas within the Permit Area.

### **Cause a Significant Environmental Impact Due to a Conflict with any Land Use Plan, Policy, or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect**

As described in *Chapter 2, Proposed Project*, the primary purpose of the Proposed Plan is to give the Permittee Agencies the ability to construct identified projects that would affect sensitive, threatened, and endangered species, including 22 listed and non-listed species. These public infrastructure projects, called Covered Activities, would provide public value by increasing regional water supply reliability and improving flood protection. The Permittees (agencies receiving incidental take permits under the Upper SAR HCP) would in return provide long-term commitment to native resources by agreeing to conserve, monitor, and manage Covered Species and their habitats in perpetuity. In exchange, the Permittees would receive assurances that the U.S. Fish and Wildlife Service would not require additional land, water, or other natural resources beyond the level agreed upon in the Upper SAR HCP if the Permittees are honoring the terms and conditions of the permit. Essentially, the Upper SAR HCP was developed to restore quantity, quality, and function of vulnerable habitats; conserve land and provide a reliable water supply to maintain habitat for sensitive, threatened, or endangered species; and prevent colonization by nonnative plants and animals in order to offset environmental impacts from Permittee Agencies' Covered Activities in the Permit Area.

The Upper SAR HCP is part of the permit application submitted by Valley District to U.S. Fish and Wildlife Service on behalf of the Permittees responsible for implementing the Upper SAR HCP. The Proposed Plan has been developed in coordination with the Permittees, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and other resource agencies and stakeholders over multiple years of development for the Upper SAR HCP with a vested interest in the management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. The Proposed Plan would involve implementation of the Upper SAR HCP that allows for the programmatic permitting process for Covered Activities of the Permittees. Under the Proposed Plan, disturbance to adjacent land uses could result from construction and operational activities

associated with Covered Activities, including water reuse projects, groundwater recharge, wells and water conveyance infrastructure, solar energy development, and routine O&M in the Permit Area. The conservation program for the Upper SAR HCP is designed to avoid, minimize, and mitigate environmental impacts of the taking of the Covered Species associated with Covered Activities to the maximum extent practicable. The program was also designed to meet the regulatory requirements of the federal Endangered Species Act and California state laws and to streamline compliance with other applicable environmental regulations.

Covered Activities would include the existing, planned, and proposed land uses over which the Permittees and/or local agencies have land use authority for public infrastructure projects. Most Covered Activities seeking coverage under the HCP would require individual permits and approvals pursuant to the local agencies' general plans and land use regulations or the requirements of the implementing agency (such as water districts) and would undergo subsequent project-level CEQA review for construction and operation-related impacts. Other Covered Activities may be exempted from environmental review requirements due to project characteristics including small projects or infill projects.

Many of the projects considered as Covered Activities are in areas currently used for infrastructure or previously allocated for such uses with development of many of the water reuse projects, groundwater recharge, wells and water conveyance infrastructure, and solar energy development already programmed and included in long-term capital improvement programs for the Permittees. Covered Activities including routine O&M are proposed on developed sites currently being utilized for public infrastructure projects. Land uses and development under the Proposed Plan would continue to be ultimately governed by land use components of the general and specific plans of the local agencies. The core components of the Proposed Plan would still help guide future land use decisions and certain aspects of site design. The environmental review performed for these local general and specific plans found no significant land use impacts relating to conflicts with land use plans, policies, and regulations. Although this EIR covers a longer planning horizon than the local general plans, it is anticipated that the nature of longer-term future relationships to land use plans would not change. In addition, while the local agencies will likely amend their general plans during the planning horizon of the Proposed Plan, it is speculative to consider the likely contents of those plans to determine potential conflicts.

The design of the Permit Area considered the general plan land use designations of the Permittees and many of the individual projects are included in the Permittees' capital improvement programs and are considered public infrastructure projects located in appropriate land uses. Thus, the Covered Activities are consistent with these general plans. Furthermore, the conservation strategy is also consistent with these general plans, and it would not reduce or affect the ability of the local agencies to regulate land use through the general plans.

## **Section 3.11, Mineral Resources**

### **Loss of Availability of a Known Mineral Resource of Value Locally or to the Region**

Potential mineral resource impacts that could result from implementing the types of Covered Activities would include impacts from constructing and operating water supply infrastructure projects proposed in the Permit Area. Several Covered Activities, depending on where they are sited, would involve ground-disturbing activities that could uncover or affect mineral resources during construction. MRZs known to contain significant mineral resources and unevaluated zones are

potentially within the Permit Area. Covered Activities that could affect significant mineral resources, depending on where they are sited, include construction of new water reuse projects (i.e., treatment facilities and associated facilities), new structures associated with groundwater recharge (i.e., water diversion and new recharge basins), new wells and associated infrastructure, and new solar projects. These activities could result in a loss of availability by limiting access to or preventing future development of mineral resources or of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

With respect to operation, potential impacts on mineral resources during the O&M phase would come from ground-disturbing activities. O&M of Covered Activities with the potential to affect mineral resources include routine O&M activities that would require excavation and grading such as bank stabilization, which could remove cover and potentially expose mineral resources to erosive forces if present at those sites. In addition, facilities maintenance, the maintenance of access roads, could further limit the availability of and access to valuable minerals. In other circumstances, Covered Activities could improve access with improved maintenance and weed abatement.

Specific projects to implement the Covered Activities may require project-level CEQA analysis. If those projects are sited in areas of known or unevaluated mineral resources and result in the loss of availability of a mineral resource, they may require project-specific mitigation to reduce impacts. Implementation of Recommended Best Practice BP-19 would reduce impacts of construction associated with Covered Activities by determining the MRZ of the project site and evaluating whether the construction would impair future mineral resource extraction by introducing an inherently incompatible use, or by restricting access to other mineral resource areas. In addition, the implementing Permittees for siting of new infrastructure projects would avoid significant impacts on mineral resources by following the goals, policies, and actions outlined in the applicable general plans and ordinances relevant to the Project location including but not limited to Riverside or San Bernardino County. Implementation of Recommended Best Practice BP-19 would reduce impacts on mineral resources as a result of construction and operation of the Covered Activities.

## **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

The following best practice measure is recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts:

### **Recommended Best Practice BP-19: Evaluate and Identify Mineral Resources**

The implementing Permittees shall, when evaluating lands while siting new projects to implement the Covered Activities, determine if the lands are within mineral resource recovery sites or within land designated as MRZ-2, MRZ-3, or MRZ-4 within the Permit Area. Lands within MRZ-2, MRZ-3, or MRZ-4 or recovery sites will be considered for development only if the implementing Permittees determines that the development would not impair future mineral resource extraction in the area by introducing an inherently incompatible use, or by restricting access to other mineral resource areas. Lands adjacent or in proximity to the designated mineral protection area will also be evaluated to assess compatibility with potential future mineral extraction operations, such as quarry transport trucks.

## Section 3.12, Noise

### Substantial Temporary or Permanent Increase in Ambient Noise Levels

#### Construction

Short-term increases in ambient noise could result from construction activities associated with Covered Activities, including the construction of water reuse projects, groundwater recharge projects, and wells and water conveyance infrastructure. Noise could also be generated through the use of construction equipment related to solar energy development, routine O&M, and habitat enhancement, management and monitoring in the Permit Area.

Complete details on the types, precise locations, and durations of construction activities for individual future projects and activities are not currently known. For this reason, a quantitative construction noise impact analysis is not possible. However, construction of larger-scale facilities (e.g., water reuse treatment facilities) would typically result in more intensive construction activities, and therefore in more construction noise, than the smaller-scale construction activities in the Permit Area (such as the construction of ground water recharge activities including diversions and recharge basins, or wells and water infrastructure). Similarly, O&M activities for habitat enhancement, monitoring and maintenance would typically occur more intermittently and infrequently, whereas O&M activities for permanent facilities may occur more regularly. Potential noise effects from each category of Covered Activity proposed under the Upper SAR HCP are discussed individually below.

#### Water Reuse Projects

The construction and operation of new water reuse projects including water and wastewater treatment plants and associated facilities as Covered Activities would be expected to occur. Existing plants and facilities in the Permit Area would also operate and be maintained.

For a water quality treatment plant, construction would likely involve the physical construction of the plant, as well as the potential construction of a conveyance system in the form of pipelines to service new or existing developments. In addition, pumping stations would be expected to be constructed as part of the conveyance system for future treatment plants. Depending on the proximity of construction to nearby noise-sensitive land uses for future water quality treatment plants, construction noise from the pipelines, pumping stations, or any other components of a water treatment project may be audible. In addition, depending on the duration, time of day (e.g., daytime versus nighttime construction), and types of equipment used, noise impacts from these types of activities could be substantial.

Construction for these types of treatment plants would be expected to involve vegetation management, structure construction, the installation of above- and below-ground utilities, paving, and other potential construction processes.

Typical noise levels generated by equipment that may be used for construction of a treatment plant, or for other Covered Activities that would involve the construction of similar structures, have been calculated previously and published in various reference documents. Table 3.12-11 in Section 3.12, Noise) shows noise levels from the Federal Highway Administration's *Roadway Construction Noise Model User's Guide* (FHWA 2006) for typical construction equipment that may be used during construction of a water quality treatment plant (as well as for other potential Covered Activities).

As shown in Table 3.12-11, the loudest typical construction equipment generally emits noise in the range of 84 to 89 dBA  $L_{max}$  at 50 feet, with the exception of pile drivers, which can result in noise levels of up to 101 dBA  $L_{max}$  at a distance of 50 feet. Typical usage factors (the percentage of time that a given piece of equipment is used) for these commonly used pieces of equipment range from 16 percent to 50 percent. The usage factor is applied to determine the average noise level, or  $L_{eq}$ , generated by construction equipment. Note that although construction noise from multiple pieces of equipment does combine when equipment is operating simultaneously, combined construction noise at any specific receptor is typically dominated by the closest and loudest equipment.

Although some information about the development of future treatment plants is available, not all information necessary to quantitatively model noise (such as exact locations of proposed construction, exact equipment proposed for use, and duration of construction activities) is available at this time. It is therefore possible that future construction of treatment plants considered as a Covered Activity in the Permit Area would be close to residences or other noise-sensitive land uses. Depending on the proximity of noise-sensitive land uses to these types of future construction projects, construction of treatment plants could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

Operational noise from a treatment plant would also generate noise. The level of noise generated would depend on the amount, location, and design of mechanical equipment (e.g., pumps, generators) or other operational sources of noise (e.g., maintenance activities). Depending on the proximity of the stationary noise sources at or affiliated with a treatment plant to nearby noise-sensitive land uses, operational noise may be audible. Noise related to the operations of treatment plants could occur during the daytime and nighttime, depending on the specific noise source. Operational activities at or related to treatment plants could therefore also result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

## Groundwater Recharge

The Covered Activities would involve construction of new structures associated with diversions, operations and maintenance of existing and new diversion structures for groundwater recharge and activities related to construction of new recharge basins, and operations and maintenance of existing and new recharge basins.

The construction and operation of new diversion structures (e.g., gates, levees, canals, channels, pipelines) would be expected to occur as a Covered Activity. These activities would also maintain existing structures in the Permit Area. Construction of new diversion structures would require similar equipment as described above for treatment facilities, resulting in similar levels of construction noise. Depending on the types of equipment used for specific projects, and the proximity of noise-sensitive land uses to these types of future construction projects, construction of diversion structures could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

O&M activities at diversion structures may require debris or vegetation management, as well as sediment removal. Although the Covered Activities would not increase O&M at existing diversions relative to existing conditions, new O&M activities would be expected to take place at new diversions following construction. In addition, the new diversions could be closer to existing noise-sensitive land uses that do not currently experience noise from O&M activities at diversions. Therefore, haul trucks accessing the new diversions and construction equipment used during the

O&M activities at the diversion sites could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

Future Covered Activities under the Project also include the reconstruction of existing, and construction of new, recharge basins and associated facilities (such as drain outlets and culverts, canals, berms, dams, meters, flow measuring stations, gates, and pipelines). During the construction process for recharge basins, geotechnical drilling and testing, involving bores or drill rigs, may take place for a period of approximately 2 weeks prior to construction at each project site. This drilling would have the potential to create substantial noise levels during this initial 2-week period. In addition, other construction activities, such as grading and excavation, and the construction of basins, facilities, and access roads, could occur over a period of 12 to 18 months at any given location in the Permit Area. Similar types of construction equipment as described above for treatment facilities would be required (refer to Table 3.12-11), resulting in similar noise levels. Depending on the types of equipment used for specific projects, the duration and timing of specific projects, and the proximity of noise-sensitive land uses to these types of future construction projects, the construction of recharge basins could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

O&M activities may include maintenance of levees and access roads; repair of banks, berms, and concrete structures; and removal of debris, sediment, and vegetation. These activities may require the use of heavy-duty construction equipment and vehicles, often on an annual basis prior to the wet season. O&M at existing recharge basins may not change greatly as a result of plan implementation.

New recharge basins would require similar types of O&M to that of existing basins, but these activities would be occurring in locations where O&M for recharge basins did not previously occur. For this reason, O&M at these new recharge basin locations (which would result in similar noise levels as existing recharge basins) could result in ambient noise increases. Depending on the proximity of new recharge basins to sensitive land uses, it is possible that O&M at new recharge basins could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

## **Wells and Water Conveyance Infrastructure**

Covered Activities related to wells and water conveyance infrastructure under the Project could include the construction of new wells, storage facilities, pipelines, and ancillary facilities, such as access roads. Specific construction activities that could occur include vegetation management, grading, and trenching, as well as the construction of tanks, pumps, pipelines, electrical equipment, and physical structures. Construction of these facilities and features would typically involve the same construction equipment described above for treatment facilities, and could result in similar noise levels. As with construction of water treatment facilities, these activities could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

O&M activities related to wells and water conveyance infrastructure typically include visual inspections, cover repairs, vegetation management, and access road management. These activities may generate noise as a result of worker truck trips or the use of equipment to conduct repairs or manage vegetation (e.g., backhoes). Although expected to be short term and relatively temporary, and although the type of equipment generally used for these types of activities would typically be smaller and generate less noise than equipment used for a construction project, it is possible that



these noise levels could still be greater than the existing ambient levels, or in excess of applicable local standards.

## **Solar Energy Development**

Covered Activities Covered Activities related to solar energy development would include the construction of solar projects on land owned by the City of Riverside. Construction activities would consist of vegetation management, grading, creation of ingress and egress access paths, and installation of solar panels and electrical equipment. Similar types of construction equipment and vehicles as described above for treatment facilities would be required, resulting in similar noise levels during construction activities for solar energy projects. Depending on the types of equipment used for specific projects, the duration of specific projects, and the proximity of noise-sensitive land uses to these types of future construction projects, the construction of solar energy projects could result in noise levels in excess of the applicable local standards, or substantially greater than the existing ambient noise levels.

O&M for solar energy projects may include vegetation removal and panel washing. The equipment used for panel washing may generate noise, as could the type of equipment often used for vegetation removal. Although expected to be short term and intermittent, and although the type of equipment generally used for these types of activities would typically be smaller and generate less noise than equipment used for a construction project, it is possible that these noise levels could be greater than the existing ambient levels, or in excess of applicable local standards.

## **Routine Operations and Maintenance**

Routine O&M activities in the Permit Area would be expected to occur. These types of maintenance activities are generally performed periodically, and include actions such as minor construction, earth moving, vegetation management, and monitoring of structures and facilities. However, many of these routine maintenance activities would occur in natural areas, and often would be relatively far from existing noise-sensitive land uses. Should repairs and replacements at properties or facilities in the Permit Area be necessary, these activities would also occur. Construction equipment, including excavators or backhoes, applicators and compressors, mowers, tractors, and maintenance vehicle use are anticipated. Although the use of this equipment would generate noise, it is likely that many of these activities could occur far enough from occupied noise-sensitive land uses to not result in significant noise effects. However, and even though the use of equipment for O&M maintenance is expected to be relatively short term, temporary, and intermittent, it is possible that these noise levels could be substantially greater than the existing ambient levels, or in excess of applicable local standards.

## **All Covered Activities**

### **Construction Noise**

As discussed previously, construction for Covered Activities has the potential to result in noise in excess of thresholds, or noise substantially greater than the existing ambient level in the Permit Area. While construction activities required for some Covered Activities (such as O&M) may be relatively minor comparatively, more intensive construction may be required for new or expanded facilities, such as water reuse projects, like treatment facilities, and solar energy developments. The construction of structures is more likely to generate noise levels in excess of thresholds, or

substantially greater than existing ambient noise levels, than some of the smaller-scale construction-related activities due to the likely construction duration and the types and amounts of construction equipment expected to be used. As discussed previously, specific information related to the location and types of construction equipment required for each activity is not reasonably foreseeable. For these reasons, it is expected that some construction-related Covered Activities (e.g., the construction of structures for water reuse projects, groundwater recharge projects, wells and water conveyance infrastructure, and solar energy development) may result in noise levels in excess of the applicable local standards or substantially greater than the existing ambient noise levels in the Permit Area.

Although the use of construction equipment for Covered Activities would generate noise, it is possible that many construction-related projects for future Covered Activities could occur relatively far from occupied noise-sensitive land uses. Depending on how far away these activities are located, it is possible that they would not result in significant noise effects. For example, a bulldozer, which may be used for construction of future Covered Activities, would generate a noise level of 72 dBA at a distance of 100 feet (refer to Table 3.12-11). Depending on the location of the proposed activity and what the specific applicable noise thresholds are in the jurisdiction where the work occurs, this noise level may exceed allowable levels or be substantially louder than the existing ambient. However, if a bulldozer was operating 500 feet from the nearest noise-sensitive land use, the noise from this equipment would be approximately 60 dBA  $L_{eq}$  based on distance alone. The actual noise level may be even lower, because shielding from intervening structures or topographical features could potentially reduce noise, as could ground absorption (which occurs as sound travels over soft ground, such as grass or dirt). Construction activities that generate noise levels of 60 dBA  $L_{eq}$  or less during daytime hours would typically not be considered disruptive during the daytime. Other non-impact equipment (for the purposes of this analysis, equipment except for a pile driver) shown in Table 3.12-11 typically has similar, or even lower, noise levels than that of a bulldozer. Construction activities using non-impact equipment could occur more than 500 feet from a noise-sensitive land use and generally an exceedance of noise thresholds may not occur.

For construction activities involving the use of a pile driver (considered to be “impact equipment”), which is one of the loudest pieces of construction equipment that may be used for construction projects, noise would still be approximately 74 dBA  $L_{eq}$  at a distance of 500 feet. At a distance of approximately 2,000 feet (see Table 3.12-11), however, noise from this equipment would be reduced to just above 60 dBA  $L_{eq}$  (based on distance alone). As discussed previously, noise would likely be further reduced at this distance depending on ground absorption and the presence of intervening structures or topography. Construction activities involving the use of pile drivers may occur more than 2,000 feet from a noise-sensitive land use and generally an exceedance of noise thresholds may not occur.

However, it is possible that both typical construction equipment and pile driving equipment could be operating closer to noise-sensitive land uses than these distances. If this were to occur, the increase in noise from construction equipment could result in a substantial increase over the ambient noise level, or the resulting noise level could exceed applicable thresholds (depending on the location of the activity).

It is important to note, however, that although construction noise may be audible depending on the type of equipment used and the distances between activities and noise-sensitive land uses, many jurisdictions (including San Bernardino and Riverside Counties) have exemptions for construction activities that occur during daytime hours. In jurisdictions with exemptions, there is often no numerical threshold that construction activities must comply with, as long as the activities are

limited to the exempt daytime hours. Therefore, should the construction of Covered Activities occur during daytime hours in a jurisdiction that provides a daytime construction noise exemption, noise impacts would not occur. Should the activities occur during non-exempt hours and result in noise levels in excess of applicable thresholds, there could be an exceedance of noise thresholds.

Because of the large size of the Permit Area, and because a substantial portion of the Permit Area consists of rural or natural lands, it is likely that many activities would occur far enough away from noise-sensitive land uses to not result in an exceedance of thresholds. However, because it is not possible to ensure that all construction activities for Covered Activities in the Permit Area would occur far enough away from noise-sensitive land uses to not result in exceedances, an exceedance in noise levels may occur.

Implementation of Recommended Best Practice BP-20 would reduce construction noise for Covered Activities. However, because the specific construction details of all future Covered Activities are not known at this time (including distances from sensitive receptors and the proposed hours of construction), it is not possible to ensure that this recommended best practice measure would reduce noise impacts for all Covered Activities.

### **Operations and Maintenance Noise**

Operational activities from Covered Activities, such as O&M at treatment facilities, recharge basins, or solar energy plants, would generate noise. The amount and duration of potential longer-term O&M activities that could result from implementation of individual Covered Activities are currently unknown. However, noise from O&M activities (such as vegetation removal with the use of construction equipment) could generate enough noise to result in adverse noise effects, depending on the equipment used and the proximity of activities to noise-sensitive land uses.

Although the use of equipment related to O&M would generate noise, it is likely that many O&M activities for future Covered Activities could occur far enough from occupied noise-sensitive land uses to not result in significant noise effects. For example, a backhoe, which may be used for future conservation measures or O&M activities for Covered Activities, would generate a noise level of 68 dBA at a distance of 100 feet (refer to Table 3.12-11). Depending on the location of the proposed activity and what the specific applicable noise thresholds are in the jurisdiction where the work occurs, this noise level may exceed allowable levels or be substantially louder than the existing ambient. However, if a backhoe was operating 500 feet from the nearest noise-sensitive land use, the noise from this equipment would be approximately 54 dBA  $L_{eq}$ , without accounting for potential shielding from intervening structures or topographical features, or from ground absorption, which may occur as sound travels over soft ground, such as grass or dirt. In addition, as described previously under the construction noise discussion, even if equipment as loud and large as a bulldozer were used for larger-scale O&M activities, noise at a distance of 500 feet would only be approximately 60 dBA  $L_{eq}$ .

In general, intermittent O&M activities that generate noise levels of 60 dB  $L_{eq}$  or less during daytime hours would not typically be considered disruptive during daytime hours. Other equipment that could be used for O&M (noting that pile drivers would not be expected to be used for O&M) shown in Table 3.12-11 typically have similar, or even lower, noise levels at a distance of 500 feet.

However, it is possible that equipment used for O&M could be operating closer to noise-sensitive land uses than this distance. If this were to occur, the increase in noise from equipment could result

in a substantial increase over the ambient noise level, or potentially an exceedance of applicable thresholds, depending on the location of the activity.

Because of the large size of the Permit Area, and because a substantial portion of the Permit Area consists of rural or natural lands, it is likely that many activities would occur far enough away from noise-sensitive land uses to result in less-than-significant noise impacts. However, it is not possible to ensure that all O&M activities would occur far enough away from noise-sensitive land uses and an exceedance of noise levels may occur.

Implementation of Recommended Best Practice BP-21 would reduce noise from O&M for Covered Activities. However, because the specific details of all future O&M activities are not reasonably foreseeable at this time (including distances from sensitive receptors), it is not possible to ensure that this measure would reduce noise impacts for all Covered Activities.

### ***Stationary Sources of Operational Noise***

With regard to mechanical equipment or other stationary sources of operational noise, noise-generating stationary equipment installed for Covered Activities also has the potential to create excessive noise. The level of noise generated would depend on the amount, location, and design of mechanical equipment (e.g., pumps, generators) for individual Covered Activities. Depending on the proximity of the stationary noise sources at or affiliated with a Covered Activity to nearby noise-sensitive land uses, operational noise may be audible, and could potentially be in excess of standards or substantially greater than the existing ambient noise level. However, implementation of Recommended Best Practice BP-22 would ensure that stationary sources of operational noise for future Covered Activities would be designed to comply with the applicable local regulations.

## **Excessive Groundborne Vibration or Groundborne Noise Levels**

### **Construction**

The construction of Covered Activities in the Permit Area, including water reuse projects, groundwater recharge projects, solar energy development, and wells and water conveyance infrastructure, would involve the use of heavy equipment. Some heavy construction equipment can generate groundborne vibration when operated, which could affect nearby sensitive land uses. Construction equipment would also be used during routine O&M activities in the Permit Area. Depending on the types of equipment used for maintenance activities, vibration could also be generated, and could potentially affect nearby sensitive land uses.

As discussed previously, details on the types, precise locations, and durations of construction activities for individual future projects and activities are currently unknown. For this reason, a quantitative construction vibration impact analysis is not possible. However, construction of larger-scale facilities (e.g., treatment facilities) would typically result in more intensive construction activities, and therefore would be more likely to result in construction vibration that could affect nearby land uses, than the smaller-scale construction activities in the Permit Area. Maintenance and enhancement activities would also be less likely to result in vibration levels that could affect nearby land uses.

Covered Activities that involve the construction of structures could involve a variety of construction equipment types, potentially including impact equipment (e.g., a pile driver). Impact equipment typically generates greater vibration levels than other types of heavy construction equipment and is

more likely to result in vibration impacts at nearby land uses. Vibration levels generated by commonly used construction equipment are shown in Table 3.12-6. A variety of equipment may be used for the construction of future Covered Activities, including all equipment listed in Table 3.12-6. Although the distance between construction of structures for Covered Activities and nearby sensitive land uses is not known at this time, it is unlikely that structures would be constructed closer than 25 feet from existing occupied land uses, so this distance was conservatively used to assess potential impacts.

### **Annoyance-related Vibration Impacts from Construction**

As shown in Table 3.12-6, a small bulldozer would only generate vibration levels of 0.003 PPV in/sec at 25 feet; this level is below the barely perceptible criterion outlined in Table 3.12-7, and would not result in a significant vibration impact related to annoyance. However, a pile driver would generate a vibration level of 1.518 PPV in/sec at a distance of 25 feet, and this vibration level would be considered strongly perceptible (refer to Table 3.12-7). A vibratory roller would generate vibration levels of 0.210 PPV in/sec at 25 feet, which would also be considered strongly perceptible. In addition, a large bulldozer would generate a vibration level of approximately 0.089 PPV in/sec at 25 feet, which would be considered distinctly perceptible. Vibration levels in excess of the distinctly perceptible and strongly perceptible criteria from Table 3.12-7 would both be considered significant with regard to annoyance. Vibration from a pile driver would be considered distinctly perceptible at distances of up to 290 feet from pile driving activity, and vibration from a vibratory roller would be considered distinctly perceptible at distances of up to 75 feet from activity. Vibration from a large bulldozer would be considered distinctly perceptible at distances of up to 45 feet from activity.

As demonstrated above, depending upon the types of equipment used for construction of future Covered Activities in the Permit Area and the proximity of construction to nearby sensitive land uses, construction could result in vibration impacts related to annoyance. Although it is possible that construction would occur farther than these distances (290 feet for pile driving and 75 feet from non-impact equipment such as a vibratory roller or a large bulldozer) from nearby sensitive land uses, it is possible that vibration-generating construction equipment used for some Covered Activities could be operating close enough to receptors to cause annoyance impacts. Vibration-related annoyance impacts from the construction of Covered Activities could occur and best practice measures would be required.

### **Damage-related Vibration Impacts from Construction**

Table 3.12-8 outlines Caltrans criteria for assessing the potential for damage-related vibration impacts. As discussed previously, a large bulldozer would generate a vibration level of approximately 0.089 PPV in/sec at 25 feet, and a small bulldozer would generate vibration levels of 0.003 PPV in/sec at 25 feet. These levels would be reduced to even lower levels if equipment was being used farther than 25 feet from structures. Both of these vibration levels at a 25-foot distance are below the damage criteria for new residential structures, older residential structures, historic and some old buildings, and fragile buildings. Therefore, non-impact construction equipment used for Covered Activities would not be expected to result in damage-related impacts in the Permit Area.

As also discussed previously, a pile driver, which is one of the most vibration-intensive pieces of construction equipment, could generate a vibration level of 1.518 PPV in/sec at a distance of 25 feet. Although pile driving, should it occur, may occur even farther from structures for Covered Activities, the exact distances between potential pile driving activity and nearby structures are not reasonably foreseeable. Pile driving could result in vibration levels in excess of the damage threshold for

historic and some old buildings at a distance of approximately 50 feet from activity, and the threshold for older residential structures at a distance of 45 feet. Pile driving activity could result in vibration levels in excess of the fragile buildings damage threshold at 150 feet. Because vibration levels could be greater than the damage criteria for certain buildings, including modern industrial/commercial buildings, depending on distance (as described above), it is possible that damage-related vibration impacts from pile driving for future Covered Activities could occur in the Permit Area. Depending on the proximity of pile driving activities to nearby buildings, damage-related vibration impacts for some future Covered Activities could occur and best practice measures would be required.

Implementation of Recommended Best Practice BP-23 would reduce construction vibration from Covered Activities. This measure may reduce impacts related to vibration for some Covered Activities in the Permit Area. However, because the specific details of the Covered Activities are not reasonably foreseeable at this time, it is not possible to ensure that best practice measures or any project-specific mitigation measure would reduce all vibration impacts related to damage for all Covered Activities.

## Operations

Only the activities that use ground-disturbing equipment would result in potential perceptible vibration. In addition, only heavy equipment would have the potential to generate vibration that would be perceptible at distances of greater than about 25 feet. Although exact equipment that would be used for conservation measures is not known at this time, impact equipment is not expected to be used. Activities using equipment such as a grader or a bulldozer would have the potential to generate some vibration. These types of equipment (a grader and bulldozer) are both represented by a small bulldozer in Table 3.12-12. This table shows vibration levels from this type of equipment at a reference distance of 25 feet and at various greater distances based on typical soil conditions (FTA 2018).

### Damage- and Annoyance-related Vibration Impacts from Operations

As shown in Table 3.12-12, this type of equipment would generate a PPV of approximately 0.003 in/sec at a distance of 25 feet. This level is below all perceptibility criteria shown in Table 3.12-7, including the barely perceptible level. It is also well below all damage thresholds for both transient and frequent intermittent sources at all building types shown in Table 3.12-8. Although it is not known at this time how close maintenance activities would be to noise-sensitive land uses, it is likely that they would be farther than 25 feet away from such uses. Even if O&M activity were closer, vibration effects would not be substantial. For example, at a distance of 10 feet, the vibration from this type of small- to medium-sized earth-moving equipment would increase to approximately 0.01 PPV in/sec, which would still be barely perceptible.

For these reasons, it is unlikely that vibration from construction equipment used for O&M related to Covered Activities would be perceptible at nearby land uses. In addition, vibration from this equipment would not be expected to cause damage to nearby structures. Furthermore, implementation of O&M for Covered Activities that involve the use of vibration-generating equipment would be temporary, and related vibration would be short term. Therefore, the short-term, intermittent activities that could occur from O&M for Covered Activities would not be expected to generate substantial levels of vibration at nearby sensitive uses.

## Expose People to Excessive Noise in the Vicinity of an Airstrip or Airport Land Use Plan

The Covered Activities would not result in the siting of any new homes, and therefore would not result in the exposure of persons residing in the Permit Area to excessive noise from aircraft activity at either private airstrips or public airports. With regard to the potential for private airstrips to expose workers to excessive noise, individuals working on construction or O&M for the Covered Activities would not be expected to be exposed to excessive noise from airstrip activity because, although there are some private airstrips in the vicinity of the Permit Area (for example Flabob Airport). The Covered Activities do not include development that generally results in people living or working on site, such as residential, commercial, or institutional development. Although some Covered Activities developed in this area may be relatively close to airports or private airstrips, it is likely that most would be outside of the 60 CNEL contour for any existing airport or airstrip. In addition, private airstrips do not generate much noise outside of the immediate vicinity of the facility or runways; therefore, even if construction or maintenance workers were near such a facility, they would be likely to primarily experience noise from the actual construction or maintenance work, rather than noise from private airstrip activities. There may be minimal exposure of people residing or working in the Permit Area to airport-related noise levels under the Covered Activities.

With regard to the potential for public airports to expose workers to excessive noise, implementation of the Covered Activities would result in the use of construction equipment throughout the Permit Area for construction of, and O&M for, Covered Activities. It is not reasonably foreseeable to ensure that construction workers or individuals conducting O&M would never work in relatively close proximity to an operational airport. However, even if this were to occur, the work would be intermittent and temporary, lasting for only the duration of the specific construction or O&M activity in any given location. Furthermore, and as discussed previously, construction workers would primarily experience noise from the actual construction work, rather than the intermittent and more distant noise from airport activities. Therefore, as construction activities would be temporary and intermittent, and as noise from construction or O&M activities would likely generate more noise at a given project site than nearby airport activities, aircraft activity from public airports is not expected to expose workers to excessive noise.

## Recommended Best Practices to Reduce Potential Covered Activities Impacts

The following best practice measure is recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts:

### **Recommended Best Practice BP-20 Apply Dust Control Measures During Construction of Covered Activities**

Grading can generate fugitive dust, including PM10 and PM2.5. Covered Activities that involve site grading, excavation, or substantial material movement will implement the following dust control measures during construction, as applicable, in compliance with applicable air district rules and regulations, including SCAQMD Rules 403, 474, and 1401–1472 and MDAQMD Rules 403.2 and 404.

- Water the grading areas a minimum of twice daily to minimize fugitive dust.
- Stabilize graded areas as quickly as possible to minimize fugitive dust.

- Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry.
- Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads.
- Remove any visible track-out into traveled public streets within 30 minutes of occurrence.
- Wet wash the construction access point at the end of each workday if any vehicle travel on unpaved surfaces has occurred.
- Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads.
- Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.
- Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 miles per hour.
- Cover/water onsite stockpiles of excavated material.
- Enforce a 15-mile-per-hour speed limit on unpaved surfaces.
- On dry days, sweep up any dirt and debris spilled onto paved surfaces immediately to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites daily for construction-related dirt in dry weather.
- Hydroseed, landscape, or develop as quickly as possible all disturbed areas and as directed by the applicable air district
- Limit the daily grading volumes/area.

#### **Recommended Best Practice BP-21: Reduce Construction Equipment and Vehicle Exhaust Emissions During Construction of Covered Activities**

Construction projects typically require equipment such as bulldozers, graders, loaders, scrapers, backhoes, and heavy trucks. Permittees will utilize clean-diesel, alternative fuel, or other engine controls to reduce equipment and vehicle exhaust emissions during construction of the Covered Activities. Permittees will implement the following control measures, as applicable, to reduce equipment and exhaust related emissions.

- Require equipment to be maintained in good tune and to reduce excessive idling time.
- Utilize alternative fuels, such as compressed natural gas, renewable diesel, and diesel.
- Require the use of equipment that meets EPA Tier 4 or higher (as promulgated) emission standards.
- Require older equipment be retrofitted with advanced engine controls, such as diesel particulate filters, selective catalytic reduction, or cooled exhaust gas recirculation.

#### **Recommended Best Practice BP-22: Use Low-VOC Coatings on Buildings During Construction of Covered Activities**

Building construction for Covered Activities (e.g., treatment facilities) may result in off-gassing of ROG from architectural coatings and paints that exceed the applicable threshold. Permittees



will reduce ROG emissions related to architectural coatings through the use of low-VOC coatings (VOC content less than or equal to 50 grams per liter).

#### **Recommended Best Practice BP-23: Evaluate Feasibility of Offsets After All Feasible Mitigation Has Been Applied**

The Permittees will evaluate the feasibility of offsets as a project-specific mitigation measure should impacts remain significant following the implementation of all feasible onsite mitigation (as described under BP-20, BP-21, and BP-22) for the Covered Activities. Offsets may include procurements through local air district incentive programs.

#### **Recommended Best Practice BP-24: Prepare a Health Risk Assessment**

For the Covered Activities, including but not limited to treatment plants and other large scale projects, a HRA will be prepared by the Permittee if sensitive receptors are located within 1,000 feet of individual project activities and if air quality impacts are estimated to exceed thresholds. The half-mile buffer represents the farthest distance at which air districts recommend performing an HRA, as pollutant concentrations dissipate as a function of distance from the emission source. The site-specific HRA will evaluate potential health risks to nearby sensitive receptors from exposure to DPM. If the HRA identifies health risks in excess of applicable air district health risk thresholds, additional measures beyond BP-20 through BP-223 (e.g., vegetation buffers, receptor filters) and/or site design changes will be incorporated into the site-specific environmental review to reduce health risks to the greatest extent feasible.

#### **Recommended Best Practice BP-25: Implement Odor Control Mechanisms and Odor Compliance Monitoring Program for Wastewater Treatment Covered Activities**

For Covered Activities future wastewater treatment facilities, the potential for odor emissions and public complaints shall be assessed by the Permittee. Facilities within 2 miles of receptors must include odor-control mechanisms and implement an odor complaint monitoring program. Odor control should target the primary odor sources: headworks, primary treatment processes, and sludge dewatering facilities. Odor-control technologies may include but are not limited to: sealed and scrubbed headworks, chemical treatment of influent prior to entrance at the headworks, enclosed sludge-handling areas, and use of deodorizing misting systems. All facilities shall prohibit the stockpiling of dewatered sludge in outdoor open areas. The monitoring program shall consist of a standard complaint logging procedure, including date, time, and origin of complaint along with a description of the atmospheric conditions present during the time of the complaint. The complaints shall be followed by an inspection of the treatment plant to determine the source of the nuisance odor and any actions that should be taken to remedy the problem.

#### **Recommended Best Practice BP-26: Covered Activity-Specific Construction Noise Analysis and Construction Noise Control Plan**

The Permittee for each Covered Activity in the Permit Area that involves construction using non-impact equipment within 500 feet of a noise-sensitive land use, or impact equipment (e.g., pile drivers) within 2,000 feet of a noise-sensitive land use, shall conduct an acoustical analysis as part of the environmental review process for future individual Covered Activities. During the environmental review process for future discretionary permits, the applicable significance guidelines for the jurisdiction in which the project would occur will be applied. The acoustical

analysis shall include a construction noise analysis that determines if construction noise impacts are expected to occur. When impacts from the development of Covered Activities are determined to be significant, the preparation and implementation of a Construction Noise Control Plan to reduce construction noise to allowable levels at nearby noise-sensitive land uses shall be required. This plan shall include feasible and appropriate project-specific measures to reduce noise, such as:

- Locating construction equipment as far as feasible from adjacent or nearby noise-sensitive receptors
- Requiring that all construction equipment powered by gasoline or diesel engines have sound control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation
- Prohibiting the idling of inactive construction equipment for prolonged periods (i.e., more than 2 minutes)
- Prohibiting or limiting gasoline or diesel engines from having unmuffled exhaust systems, as feasible
- Using noise-reducing enclosures around noise-generating equipment that has the potential to disturb nearby land uses
- Ensuring that equipment and trucks used for project construction incorporate the best available noise control techniques (e.g., improved mufflers, equipment redesign, intake silencers, ducts, engine enclosures, acoustically attenuating shields or shrouds), wherever feasible
- Ensuring that impact tools (e.g., jack hammers, pavement breakers, rock drills) used for project construction are hydraulically or electrically powered, where feasible
- Locating stationary noise sources, such as temporary generators, as far from nearby receptors as possible, and potentially muffling and enclosing them within temporary enclosures and shielding by barriers, which can reduce construction noise by as much as 5 dB
- Completing the noisiest construction activities during times of least disturbance to surrounding residents and occupants, as feasible
- Monitoring the effectiveness of noise attenuation measures by taking noise measurements

#### **Recommended Best Practice BP-27: Covered Activity-Specific O&M Noise Analysis and O&M Noise Control Plan**

The Permittee for each Covered Activity involving noise-generating O&M expected to occur within 500 feet of noise-sensitive land uses shall conduct an acoustical analysis as part of the environmental review process. During the environmental review process for these future discretionary permits, the applicable significance guidelines for the jurisdiction in which the Covered Activity would occur will be applied. The acoustical analysis shall include an operational noise analysis that determines if O&M noise impacts from mobile equipment or work vehicles are expected to occur. When impacts from the O&M for Covered Activities are determined to be significant, the Permittees shall prepare and implement an Operational Noise Control Plan to reduce potential conflicts between existing sensitive receptors and expected

O&M activities. The plan would help reduce noise during O&M to allowable levels at nearby noise-sensitive land uses. This plan shall include feasible and appropriate project-specific measures to reduce noise, such as:

- Construction of enclosures around noise-generating mechanical equipment used for O&M
- Use of mufflers or silencers on equipment exhaust fans
- Orientation or shielding of equipment to protect sensitive uses to the greatest extent feasible
- Placement of barriers around the equipment
- Use of smaller and quieter mechanical equipment for vegetation management during O&M activities
- Limitation of noise-generating O&M activities to daytime hours, when noise is typically considered less disruptive
- Staging equipment necessary for O&M activities as far as possible from nearby noise-sensitive land uses

**Recommended Best Practice BP-28: Covered Activity -Specific Stationary-Source Operational Noise Analysis and Operational Noise Control Plan.**

The Permittee for each future Covered Activity that may result in the development of stationary sources of noise (e.g., mechanical equipment such as generators or pumps) shall conduct an acoustical analysis as part of the environmental review process for future individual Covered Activities. During the environmental review process for these future discretionary permits, the applicable significance guidelines for the jurisdiction in which the Covered Activity would occur will be applied. The acoustical analysis shall include an operational noise analysis that determines if stationary-source noise impacts are expected to occur. When impacts from stationary noise sources are determined to be significant, the Permittee shall prepare and implement an Operational Noise Control Plan. This plan shall ensure that mechanical or stationary sources of noise include design features to reduce noise levels such that they are in compliance with local or applicable thresholds. This plan shall include feasible and appropriate project-specific measures to reduce noise, such as:

- Construction of enclosures around noise-generating mechanical equipment
- Installation of relatively quiet mechanical equipment (e.g., generator) models
- Use of mufflers or silencers on equipment exhaust fans
- Orientation or shielding of equipment to protect sensitive uses to the greatest extent feasible
- Placement of barriers around the equipment

**Recommended Best Practice BP-29: Covered Activity-Specific Construction Vibration Analysis.**

The Permittee for Covered Activities that involve construction involving pile driving adjacent to sensitive buildings or receptors shall conduct a vibration impact analysis as part of the environmental review process for Covered Activities. During the environmental review process

for future discretionary permits, the applicable significance criteria to assess potential damage and annoyance effects of vibration shall be applied. The vibration analysis shall determine if construction vibration impacts are expected to occur. When impacts from the construction of Covered Activities are determined to be significant, the preparation and implementation of a Construction Vibration Control Plan to reduce the potential for vibration impacts, or to resolve potential impacts should they occur, shall be required. This plan shall include feasible and appropriate project-specific measures to reduce noise, and may include measures such as those described below.

- **Vibration Measures for Annoyance, Non-impact Equipment.** Should the use of vibration-generating equipment, such as a hoe ram, vibratory roller, or large bulldozer, be proposed for a specific Covered Activity within 75 feet of a building, a set of site-specific vibration attenuation measures shall be implemented under the supervision of a qualified acoustical consultant during the project construction period to reduce potential annoyance. These attenuation measures shall include, as feasible, strategies such as: using smaller equipment that generates less vibration; setting the equipment back farther from sensitive uses, as feasible; and notifying nearby sensitive land uses in writing that vibration-generating construction activities may occur within 75 feet. In addition, any other effective strategies to the extent necessary shall be included to achieve a PPV vibration level at neighboring properties of less than the distinctly perceptible level of 0.04 in/sec.
- **Vibration Measures for Annoyance, Pile Drivers.** Should pile driving be proposed for a specific Covered Activity within 290 feet of a building, a set of site-specific vibration attenuation measures shall be implemented under the supervision of a qualified acoustical consultant during the project construction period to reduce potential annoyance. These attenuation measures shall include, as feasible, strategies such as: implementing “quiet” pile-driving technology, such as predrilling piles; using sonic pile drivers; using more than one pile driver to shorten the total duration of pile driving; and notifying nearby sensitive land uses in writing prior to pile driving activity that construction may occur within 200 feet. In addition, any other effective strategies to the extent necessary shall be included to achieve a PPV vibration level at neighboring properties of less than the distinctly perceptible level of 0.04 in/sec.
- **Pile Driving Control Measures for Damage.** Should pile driving be proposed for a specific Covered Activity within 150 feet of a building, a set of site-specific vibration attenuation measures shall be implemented under the supervision of a qualified acoustical consultant during the project construction period to reduce the potential for structural damage. These attenuation measures shall include, as feasible, strategies such as:
  - Retain a building evaluation team (e.g., a structural engineer, an architectural historian, and a licensed historical architect) to evaluate potentially affected nearby buildings, determine their susceptibility to damage, and establish building-specific vibration thresholds.
  - Document existing cracks in paint, plaster, concrete, and other building elements; and conduct regular periodic inspections for cosmetic damage to each building within 100 feet of pile driving activities.
  - Implement “quiet” pile-driving technology, such as predrilling piles, using sonic pile drivers, or use more than one pile driver to shorten the total duration of pile driving.

- Following completion of construction, the building evaluation team shall conduct a second inspection to inventory changes in existing cracks and new cracks or damage, if any, that occurred as a result of pile driving. If new damage is found, then the Permittee shall promptly arrange to have the damage repaired in accordance with recommendations made by the building evaluation team.

## Section 3.13, Population and Housing

### **Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)**

The Covered Activities would provide a coordinated method for Permittees to receive incidental take permits for their Covered Activities. The Covered Activities include both specific projects, such as water quality treatment facilities or groundwater recharge basins, and ongoing operation and maintenance activities. The Covered Activities would not include any projects such as residential development or roadways that would directly increase population growth by providing new housing and access in the Permit Area. Indirect population growth would not occur because the Covered Activities would not include projects that would extend the service area of utility providers. Covered Activities will be included to implement projects to increase available water supplies regionally, these increases are intended to serve existing projected population growth and not support new unplanned populations. As such, these projects are not intended to increase the population growth in the area. In addition, although some of the Covered Activities are facilities that may need full-time workers on site, these projects would not represent a substantial unplanned increase in jobs and thus would not result in a significant indirect increase in unplanned population in the Permit Area.

One Covered Activity (EV.1 (Phase 1)) proposed by the East Valley Water District (East Valley) would construct a new surface water and/or imported water treatment plant. A specific location of the water treatment plant has not yet been determined but a preliminary development area has been identified where these new facilities would be built. It is possible that the plant would provide water to a development being proposed that is not covered by the Upper SAR HCP. The development's water supply infrastructure would be built by the developer within the project site boundaries in the Permit Area but would then be turned over East Valley for long-term management. East Valley is including the construction of pipelines needed to deliver water to the new water treatment plant as part of the Covered Activity. Once raw water is processed at the treatment plant, underground water pipelines would convey potable water throughout the new development and surrounding communities. The conveyance pipelines would be constructed within the public right-of-way. Because this project is currently pursuing its independent planning and permitting, a timeframe and expected duration for construction has not yet been determined. As such, through the extension of East Valley facilities, Covered Activities would support indirect planned population growth. This East Valley project is not considered unplanned population growth and would be required to comply with CEQA on an individual basis and to avoid or minimize impacts to the extent feasible.

## **Displace a substantial number of existing people or housing, necessitating the construction of replacement housing elsewhere**

### **Construction and Operations**

Many of the projects considered as Covered Activities are in areas currently used for infrastructure or previously allocated for such uses with development of many of the water reuse projects (i.e., treatment plants), groundwater recharge (i.e., diversions and recharge basins), wells and water conveyance infrastructure, and solar energy development included within long-term capital improvement programs for the Permittees. The development of the Permit Area considered the existing land uses and the types of development proposed by the Permittees. Covered Activities would not result in the removal of housing because the distribution of the Covered Activities in the Permit Area accommodates the physical integrity of the communities by designing and locating facilities in areas to minimize potential impacts on population and housing from existing and planned projects. Covered Activities including general property and facility maintenance and routine O&M are proposed on developed sites currently being utilized for public infrastructure projects. In some cases, the Covered Activities involving water conveyance infrastructure (e.g., pipelines) are located in public rights-of-way, and associated facilities are in areas where they would not displace existing housing or people. However, projects involving habitat enhancement are proposed generally in areas where there are natural resources considered for habitat preservation, and these areas are often occupied by homeless encampments.

The Covered Activities projects are not expected to substantially displace any existing permanent housing, as these projects would not include removal or construction of any permanent residences. However, some of the Covered Activities include homeless encampment removal associated with conservation areas. The Permit Area does include public open space areas that are populated with homeless individuals living in temporary encampments, also known as transient camps, as previously shown on Figure 3.13-1. It is estimated that there are currently as many as 94 individual encampment sites near the Santa Ana River and its tributaries; however, the exact number of homeless populations within the Permit Area is unknown and likely fluctuates depending upon weather conditions, how recent a previous cleanup effort occurred in the area, and other factors. These encampments have resulted in trash and human waste placed in proposed conservation areas and damage to the existing natural vegetation.

It is expected that the Covered Activities resulting in homeless encampment removals in order to implement habitat projects would affect the intensity and distribution of encampments throughout the Permit Area. For example, the conservation projects themselves would involve the introduction of heavy equipment and personnel into areas occupied by homeless encampments. These encampments would be removed from construction areas in coordination with local jurisdictional authorities, subject to applicable local and state law, prior to the start of construction activities associated with these conservation projects, consistent with existing homeless encampment removals. Moreover, because the Covered Activities involving habitat improvement in the Permit Area would result in changes to vegetation cover and hydrology (e.g., restoration/rehabilitation of waters to floodplains that may exclude human use of certain areas during storm events), substantial portions of the Permit Area may no longer be amendable as locations for homeless encampments. In addition, because Covered Activities could result in greater public recreational use of the conservation areas, continued occupation of existing encampments and the creation of new encampments would become less viable. For some of the heavily used homeless encampment areas,

such as Hidden Valley Creek (Conserv.1 [Phase 1]), Lower Hole Creek Floodplain (Conserv.4 [Phase 1]), and Anza Creek and Old Ranch Creek (Coserv.5 [Phase 1]), conservation activities also include increased patrol of the project sites dissuading homeless individuals from occupying existing encampments or creating new encampments.

The complex issue of homeless encampments in these open space riparian areas requires the involvement and coordination of multiple local agencies, including the Counties of San Bernardino and Riverside as well as the affected cities. The counties and cities currently implement existing programs involving transient populations being relocated to safer, more sanitary shelters or more permanent residences, including solutions for people that choose not to stay in homeless shelters for varying reasons (e.g., because of drug dependency or pets that are not allowed in some shelters). The removal of unpermitted structures, debris, or materials associated with homeless encampments would be environmentally beneficial for the Santa Ana River Basin Permit Area, both reducing human hazards and eliminating trash and other sources of waste in and around the area. Relocation of transient individuals, removal of homeless encampments, and cleanup of remaining refuse would be coordinated and conducted among the counties and/or cities prior to construction and during operation. For example, the Counties of San Bernardino and Riverside provide outreach, programs, and resources with the overall goal of reducing homelessness by providing an array of housing options and programs based on community needs, as described in Section 3.13.1.3, *Local Regulations*.

## **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

No best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to population and housing.

## **Section 3.14, Recreation**

### **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**

#### **Construction**

The conservation strategy and conservation measures would not increase the use of existing parks or other recreational facilities, although construction of Covered Activities that occur within areas of the Santa Ana River in the Permit Area could provide additional amenities to existing recreational facilities already in use (for example, the Habitat Improvement, Management, and Monitoring Covered Activities including Conserv.1 through Conserv.20 to be carried out in Phases 1 through 3). For construction activities expected to be adjacent to recreational resources and neighborhood parks, Covered Activities would not increase the use of parks and other recreational facilities by increasing demand through inducing population growth. Impacts from construction of the Covered Activities in the Permit Area may result in traffic delays or detours and may temporarily affect access to the recreational resources. Other construction impacts involving generation of noise and air emissions or temporary visual impacts on adjacent recreational resources may also result. However, these temporary impacts would not result in the deterioration of recreation facilities.

Construction would also tend to occur during the winter (e.g., September–December or late January–early April) when there is generally low use of outdoor parks and recreation facilities. As such, Covered Activities would result in only a temporary effect on any nearby existing park or recreational facility, such that patrons would likely continue to use the park or facility or patron use would be low because of the season (e.g., winter). Therefore, construction activities associated with the Permittees and SCE's implementation of the Covered Activities would not result in the increased use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated.

## **Operations**

O&M associated with implementation of the Covered Activities near an existing park or recreational facility would occur infrequently (e.g., as needed, once a year for 5 to 10 years or once every 4 to 5 years depending on the activity). Periodic and intermittent O&M activities are not expected to affect recreational resources. These O&M activities would be part of infrastructure project operations and could include maintenance vehicles entering and exiting the Covered Activities project areas, as well as from staging and stockpile areas, which might be adjacent to recreational facilities or in previously disturbed areas. As such, these Covered Activities would only present a temporary effect occurring periodically on an existing park or recreational facility. Therefore, it is not anticipated the activities associated with O&M of the Covered Activities would result in adverse effects on any existing nearby recreational facilities. The Covered Activities is not expected to create additional increase in the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of these facilities would occur or be accelerated.

## **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment**

### **Construction**

The impacts of Covered Activities by the Permittees and SCE related to the construction or expansion of recreational facilities would be the same as those described under Impact REC-1. The Covered Activities are not anticipated to result in the increased need for new or expanded recreational facilities. Instead, the Covered Activities could result in net improvements to recreational resources because improvements to areas of the Santa Ana River would provide additional amenities to existing recreational facilities already in use.

### **Operations**

The impacts of Covered Activities by the Permittees and SCE related to the O&M of recreational facilities would be the same as those described under Impact REC-1. Periodic and intermittent O&M activities are not expected to affect recreational resources. O&M activities would be considered part of operations and could include maintenance vehicles entering and exiting the project areas, as well as from staging and stockpile areas, which might be adjacent to recreational facilities or in previously disturbed areas. Some of the Covered Activities could enhance recreational facilities (for example, the Habitat Improvement, Management, and Monitoring Covered Activities including Conserv.1 through Conserv.20 to be carried out in Phases 1 through 3) and provide for an enhanced recreational experience through proposed improvements. In addition, for Covered Activities like Evans Lake (Conserv.6 [Phase 1]), new communities and recreational facilities could be part of



specific projects providing for increased recreational resources in the Permit Area. Covered Activities are not expected to require the construction or expansion of additional recreational facilities that might have an adverse physical effect on the environment.

### **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

No best practice measures are recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to recreational resources.

## **Section 3.16, Transportation**

### **Conflict with a Program, Plan, Ordinance, or Policy addressing the Circulation System**

Covered Activities relate to the construction and O&M of new water reuse projects (i.e., treatment plants), diversion structures, new recharge basins, new wells and associated development (pipelines, access roads, reservoirs, bridges), and new solar development. These activities would occur during different phases of implementation. Thus, vehicle trips associated with construction and operation of the Covered Activities would be staggered and would not all occur in the same phase or in the same location. Covered Activities that relate to new water reuse projects and their O&M are expected to occur primarily during Phase 1 in previously disturbed areas throughout the Permit Area, creating construction-related vehicle trips and impacts on traffic during the short term. For Covered Activities like the Recycled Water Project (ID: WD.1 (Phase 1)), improvements would include construction of the pipeline infrastructure and would be constructed within existing public roadway right-of-way. Thus, construction activities associated with the Covered Activities may result in temporary transportation impacts.

For the proposed Sterling Natural Resource Center Covered Activity (ID: EV.4.01 – 4.03 (Phase 1)), this water reuse project would occur during Phase 1 and include a new wastewater treatment facility, treated water conveyance system, and re-use of defunct recharge basins. However, the Covered Activities would only cover O&M associated with the pipelines, and those activities are not expected to result in long-term traffic and transportation impacts.

Covered Activities that relate to construction of new structures associated with diversion and O&M of existing and new diversion structures would utilize existing roads and reestablished roads to the extent possible, reducing any impacts on traffic. For maintenance of the Mill Creek Channel (ID: CD.1 (Phase 1)), heavy equipment (i.e., bulldozer) access for channel repair and vegetation and debris management may be needed. Most portions of the channel can be accessed from existing unpaved access roads.

Construction for many of the groundwater recharge projects are anticipated to start construction during Phases 1 and 2 of the Proposed Plan with the exception of the Vulcan Mining Groundwater Recharge Basin (ID: WD.4 (Phase 4)) which is anticipated to occur during Phase 4. Staging areas and access roads for construction are to be strategically planned to utilize existing disturbed areas. Maintenance activities would utilize heavy equipment such as dozers, dump trucks, and excavators and are assumed to occur within the permanent disturbance footprint of the recharge basins.

Wells and water conveyance infrastructure activities are related to the creation of new wells, storage facilities, and pipelines and ancillary facilities (e.g., access roads) and the O&M of existing

wells and associated development. Almost all Covered Activities would occur during Phases 1 and 2 with the exception of East Valley Water District New Reservoirs and Pipelines (ID: EV.5 (Phase 3)) which is anticipated to occur in Phase 3. The time period of construction for many of these Covered Activities is estimated to be 12 months; Covered Activities close to urban areas are expected to produce impacts for the length of the construction period, which may require mitigation.

O&M activities require temporary access to access roads and work areas that would use heavy equipment and service trucks. Maintenance activities would be performed periodically and include actions such as minor construction, earth-moving, or vegetation management activities, which, because of their temporary nature, are not expected to result in long-term impacts on traffic and transportation. Currently existing and new O&M activities would not require any additional CEQA analysis as they are likely categorically exempt projects through CEQA (Article 19, Categorical Exemptions, Section 15304, Minor Alterations of Land).

Covered Activities may result in temporary increases in VMT during construction activities. Construction equipment would be delivered to and removed from each site as needed. The majority of projects under the Covered Activities would be located away from residential and commercial areas far below the VMT threshold. Construction activities that involve heavy equipment to be used for longer periods of time could result in a temporary increase of vehicle trips and may require a VMT analysis prior to project implementation. Recommended Best Practice BP-30 through BP-32 is recommended to reduce traffic impacts and VMT where needed and should be conducted in accordance with an approved construction traffic control plan.

Covered Activities would result in routine O&M activities in the Permit Area. Construction equipment may be used, which would generate traffic. However, many of the routine maintenance activities would occur in natural areas, and would be located away from residential and commercial areas. Operation activities are short term, relatively temporary, and intermittent, and may result in temporary transportation impacts due to worker commutes and staging and stockpile areas, which would be located in previously disturbed areas or existing water infrastructure sites, as applicable.

Covered Activities in the Permit Area include water infrastructure development and maintenance, and other minor construction. Population would not increase because of implementation of the Covered Activities. Some access roads could be built to access the sites. However, these roads and the addition of VMT would not interfere with transportation plans, programs, or ordinances addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Because the Covered Activities would serve to streamline implementation of water infrastructure projects, there would be no additional growth or land uses that result in high levels of traffic generation, and no conflicts are anticipated.

### **Conflict or be Inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b)**

Covered Activities relate to the construction of new water reuse projects (i.e. treatment plants), groundwater recharge (i.e., diversion structures, new recharge basins), new wells and associated development (pipelines, access roads, reservoirs, bridges) and new solar projects. Vehicle trips associated with construction and operation of the Covered Activities would be staggered in the Permit Area and would not all occur in the same phase. Construction of wells and water conveyance infrastructure for the East Valley Water District Pipeline Maintenance (ID: EV.2 (Phase 1)) would occur during Phase 1 and include treatment facilities and reservoirs to accommodate 32 million

gallons of storage for the system buildout in 2035. Collectively, EV.2 (Phase 1) may result in temporary impacts on transportation and a project-specific traffic impact study would likely be required.

As mentioned above, the majority of the Covered Activities would be located away from residential and commercial areas and short term construction activities would not typically generate a substantial amount of traffic during project construction. Potential impacts on traffic and access due to construction activities are expected to occur for traffic entering and exiting the project area. However, these activities are not expected to have an impact on VMT under State CEQA Guidelines Section 15064.3(b)(3) and a qualitative analysis of construction traffic may be appropriate, instead of providing VMT or an estimated VMT for analysis. For Covered Activities large enough in scale to result in impacts, a project-specific traffic analysis may be prepared to support the CEQA analysis for that Covered Activity, and project-specific mitigation measures may be required, although construction is temporary in nature and would not substantially affect the regional roadway network. Overall, VMT are not expected to increase as a result of implementation of the Covered Activities due to the nature of those types of activities and no conflicts with State CEQA Guidelines Section 15064.3, subdivision (b) would occur.

These activities would be located away from residential and commercial areas and the types of land uses do not typically generate a substantial amount of traffic during project operations. Temporary transportation impacts may result from maintenance and repair activities during operations. Temporary impacts may occur due to occasional trips to and from sites, and access to staging and stockpile areas, which may be located in previously disturbed areas. These impacts would be intermittent and short term in nature. Overall, implementation of O&M activities under the Covered Activities are not expected to result in substantial increases in VMT and no conflicts or inconsistencies with State CEQA Guidelines Section 15064.3, subdivision (b) would occur.

### **Increase Hazards Because of a Geometric Design Feature or Incompatible Uses**

The Covered Activities include water reuse projects, groundwater recharge, and wells and water conveyance infrastructure and would not include design features or introduce incompatible uses that would affect roadways, and are therefore not expected to result in substantially increased hazards. Additionally, the Covered Activities would not permanently alter the alignment of the existing roadway network serving the area. Construction would require the temporary use of heavy construction equipment in staging areas, on access roads, and where traffic enters and exits the project area. However, most of these activities would be coordinated to be located away from residential and commercial areas to reduce impacts. As the Covered Activities would result in minor, temporary effects on traffic as a result of construction activities and only minor changes related to design features of the roadways would occur, impacts regarding safety hazards within the Permit Area would not be anticipated.

Temporary transportation impacts are expected because of maintenance and repair activities, considered part of operations. Temporary impacts may result due to occasional trips to and from sites, and access to staging and stockpile areas, which may be located in previously disturbed areas. The Covered Activities would result in minor, temporary effects on traffic as a result of operational activities, and minor changes related to design features of the roadways would occur. As such, impacts regarding safety hazards within the Permit Area would not be anticipated.

## Inadequate Emergency Access

Construction for water reuse projects (i.e., treatment facilities), groundwater recharge (i.e., diversion projects, recharge basins), wells and water conveyance infrastructure including installation of new pipelines would require the temporary use of heavy construction equipment in staging areas, on access roads, and where traffic enters and exits the project area. These Covered Activities would occur during different phases of implementation in various locations throughout the Permit Area. Thus, vehicle trips associated with construction of the Covered Activities would be staggered and would not all occur in the same phase. This would also minimize constraints on emergency access and the transportation system in the Permit Area.

Construction of groundwater recharge projects like the Riverside North Aquifer Storage and Recovery Project (ID: RPU.5 (Phase 2) would primarily occur during Phases 1 and 2 of the Upper SAR HCP, expected to take approximately 24 to 36 months to complete, and may require a more detailed and project-specific traffic impact analysis in the future to determine impacts. Construction of wells and water conveyance infrastructure for the East Valley Water District collectively (IDs: EV.1 (Phase 1) through EV.5 (Phase 3) would occur during Phases 1 and 3 and may result in temporary impacts on transportation. The Sterling Natural Resource Center projects (ID: EV.4.01 through 4.03 (Phase 1) may result in temporary transportation impacts and may require a traffic impact study due to the construction involved on city streets. However, these activities are not expected to result in inadequate emergency access. Once construction activities are completed, all roadways would be restored to their previous condition, and subsequent activities associated with the implementation of Covered Activities (e.g., monitoring) would result in little additional traffic on roadways within the Permit Area. Construction activities would be minor and short term and would generally occur in areas that are not densely populated. As such, it is not anticipated that there would be conflicts with emergency access providers, and inadequate emergency access would not result. Furthermore, Recommended Best Practice BP-32 is recommended for coordination with emergency service providers at least 1 month prior to construction for construction projects that are anticipated longer than six months. Adherence to this recommended best practice would reduce any potential impacts regarding emergency services associated with the Covered Activities.

Minor, short-term transportation impacts during operations are expected as a result of maintenance and repair activities, as very few vehicle trips would occur intermittently for worker trips. These activities are not expected to result in inadequate emergency access and no changes to local roadways would occur.

## Recommended Best Practices to Reduce Potential Covered Activities Impacts

The following best practice measure is recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts:

### **Recommended Best Practice BP-30: Prepare Traffic Control Plans for Covered Activities**

As a standard measure for long-term construction activities scheduled for more than 6 months, individual Permittees that propose construction of Covered Activities (wells and water conveyance infrastructure, water reuse, treatment facilities, reservoirs) in the Permit Area shall require contractors to prepare traffic control plans that identify specific traffic control measures to ensure access and safety on the local roadway network. The traffic control plan will include the following elements at a minimum:

- A schedule of lane closures and road closures over the construction period
- Measures to maintain traffic flow at all times across the construction zone including requiring flaggers to direct traffic when only one lane of traffic is available
- Detour routes and notification procedures if full road closures are needed
- Temporary signalization modifications (if any) for intersection signals
- Maintained access to residence and business driveways, public facilities, and recreational resources at all times to the extent feasible; minimized access disruptions to businesses and residences
- The requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access
- Identification of all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling, or night construction) will be used

#### **Recommended Best Practice BP-31: Prepare a Notification Plan for Covered Activities**

As a standard measure for long-term construction activities scheduled for more than 6 months, individual Permittees that propose construction of Covered Activities in the Planning Area that result in traffic impacts as screened by each lead agency shall prepare a notification plan for communication with affected residents and businesses prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints.

#### **Recommended Best Practice BP-32: Coordination with Local Jurisdictions**

As a standard measure for long-term construction activities scheduled for more than 6 months, individual Permittees shall coordinate with the local jurisdictions to ensure that improvements in the Planning Area are conducted efficiently and simultaneously to reduce impacts. Coordination with emergency services shall occur 1 month prior to construction start.

### **Section 3.18, Utilities**

The implementation of the Covered Activities would not involve development such as residential or commercial that could induce population growth and thereby indirectly result in the demand for new or expanded utilities. The Covered Activities would not include residential development or other projects that would increase demand on water supplies; the one-time projects as well as the continuing O&M activities would support the existing water supply system and ensure water would continue to be delivered to the different water districts. Some of the Covered Activities would be new water reuse facilities, which could increase the amount of wastewater that can be treated or water than can be provided to customers, but these facilities are intended to replace aging infrastructure in order to keep up with existing and projected demand, and would not result in any new demand. Table C-1 identifies the Covered Activities and the annual average amount of increased water supplies that are anticipated from implementation of the Covered Activities. The Covered Activities are spread throughout the Permit Area and would result in a positive benefit to

water supplies regionally. Under the terms of the Orange County and Western Judgments, Valley District and Western are directly responsible for ensuring that groundwater and surface water are effectively managed. The Orange County Judgment requires entities in the upper watershed (above Prado Flood Control Basin) to deliver specific quantities of flow in the Santa Ana River at Riverside Narrows and at Prado Dam. The Western Judgment establishes entitlements to groundwater extractions from the San Bernardino Basin Area and requires Valley District's replenishment of the basin when surface diversions and groundwater extractions exceed the determined safe yield. The Covered Activities would comply with the Orange County and Western Judgments.

**Table C-1. Summary of Covered Activities with Water Supply Effects**

<b>ID</b>	<b>Proposed Covered Activity</b>	<b>Type of Modification</b>	<b>Average Annual Amount</b>
EV.4.01 – 4.03 (1)	Sterling Natural Resource Center: Wastewater Treatment Plan	Effluent discharge reduction	6,733 afy/9.3 cfs/5.0 mgd reduction in flow to SAR
IEUA.1.01 (1)	Wineville Basin (2010 RMPU)	Groundwater recharge	Increase capture by 2,960 afy/4.1 cfs/2.2 mgd (combined with IEUA.1.06 and IEUA.1.10)
IEUA.1.02 (1)	Lower Day Basin (2010 RMPU)	Groundwater recharge	Increase capture by 993 afy/1.4 cfs/0.7 mgd
IEUA.1.03 (1)	San Sevaine Basin Cells 1-5 (2013 RMPU)	Groundwater recharge	Increase capture by 669 afy/0.9 cfs/0.5 mgd
IEUA.1.04 (1)	Victoria Basin Improvements (2013 RMPU)	Groundwater recharge	Increase capture by 90 afy/0.1 cfs/0.1 mgd
IEUA.1.05 (1)	Montclair Basin Cells 1-4 (2013 RMPU)	Groundwater recharge	Increase capture by 96 afy/0.1 cfs/0.1 mgd
IEUA.1.06 (1)	Jurupa Basin (2010 RMPU)	Groundwater Recharge	Increase capture by 2,968 afy/4.1 cfs/2.2 mgd (combined with IEUA.1.01 and IEUA.1.10)
IEUA.1.07 (1)	Declez Basin (2010 RMPU)	Groundwater Recharge	Increase capture by 507 afy/0.7 cfs/0.4 mgd
IEUA.1.08 (1)	CSI Basin (2010 RMPU)	Groundwater Recharge	Increase capture by 100 afy/0.1 cfs/0.1 mgd
IEUA.1.09 (1)	Ely Basin (2010 RMPU)	Groundwater Recharge	Increase capture by 201 afy/0.3 cfs/0.2 mgd
IEUA.1.10 (1)	RP3 Basin (2010 RMPU)	Groundwater Recharge	Increase capture by 2,961 afy/4.1 cfs/2.2 mgd (combined with IEUA.1.01 and IEUA.1.06)
IEUA.1.11 (1)	Turner Basin (2010 RMPU)	Groundwater Recharge	Increase capture by 23 afy/0.03 cfs/0.02 mgd
IEUA.1.12 (1)	East Declez Basin	Groundwater Recharge	Increase capture by 414 afy/0.6 cfs/0.3 mgd
IEUA.3.01 (1)	Cucamonga Creek Dry-Weather Flow Diversion	Groundwater Recharge	Increase capture by 652 afy/0.9 cfs/0.5 mgd (combined with IEUA.3.02 and IEUA.3.06)
IEUA.3.02 (1)	Cucamonga Creek at Interstate 10 Dry-Weather Flow Diversion	Groundwater Recharge	Increase capture by 652 afy/0.9 cfs/0.5 mgd (combined with IEUA.3.01 and IEUA.3.06)
IEUA.3.03 (1)	Chino Creek at Chino Hills Parkway Dry-Weather Flow Diversion	Groundwater Recharge	Increase capture by 145 afy/0.2 cfs/0.1 mgd

<b>ID</b>	<b>Proposed Covered Activity</b>	<b>Type of Modification</b>	<b>Average Annual Amount</b>
IEUA.3.04 (1)	Day Creek at Wineville Basin Outflow Diversion	Groundwater Recharge	Increase capture by 362 afy/0.5 cfs/0.3 mgd
IEUA.3.05 (1)	San Sevaine Creek Diversion	Groundwater Recharge	Increase capture by 652 afy/0.9 cfs/0.5 mgd
IEUA.3.06 (1)	Lower Deer Creek Diversion	Groundwater Recharge	Increase capture by 579 afy/0.8 cfs/0.5 mgd (combined with IEUA.3.01 and IEUA.3.02)
IEUA.4 (1)	IEUA Regional Wastewater Treatment Expansion	Water Reuse Projects	Increase capture by 9,991 afy/13.8 cfs/7.4 mgd
Rial.1(2)	Rialto Wastewater Diversion and Reuse Project	Discharge reduction	Phase 1 – 1,665 afy/2.3 cfs/1.2 mgd Phase 2 – 1,448 afy/2.0 cfs/1.1 mgd
RPU.5 (2)	Riverside North Aquifer Storage and Recovery Project	In-stream and off-stream recharge	Increase capture by 16,570 afy/22.9 cfs/14.8 mgd
RPU.8 (2)	Riverside Basin Recharge Project	Groundwater Recharge <sup>1</sup>	Columbia – 362 afy/0.5 cfs/0.3 mgd Marlborough – 290 afy/0.4 cfs/0.2 mgd Spring Brook – 290 afy/0.4 cfs/0.2 mgd Van Buren – 579 afy/0.8 cfs/0.5 mgd
RPU.10 (2)	Santa Ana River Sustainable Parks and Tributaries Water Reuse Project	Effluent re-distribution	17,954 afy/24.8 cfs/13.3 mgd = combined amount of discharge reduction at RWQCP (12,952 afy/17.89 cfs/9.6 mgd for tributary in-stream flows and 4,995 afy/6.9 cfs/3.7 mgd for use by city of Riverside)
VD.2.02 (3)	Cable Creek Diversion and Basin	Groundwater Recharge	Increase capture by 2,389 afy/3.3 cfs/1.8 mgd
VD.2.03 (4)	Lytle Creek Diversion and Basin	Groundwater Recharge	Increase capture by 3,620 afy/5.0 cfs/2.7 mgd
VD.2.05 (4)	City Creek Diversion and Basin	Groundwater Recharge	Increase capture by 4,662 afy/6.4 cfs/3.4 mgd
VD.2.06 (2)	Plunge Creek – Basin 1	Groundwater Recharge	Increase capture by 3,113 afy/4.3 cfs/2.3 mgd
VD.2.07 (4)	Cajon-Vulcan 1 Diversion and Basin	Groundwater Recharge	Increase capture by 579 afy/0.8 cfs/0.4 mgd
VD.2.08 (4)	Vulcan 2 Diversion and Basin	Groundwater Recharge	Increase capture by 782 afy/1.1 cfs/0.6 mgd
VD.2.09 (3)	Lytle-Cajon Diversion and Basin	In-channel recharge basin	Increase capture by 1,090 afy/1.5 cfs/1.0 mgd



<b>ID</b>	<b>Proposed Covered Activity</b>	<b>Type of Modification</b>	<b>Average Annual Amount</b>
VD.2.10 (3)	Plunge Creek – Basin 2	Groundwater Recharge	Accounted for in VD.2.06
VD.2.11 (2)	Devil Creek Diversion and Basins	Groundwater Recharge	Increase capture by 2,051 afy /2.8 cfs/1.5 mgd
VD.2.12 (1)	Waterman Basin Spreading Grounds Channel Maintenance	Groundwater Recharge	Increase capture by 1,448 afy/2.0 cfs/1.1 mgd
VD.2.13 (2)	Twin Creek Spreading Grounds	Groundwater Recharge	Increase capture by 1,927 afy/2.7 cfs/1.4 mgd
VD.3 (1)	Enhanced Recharge Project – Seven Oaks Dam Water Conservation Improvements	Groundwater Recharge	Phase 1b – Increase capture by 3,692 afy/5.1 cfs/2.8 mgd
WD.1 (1, 3)	SBMWD Recycled Water Project	Effluent discharge reduction	Phase 1 – 9,556 afy/13.2 cfs 7.1 mgd reduction in flow from RIX to River Phase 3 – 3,620 afy/5 cfs/ 2.7 mgd reduction (minimum 16,651 afy/23 cfs/12.4 mgd discharge)
West.3 (1)	Recycled Water Live Stream Discharge	Groundwater Recharge <sup>1</sup>	6,733 afy/9.3 cfs/5.0 mgd capacity
West.6 (1)	Arlington Basin Water Quality Improvement Project	Groundwater Recharge <sup>1</sup>	1,810 – 2,534 afy/2.5–3.5 cfs/1.5–1.9 mgd

<sup>1</sup> The source of the water captured by new recharge basins is urban runoff that currently flows to Lake Evans, where it percolates and evaporates. As such, increasing capture of this water would not directly affect surface hydrology of the mainstem of Santa Ana River.

afy = acre-feet-per year

cfs = cubic feet per second

mgd = million gallons per day

RIX = Rapid Infiltration and Extraction facility

RMPU = Recharge Master Plan Update

RWQCP = Riverside Regional Water Quality Control Plant

SAR = Santa Ana River

SBMWD = San Bernardino Municipal Water Department

## Determination by the Wastewater Treatment Provider for Adequate Capacity to Serve the Project's Projected Demand

Many of the Permittees for the Covered Activities are wastewater treatment providers, and the Covered Activities would facilitate their objective of providing effective wastewater treatment for the Permit Area and meeting demands of the existing and projected population for the foreseeable future. The Covered Activities may include projects to expand wastewater treatment capabilities, replace aging infrastructure, or construct new water reuse projects and treatment facilities. The following Covered Activities would support wastewater treatment capacity:

- The proposed Sterling Natural Resource Center would include a new wastewater treatment facility, treated water conveyance system, and re-use of defunct recharge basins. The Sterling Natural Resource Center would provide tertiary treatment of wastewater generated within the East Valley service area. The Sterling Natural Resource Center would have a maximum capacity of 10 to 12 million gallons per day and produce tertiary treated water in compliance with California Code of Regulations Title 22 recycled water quality requirements for unrestricted use.
- The Rialto Wastewater Diversion and Reuse Project would reduce the amount of treated effluent that is discharged from the Rialto Wastewater Treatment Plant and would recycle/reuse the wastewater by transporting treated wastewater through a pipeline system to recycled water consumers within the city of Rialto service area for direct application.
- The Western Riverside County Regional Wastewater Treatment Plant Enhancement and Expansion Project would result in a reduction in recycled water discharge.
- The RPU Pipeline Crossing from Rapid Infiltration and Extraction Facility would install a 36-inch-diameter pipeline that would transport water from the rapid infiltration and extraction facility through a pipeline for recycled water use. The estimated reduction in discharge from the wastewater treatment plant could be up to 13.8 cubic feet per second (7.4 million gallons per day).

In addition, there are several Covered Activities that would result in maintenance projects for existing wastewater treatment facilities. The Covered Activities would not include residential, commercial, or institutional development, and would not be anticipated to place substantial demands on wastewater treatment services. Even so, some Covered Activities may require new buildings and onsite workers and may include restrooms, sinks, and other sources of wastewater; however, these are anticipated to be minor increases in wastewater demands. Other Covered Activities that are not included in the wastewater treatment system, such as bank stabilization, recharge basins, solar energy development, or conservation and maintenance of the activities, would not be anticipated to produce wastewater. Therefore, the Project would not increase demand, and would not interfere with the wastewater treatment providers' ability to meet existing or projected demand. The Project would allow for a programmatic permitting process for the Covered Activities of the Permittees and would not directly result in sources of solid waste. However, implementation of the Project would allow for future construction of Covered Activities and routine repair and maintenance activities, which would produce solid waste related to demolition and construction debris, and municipal waste from onsite workers. In general, the Covered Activities would produce solid waste during construction activities, which would be short term. The Covered Activities would be required to comply with local policies and regulations related to the appropriate disposal of construction and demolition waste. The Covered Activities would also comply with the state

mandate concerning waste diversion and would not be anticipated to conflict with this state regulation. Many of the Covered Activities are infrastructure projects or improvements to existing facilities that, when completed, would operate autonomously and would not produce solid waste. Routine O&M activities may occur repeatedly in one area or throughout the Permit Area and may produce solid waste. The Covered Activities would be required to comply with local policies and regulations related to the appropriate disposal of any associated operation-generated waste. The Covered Activities would also comply with the state.

### **Compliance with Federal, State, and Local Management and Reduction Statutes and Regulations for Solid Waste**

Implementation of the Covered Activities would allow for construction of new projects and routine repair and maintenance activities, which could produce solid waste related to demolition and construction debris, municipal waste from onsite workers, and any other construction- or operation-generated waste. The implementation of the Covered Activities would be compliant with the existing local and state regulations in place to ensure solid waste is disposed of safely, and to divert solid waste from landfills through recycling, composting, and source reduction. The County of San Bernardino General Plan, the San Bernardino Draft Countywide Plan, the County of Riverside General Plan, the San Bernardino Countywide Integrated Waste Management Plan, and the Riverside Countywide Integrated Waste Management Plan contain several strategies to achieve the state-mandated reduction levels. The Covered Activities would not directly conflict with the regulations and policies of these documents. In addition, Covered Activities would be required to comply with CEQA and would undergo analysis at the project level. Compliance with the applicable local and state regulatory framework for the reduction of solid waste would reduce the reduce potential impacts generated from the Covered Activities.

### **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

There are no best practice measures recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to utilities and service systems.

## **Section 3.19, Wildfire**

### **Substantially impair an adopted emergency response plan or emergency evacuation plan.**

#### **Construction**

Construction activities associated with Covered Activities implemented as part of the conservation strategy and conservation measures have the potential to temporarily result in impacts to emergency response related to wildfire as temporary roadway lane closures and detours during construction activities could impact or physically interfere with emergency response and evacuation plans. Lane closures and detours could have the potential to back up public traffic creating delays in response times and hinder movement of larger emergency vehicles through access areas with reduced roadway clearance lanes. Detours could increase response times to outlying areas with limited alternative access roads. Heavy equipment such as bull dozers and excavators, construction fencing, and staging areas could also block access to high risk vegetated areas.

The potential for impacts is limited due to the proximity of Covered Activity sites having limited public access and are not situated on roadways available to the public and are not located in urbanized areas. In addition, the Covered Activities do not involve modifications to facilities that are critical to emergency response and therefore would not impede access to fire, police and hospitals facilities.

## Operations and Maintenance

Proposed conservation activities would not alter any roadways that could impair implementation of or physically interfere with emergency response and do not involve modifications to critical emergency response facilities or impede access in an emergency. Covered activities are generally routine in maintenance and include visual inspections and repairs, vegetation management may include the use of excavators, herbicide and pest control applicators, mowers, tractors, vehicle use are anticipated.

All Covered Activities are required to comply with local, regional, state, and federal emergency response regulations, policies, plans and guidelines.

### **Due to slope, prevailing winds, and other factors, exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.**

All implementation activities of the Covered Activities have the potential to introduce ignition sources that could exacerbate wildfire risk and expose project occupants to pollution concentrations from wildfire and the potential for some of the Covered Activities to be located in defined high fire hazard areas. Structural and automobile fires represent the most common types of fire in urbanized areas and can be caused by a variety of human, mechanical, and natural factors. Urban fires have the potential to spread to other structures or areas, particularly if not extinguished promptly. Areas of dense, dry vegetation, particularly in canyon areas and on hillsides, pose the greatest potential for wildfire risks.

## Construction Activities

Construction activities could introduce new potential ignition sources in the form of building materials (e.g., wood, stucco), vegetation for landscaping, vehicles, and small machinery (e.g., for typical landscape maintenance) especially in high fire hazard areas. Covered Activities would involve construction and operation of water reuse projects (treatment facilities), groundwater recharge stations and water diversions, wells, and water conveyance, monitoring and supporting of infrastructure and roadways, solar energy projects, habitat enhancement and management. These activities will use a variety of tools ranging from hand-operated tools to heavy equipment such as bulldozers or excavators. Additionally, Covered Activities could involve maintenance and repair of structures, sediment removal at recharge basins; vegetation removal and care along embankments and within transmission lines rights of way and routine monitoring and inspections. The implementation of Covered Activities would require temporary roadway closures, and detours may be needed. Vehicle use is expected for all Covered Activities.

As part of the conservation strategy HCP Preserve System monitoring, management and maintenance activities include activities that are designed to help decrease the risk wildfire and

include mechanical vegetation management as a means to meet state and local fire codes for fuel modification in high risk area.

All activities are expected to follow fire-management goals and policies set forth by the County of San Bernardino General Plan and the Proposed San Bernardino Countywide Plan Update; requirements of the San Bernardino Fire Safety Overlay and Fuel Modification Areas; County of Riverside General Plan; Riverside County Fire Code; requirements of CAL FIRE and of the responsible Fire Authority; and all other applicable fire and safety policies or regulations set forth in Section 3.19.2, Regulatory Framework, to minimize risk of wildfire. Compliance with these established goals, policies, and requirements would reduce potential impacts related to wildfire risks and its pollutants and decrease interactions between the WUI. Further Covered Activities that do not have sufficient buildable area outside of high fire severity zones (VHFHSZ) will be required to comply with enhanced fire resistance guidelines.

### **Monitoring, Management, and Maintenance Activities**

As part of the conservation strategy HCP Preserve System monitoring, management and maintenance include activities that are designed to help decrease the risk wildfire. These includes management activities (i.e., routine activities that occur in natural habitats as a part of general land stewardship, such as trash removal, access control, and signage) and habitat management (e.g., habitat conservation, invasive species control, vegetation management, and fire break/fuel management). Fuel modification can be in the form of manual, mechanical, or chemical vegetation control for the purposes of wildfire management. Methods may include thinning, trimming up, and removal of vegetation within buffer zones. Such activities could occur periodically throughout the year in the Permit Area.

Additional wildfire reduction activities would include removal of homeless encampments in areas of the Santa Ana River, recognized as high-risk areas for wildfires due to trash and debris and unintentional fire incidents. Further, post construction monitoring conducted by park ranger patrol would deter unauthorized human disturbances and of areas know to be occupied by the homeless population where the risk reductions include patrols by removal of homeless encampments in certain areas of the Santa Ana River as a means to reduce unintended incidents and arson. The Covered Activities would also increase reliable water supplies that could be used to fight fires.

### **Require the installation or maintenance of associated infrastructure (e.g., 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 on the environment**

The Covered Activities could include installation and maintenance of associated infrastructure (e.g., roads, fuel breaks, emergency water sources, or other utilities) to serve both construction and operation of the Covered Activities conservation activities that may exacerbate fire risk. Ground and vegetation disturbance could occur in VHFHSZs mapped by CAL FIRE (discussed in Section 3.19.2, *Environmental Setting*). All access points, storage, and staging areas during construction would be located in a manner that has the least impact on native vegetation as well as vehicular and pedestrian traffic. An irrigation system (i.e., a groundwater well) may be required to enhance the survivorship of newly installed native plants and seed when plants have been grown in nursery conditions, when they are planted under initially dry or drought conditions, or when planting does not occur within an ideal seasonal planting time frame. This additional infrastructure is not

anticipated to exacerbate fire risk in the Covered Activities area. The Covered Activities would improve the existing onsite natural habitat, and fire risk would not increase with the project in operation

All Covered Activities proposed within VHFHSZ area would be in compliance with all policies, procedures, and guidelines applicable to mitigate wildfire risk in those areas.

### **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.**

As part of the construction of the Covered Activities, maintenance and operations would include ground- or habitat-disturbing activities associated with management of water supply resources (e.g., storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (e.g., water quality and biological resource protection) of the watershed as part of the conservation strategy, however it does not include buildings or habitable structures which have the potential to 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.

However, some project activities, such as mechanical vegetation management, could reduce risk of wildfire related to implementation of the Covered Activities because those activities would create buffers and reduce vegetation available to fuel wildfire. In addition, the Covered Activities would restore natural tributaries, provide cleanup of trash, and help reduce damage to native vegetation caused by human influences.

All activities would be required to be in compliance with all policies, procedures and guidelines applicable as set forth by local, regional, state and federal agencies and have prepared site specific reports and plans as out lined in Section 3.6, *Geology, Soils, and Paleontological Resources*, and Section 3.9, *Hydrology and Water Quality* as mitigation to reduce loss of life , personal injury and property damages that could result from wildfire.

### **Recommended Best Practices to Reduce Potential Covered Activities Impacts**

There are no best practice measures recommended for inclusion in the environmental review for the related projects to avoid or minimize impacts to wildfire.

