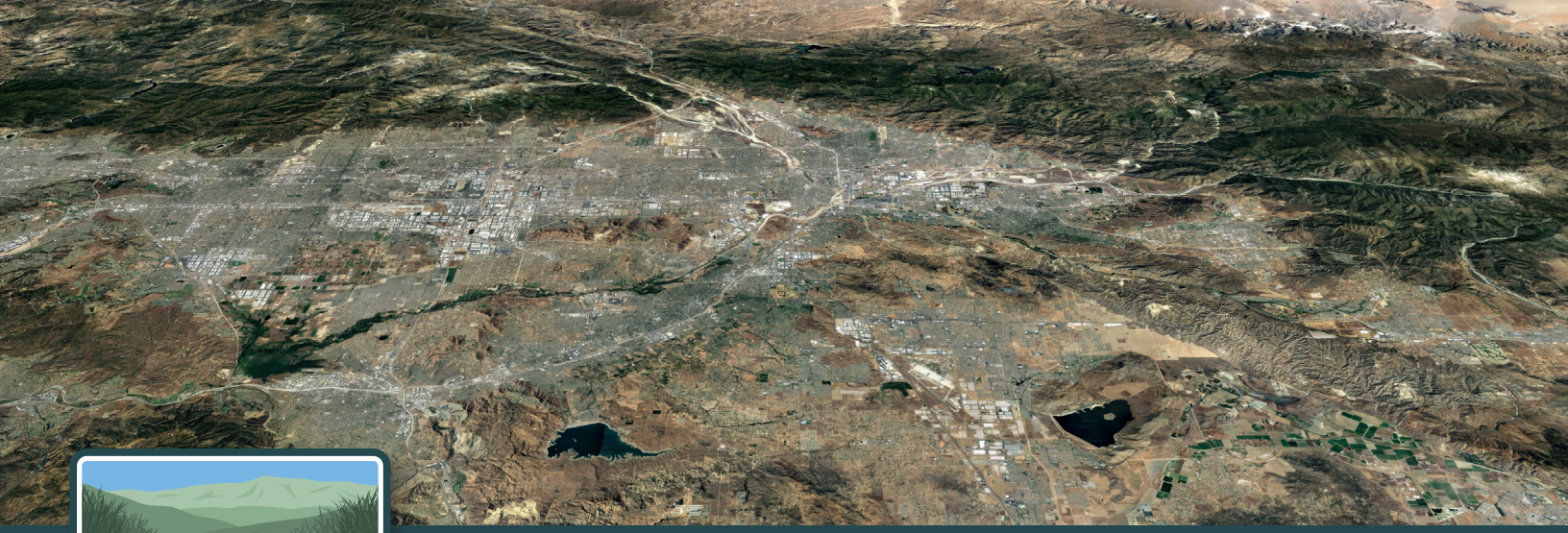

Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program

Draft Environmental Impact Report | April 2019

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Contents

List of Tables vi
List of Figures vii
List of Acronyms and Abbreviations xv

Executive Summary ES-1

ES.1 Introduction ES-1
ES.2 Background ES-1
ES.3 Project Location and Area ES-2
ES.4 Project Objectives ES-4
ES.5 Project Description ES-5
ES.6 Summary of Impacts ES-13
ES.7 Project Alternatives ES-71
ES.8 Potential Areas of Controversy/Issues to be Resolved ES-75
ES.9 How to Comment on this Draft EIR ES-76

Chapter 1 Introduction 1-1

1.1 Introduction 1-1
1.2 Purpose of the Environmental Impact Report 1-5
1.3 Valley District 1-5
1.3.1 Project Setting 1-5
1.3.2 Lead Agency 1-7
1.4 Intended Use of this Draft EIR 1-8
1.5 CEQA Environmental Review Process 1-8
1.5.1 Notice of Preparation and Initial Study 1-8
1.5.2 Written Comments Provided During the NOP Period 1-9
1.5.3 Public Scoping 1-12
1.5.4 Draft EIR 1-12
1.5.5 Level of CEQA Analysis in this Draft EIR 1-13
1.5.6 Known Areas of Controversy and Issues of Concern 1-13
1.5.7 Public Review of the EIR 1-13
1.5.8 Final EIR 1-14
1.5.9 Mitigation Monitoring and Reporting Program 1-15
1.6 Organization of the Draft EIR 1-15
1.7 Citation of Supporting Documents 1-16

Chapter 2 Project Description 2-1

2.1 Introduction 2-1

2.2 Project Background 2-3
2.2.1 Santa Ana River Conservation & Conjunctive Use Program 2-3
2.2.2 Site Characteristics and Preliminary Design of Santa Ana River Tributary Restoration Projects 2-4
2.2.3 Opportunities and Constraints for Tributary Restoration Sites Report 2-4
2.3 Project Location 2-5
2.3.1 Project Area and Land Ownership 2-6
2.4 Existing Conditions and Land Uses 2-7
2.4.1 Anza Creek and Old Ranch Creek 2-7
2.4.2 Lower Hole Creek 2-9
2.4.3 Hidden Valley Creek 2-13
2.5 Project Objectives 2-14
2.6 Tributaries Restoration Project and Mitigation Reserve Program Phase I Components 2-16
2.6.1 Common Design Features 2-16
2.6.2 Individual Restoration Site Project Components 2-27
2.6.3 Construction Activities 2-36
2.6.4 Long-Term Maintenance 2-39
2.7 Mitigation Reserve Program Project Components 2-39
2.7.1 Expanded Mitigation Reserve Program Phase II 2-42
2.7.2 Site Protection Mechanism 2-49
2.7.3 Funding Mechanisms and Schedule 2-49
2.7.4 Long-Term Management Plan 2-49
2.8 Potential Additional Location for Restoration Activities 2-50
2.9 Required Approvals 2-50
Chapter 3 Impact Analysis 3-1
Scope of the Environmental Impact Analysis 3-1
Approach to Environmental Analysis 3-2
3.1 Agricultural and Forestry Resources 3.1-1
3.1.1 Regulatory Setting 3.1-1
3.1.2 Environmental Setting 3.1-7
3.1.3 Environmental Impacts 3.1-10
3.2 Air Quality 3.2-1
3.2.1 Regulatory Setting 3.2-1
3.2.2 Environmental Setting 3.2-9
3.2.3 Environmental Impacts 3.2-18
3.3 Biological Resources 3.3-1

3.3.1 Regulatory Setting 3.3-2
3.3.2 Environmental Setting 3.3-27
3.3.3 Environmental Impacts 3.3-114
3.4 Cultural Resources 3.4-1
3.4.1 Regulatory Setting 3.4-1
3.4.2 Environmental Setting 3.4-12
3.4.3 Environmental Impacts 3.4-23
3.5 Geology, Soils, and Paleontological Resources 3.5-1
3.5.1 Regulatory Setting 3.5-1
3.5.2 Environmental Setting 3.5-4
3.5.3 Environmental Impacts 3.5-7
3.6 Greenhouse Gas Emissions 3.6-1
3.6.1 Regulatory Setting 3.6-1
3.6.2 Environmental Setting 3.6-8
3.6.3 Environmental Impacts 3.6-11
3.7 Hazards and Hazardous Materials 3.7-1
3.7.1 Regulatory Setting 3.7-1
3.7.2 Environmental Setting 3.7-12
3.7.3 Environmental Impacts 3.7-15
3.8 Hydrology and Water Quality 3.8-1
3.8.1 Regulatory Setting 3.8-1
3.8.2 Environmental Setting 3.8-14
3.8.3 Environmental Impacts 3.8-31
3.9 Noise 3.9-1
3.9.1 Noise Fundamentals 3.9-1
3.9.2 Groundborne Vibration Fundamentals 3.9-7
3.9.3 Regulatory Setting 3.9-11
3.9.4 Environmental Setting 3.9-17
3.9.5 Environmental Impacts 3.9-19
3.10 Population and Housing 3.10-1
3.10.1 Regulatory Setting 3.10-1
3.10.2 Environmental Setting 3.10-8
3.10.3 Environmental Impacts 3.10-15
3.11 Recreation 3.11-1
3.11.1 Regulatory Setting 3.11-1
3.11.2 Environmental Setting 3.11-6
3.11.3 Environmental Impacts 3.11-8

3.12 Tribal Cultural Resources 3.12-1
3.12.1 Regulatory Setting 3.12-1
3.12.2 Environmental Setting 3.12-11
3.12.3 Environmental Impacts 3.12-13
3.13 Utilities and Service Systems 3.13-1
3.13.1 Regulatory Setting 3.13-1
3.13.2 Environmental Setting 3.13-8
3.13.3 Environmental Impacts 3.13-13
Chapter 4 Cumulative Impacts 4-1
4.1 CEQA Analysis Requirements 4-1
4.2 Related Projects 4-2
4.2.1 Geographic Scope 4-2
4.2.2 Project Timing 4-3
4.2.3 Type of Projects Considered 4-3
4.2.4 Description of Cumulative Projects 4-3
4.3 Cumulative Impacts Analysis 4-16
4.3.1 Significance Criteria 4-16
4.3.2 Resource Topics 4-16
Chapter 5 Other CEQA Considerations 5-1
5.1 Significant and Unavoidable Adverse Environmental Impacts 5-1
5.2 Significant Irreversible Environmental Effects 5-1
5.3 Growth-Inducing Impacts 5-2
5.3.1 Population 5-3
5.4 Mandatory Findings of Significance 5-3
5.4.1 Quality of the Environment 5-3
5.4.2 Impact on Species 5-4
5.4.3 Impacts on Historical Resources 5-4
5.4.4 Long-Term Impacts 5-4
5.4.5 Impacts on Human Beings 5-5
Chapter 6 Effects Found Not Significant 6-1
6.1 Introduction 6-1
6.1.1 Aesthetics 6-1
6.1.2 Agricultural and Forestry Resources 6-4
6.1.3 Biological Resources 6-5
6.1.4 Energy 6-5
6.1.5 Geology, Soils, and Paleontological Resources 6-7
6.1.6 Hazards and Hazardous Materials 6-10

6.1.7 Hydrology and Water Quality 6-14
6.1.8 Land Use and Planning 6-15
6.1.9 Mineral Resources 6-17
6.1.10 Noise 6-18
6.1.11 Population and Housing 6-19
6.1.12 Public Services 6-19
6.1.13 Transportation 6-21
6.1.14 Utilities and Service Systems 6-23
6.1.15 Wildfire 6-26
Chapter 7 Alternatives Analysis 7-1
7.1 Project Alternatives Summary 7-1
7.1.1 Project Alternatives Selected for Analysis 7-2
7.1.2 Alternatives Considered but Rejected at this Time 7-5
7.1.3 Alternatives Impact Analysis 7-11
7.2 Environmentally Superior Alternative 7-27
Chapter 8 Report Preparers 8-1
Lead Agency 8-1
Consultants 8-1
Chapter 9 References 9-1
9.1 Chapter 2, Project Description 9-1
9.2 Chapter 3, Impact Analysis 9-1
9.2.1 Agriculture and Forestry Resources 9-1
9.2.2 Air Quality 9-1
9.2.3 Biological Resources 9-3
9.2.4 Cultural Resources 9-4
9.2.5 Geology, Soils, and Paleontological Resources 9-9
9.2.6 Greenhouse Gas Emissions 9-9
9.2.7 Hazards and Hazardous Materials 9-10
9.2.8 Hydrology and Water Quality 9-11
9.2.9 Noise and Vibration 9-13
9.2.10 Population and Housing 9-14
9.2.11 Recreation 9-15
9.2.12 Tribal Cultural Resources 9-16
9.2.13 Utilities and Service Systems 9-16
9.3 Chapter 4, Cumulative Impacts 9-17
9.4 Chapter 6, Effects Not Found Significant 9-17
9.5 Chapter 7, Alternatives Analysis 9-18

Appendices

A Site Characteristics and Preliminary Design of Santa Ana River Tributary Restoration Projects
B Opportunities and Constraints for Tributary Restoration Sites Report
C 30 Percent Design for Upper Santa Ana River Tributaries
D Notice of Preparation/Initial Study
E Air Quality and Greenhouse Gas Analysis Supporting Documentation
F *Cultural Resources Survey and Inventory for the Upper Santa Ana River Restoration Project, Riverside County, California*
G Noise and Vibration Analysis Supporting Documentation
H Evans Creek Site Environmental Assessment

Tables

Table		Page
ES-1	Project Area by Local Jurisdiction and Proposed Project Component	ES-4
ES-2	Summary of Impacts and Mitigation Measures	ES-14
ES-3	Summary of Comparison of Alternatives Impacts	ES-73
1-1	Notice of Preparation Written Comment Summary by Respondent	1-9
2-1	Project Area by Local Jurisdiction and Proposed Project Component	2-6
2-2	Land Ownership by Project Site and Project Component	2-7
2-3	Project Specifics and Benefits to Santa Ana Sucker and Associated Resources within Anza Creek	2-29
2-4	Project Specifics and Benefits to Santa Ana Sucker and Associated Resources within Old Ranch Creek	2-31
2-5	Project Specifics and Benefits to Santa Ana Sucker and Associated Resources within Lower Hole Creek	2-34
2-6	Project Specifics and Benefits to Santa Ana Sucker and Associated Resources within Hidden Valley Creek	2-36
2-7	Additional Site Improvements for the Four Proposed Restoration Sites	2-44
2-8	Potential Discretionary Permits	2-51
3.1-1	Agricultural Lands (Farmland of Local Importance) within the Proposed Project Sites	3.1-8
3.2-1	Federal and State Ambient Air Quality Standards	3.2-2
3.2-2	Ambient Air Quality Monitoring Data from the Riverside-Rubidoux Station (2015–2017)	3.2-12
3.2-3	Federal and State Attainment Status of the Project Area in Riverside County	3.2-15
3.2-4	Sensitive Receptors Located within 1,000 Feet of the Restoration Sites	3.2-16
3.2-5	SCAQMD Regional Air Quality Significance Threshold (maximum pounds per day)	3.2-22
3.2-6	SCAQMD Localized Significance Thresholds (pounds per day)	3.2-23
3.2-7	Regional Criteria Pollutant Emissions from Construction Activities (pounds per day)	3.2-27
3.2-8	Localized Criteria Pollutant Emissions from Construction Activities (pounds per day)	3.2-27
3.2-9	Regional Criteria Pollutant Emissions from Maintenance Activities (pounds per day)	3.2-28

3.2-10 Localized Criteria Pollutant Emissions from Maintenance Activities (pounds per day) 3.2-29

3.3-1 Western Riverside County Multiple Species Habitat Conservation Plan Criteria Cells, Plan Areas, Plan Area Subunits, Conserved Lands containing portions of Project Sites, and Individual Species Survey Areas 3.3-12

3.3-2 Acres of Each Restoration Site within Jurisdictions of Cities and Counties 3.3-14

3.3-3 Special-status Species and Sensitive Natural Communities with Potential to Occur at the Proposed Project Sites 3.3-33

3.3-4 Vegetation Communities and Land Cover Types Occurring at the Anza Creek/Old Ranch Creek Site 3.3-75

3.3-5 Jurisdictional Waters and Wetlands within the Anza Creek and Old Ranch Creek Sites 3.3-83

3.3-6 CRAM Metric, Submetric, Attribute, and Overall Scores for Anza Creek and Old Ranch Creek Sites 3.3-87

3.3-7 Vegetation Communities and Land Cover Types Occurring within the Lower Hole Creek Site 3.3-88

3.3-8 Jurisdictional Waters and Wetlands within the Lower Hole Creek Site 3.3-94

3.3-9 CRAM Metric, Submetric, Attribute, and Overall Scores for the Lower Hole Creek Site 3.3-99

3.3-10 Vegetation Communities and Land Cover Types Occurring within the Hidden Valley Creek Site 3.3-103

3.3-11 Jurisdictional Waters and Wetlands within the Hidden Valley Creek Site 3.3-108

3.3-12 2016 CRAM Metric, Attribute, and Overall Scores for the Hidden Valley Creek Site 3.3-113

3.3-13 Acres or Populations of Temporary Impacts on Special-Status Species at the Tributaries Restoration Project and Mitigation Reserve Program Phase I and Phase II Sites 3.3-118

3.3-14 Estimated Temporary and Permanent Impacts on Native Communities, Nonnative Communities, and Land Cover Types at the Tributaries Restoration Project and Mitigation Reserve Program Phase I Sites 3.3-150

3.3-15 Summary of Restoration Design Components and Benefits to Sensitive Species at the Anza Creek/Old Ranch Creek Tributary Restoration Sites 3.3-154

3.3-16 Summary of Restoration Design Components and Benefits to Sensitive Species at the Lower Hole Creek Tributary Restoration Site 3.3-155

3.3-17 Summary of Restoration Design Components and Benefits to Sensitive Species at the Hidden Valley Creek Tributary Restoration Site 3.3-156

3.3-18 Acres of Temporary and Permanent Impacts on Natural Communities at Each Tributary Restoration Project and Mitigation Reserve Program Phase I Site 3.3-160

3.3-19 Impacts on Waters of the U.S. and State 3.3-166

3.3-20 Impacts on CDFW Jurisdictional Resources 3.3-167

3.4-1 Cultural Resources Studies Conducted within a 0.5-mile Radius of the Project Area 3.4-24

3.4-2 Cultural Resources Sites Located within 0.5 mile of the Project Area 3.4-25

3.4-3 Eligibility Recommendations and Recommended Mitigation Measures for Identified Archaeological Sites within the Tributaries Restoration Project and Mitigation Reserve Program Phase I Study Area 3.4-40

3.4-4 Eligibility Recommendations and Recommended Mitigation Measures for Archaeological Sites within the Expanded Mitigation Reserve Program Phase II Study Area 3.4-44

3.6-1 Lifetimes and Global Warming Potentials of Key Greenhouse Gases 3.6-9

3.6-2 Global, National, State, and Local Greenhouse Gas Emissions (metric tons per year) 3.6-10

3.6-3 Project Total Construction-Related Greenhouse Gas Emissions (metric tons per year) 3.6-16

3.6-4 Estimated Annual Maintenance-Related Greenhouse Gas Emissions (metric tons per year) 3.6-17

3.6-5 Estimated Annual Amortized Construction and Operations- and Maintenance-Related Greenhouse Gas Emissions (metric tons per year) 3.6-17

3.8-1 Anza Creek Watershed Acres, Impervious Acres, and Stormwater Runoff Amounts 3.8-17

3.8-2 Old Ranch Creek Watershed Acres, Impervious Acres, and Stormwater Runoff Amounts 3.8-19

3.8-3 Lower Hole Creek Watershed Acres, Impervious Acres, and Stormwater Runoff Amounts 3.8-20

3.8-4 Hidden Valley Creek Watershed Acres, Impervious Acres, and Stormwater Runoff Amounts 3.8-21

3.8-5 303(d) Impairments for Surface Waters in the Project Area 3.8-22

3.8-6 Beneficial Uses Designated by the Basin Plan for Reach 3, Santa Ana River Watershed 3.8-23

3.8-7 Santa Ana River Reach 3 Water Quality Objectives (mg/L) from the Basin Plan 3.8-24

3.8-8 Flood Zone Acreage by Project Component 3.8-26

3.8-9 Tributary Floodplain Improvements 3.8-39

3.9-1 Typical A-Weighted Sound Levels 3.9-3
3.9-2 Caltrans Guideline Vibration Damage Criteria 3.9-11
3.9-3 Caltrans Guideline Vibration Annoyance Criteria 3.9-12
3.9-4 [Reproduced from County of Riverside Noise Element Table N-2] Stationary Source Land Use Noise Standards 3.9-12
3.9-5 County of Riverside Exterior Noise Standards 3.9-14
3.9-6 Applicable City of Riverside Exterior Noise Standards 3.9-15
3.9-7 Applicable City of Jurupa Valley Exterior Noise Standards 3.9-17
3.9-8 Summary of Noise Measurement Results 3.9-18
3.9-9 Analyzed Receiver Locations 3.9-19
3.9-10 Construction Equipment Vibration Source Levels 3.9-23
3.9-11 Estimated Range of Tributaries Restoration Project and Mitigation Reserve Program Phase I Construction Noise Levels 3.9-29
3.9-12 Estimated Worst-Case Tributaries Restoration Project and Mitigation Reserve Program Phase I Maintenance Noise Levels 3.9-31
3.9-13 Estimated Noise Levels from Tributaries Restoration Project and Mitigation Reserve Program Phase I Groundwater Well Pumps and Motors 3.9-32
3.9-14 Estimated Range of Groundborne Vibration from Tributaries Restoration Project and Mitigation Reserve Program Phase I Construction 3.9-37
3.9-15 Potential Groundborne Vibration Impact Distances from Expanded Mitigation Reserve Program Phase II Construction 3.9-38
3.9-16 Estimated Increase in Ambient Noise Levels Due to Groundwater Well Pumps and Motors for the Tributaries Restoration Project and Mitigation Reserve Program Phase I 3.9-41
3.9-17 Estimated Increase in Ambient Noise Levels Due to Construction of the Tributaries Restoration Project and Mitigation Reserve Program Phase I 3.9-43
3.10-1 2017 Riverside County Area Median Household Income Classification in US Dollars 3.10-9
3.10-2 2016 Riverside County Housing Units 3.10-9
3.10-3 Population and Demographic Distribution by City 3.10-10
3.10-4 Median Household Income and Poverty Status in 2016 by City and Census Tract 3.10-11
3.10-5 2016 City of Jurupa Valley Housing Units 3.10-11

3.10-6 2016 City of Riverside Housing Units 3.10-12

3.13-1 Anticipated Future Regional Water Supply in the Valley District Service Area under Normal-Year Conditions (AFY) 3.13-11

3.13-2 Anticipated Future Water Supply in the RPU Service Area under Normal Year Conditions (AFY) 3.13-13

3.13-3 Riverside Public Utilities Normal Year Supply and Demand Comparison (AF) 3.13-17

3.13-4 Valley District Normal Year Supply and Demand Comparison (AF) 3.13-17

4-1 Cumulative Project List 4-5

7-1 Species with Potential to Occur at the Evans Creek Site for Alternative B 7-17

7-2 Summary of Comparison of Alternatives Impacts 7-29

Figures

Figure		Page
ES-1	Project Location	ES-3
ES-2	Construction Limits for Tributaries Restoration Project and Mitigation Reserve Program Phase I	ES-9
ES-3	Mitigation Reserve Program Phases I and II	ES-11
1-1	Regional Location	1-3
1-2	Project Sites	1-4
2-1	Project Location	2-2
2-2	Existing Setting Photos Old Ranch Creek	2-10
2-3	Existing Setting Photos Anza Creek	2-11
2-4	Existing Setting Photos Lower Hole Creek	2-12
2-5	Existing Setting Photos Hidden Valley Creek	2-15
2-6	Old Ranch Creek Cross Section	2-19
2-7	Anza Creek Cross Section	2-20
2-8	Lower Hole Creek Cross Section	2-21
2-9	Hidden Valley Creek Cross Section	2-22
2-10	Tributaries Habitat Structures	2-23
2-11	Conceptual Recreational Improvements at Anza Creek/Anza Narrows Park	2-26
2-12	Anza Creek Restoration Activity Overview	2-28
2-13	Old Ranch Creek Restoration Activity Overview	2-30
2-14	Lower Hole Creek Restoration Activity Overview	2-32
2-15	Hidden Valley Creek Restoration Activity Overview	2-35
2-16	Construction Limits	2-38
2-17	Expanded Mitigation Reserve Program Phase II	2-41
2-18	Anza/Old Ranch Creek Mitigation Reserve Program	2-46
2-19	Lower Hole Creek Mitigation Reserve Program	2-47
2-20	Hidden Valley Creek Mitigation Reserve Program	2-48

3.1-1 Farmlands 3.1-9

3.2-1 Sensitive Land Uses in the Project Vicinity 3.2-17

3.3-1 Cities and Counties in the Project Vicinity 3.3-10

3.3-2 Habitat Conservation Plan (HCP) Elements in the Vicinity of the Tributary Restoration Sites 3.3-11

3.3-3 Designated Critical Habitat Map Overview 3.3-29

3.3-4 Anza and Old Ranch Creeks Vegetation Communities and Land Cover Types Map 3.3-73

3.3-5 Designated Critical Habitat Map Anza and Old Ranch Creeks 3.3-77

3.3-6 Anza and Old Ranch Creeks Sensitive Fish and Wildlife Observations and Potential Aquatic Species Habitat Map 3.3-81

3.3-7 Anza/Old Ranch Creek Jurisdictional Aquatic Resources Map (USACE/RWQCB) 3.3-85

3.3-8 Anza/Old Ranch Creek Jurisdictional Aquatic Resources Map (CDFW) 3.3-86

3.3-9 Lower Hole Creek Vegetation Communities and Land Cover Types Map 3.3-91

3.3-10 Designated Critical Habitat Map Lower Hole Creek 3.3-92

3.3-11 Lower Hole Creek Sensitive Fish and Wildlife Observations and Potential Aquatic Species Habitat Map 3.3-95

3.3-12 Lower Hole Creek Jurisdictional Aquatic Resources Map (USACE/RWQCB) 3.3-96

3.3-13 Lower Hole Creek Jurisdictional Aquatic Resources Map (CDFW) 3.3-97

3.3-14 Hidden Valley Creek Vegetation Communities and Land Cover Types Map 3.3-101

3.3-15 Designated Critical Habitat Map Hidden Valley Creek 3.3-105

3.3-16 Hidden Valley Creek Sensitive Fish and Wildlife Observations and Potential Aquatic Species Habitat Map 3.3-109

3.3-17 Hidden Valley Creek Jurisdictional Aquatic Resources Map (USACE/RWQCB) 3.3-110

3.3-18 Hidden Valley Creek Jurisdictional Aquatic Resources Map (CDFW) 3.3-111

3.8-1 Santa Ana River Watershed and Waterbodies 3.8-15

3.8-2 Stormwater Sub-Watersheds 3.8-18

3.8-3 Floodplain 3.8-25

3.8-4 Groundwater Basins 3.8-28

3.9-1 Ambient Noise Measurement Locations 3.9-21

3.9-2 Noise and Vibration Analysis Locations 3.9-22

3.13-1 Water Districts 3.13-9

4-1 Cumulative Projects 4-4

7-1 Restoration Concept 7-7

Acronyms and Abbreviations

°C	degree Centigrade
°F	degrees Fahrenheit
µg/m^3	microgram per cubic meter
µPa	microPascals
AA	Assessment Area
AB	Assembly Bill
Accord	Seven Oaks Accord
ACS	American Community Survey
AF	acre-feet
AFY	acre-feet per year
Alliance	Upper Santa Ana River Sustainable Resources Alliance
AMP	Archaeological Monitoring Plan
AMSL	above mean sea level
AP-42	AP-42 Compilation of Air Pollutant Emission Factors
APE	Area of Potential Effects
AQMP	Air Quality Management Plan
ATP	Archaeological Treatment Plan
ATV	all-terrain vehicle
BAMPP	Bat Avoidance, Monitoring, and Protection Plan
Basin	South Coast Air Basin
Basin Plan	Water Quality Control Plan for the Santa Ana River Basin
BAU	business-as-usual
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
BTAC	Basin Technical Advisory Committee
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPTAC	Comprehensive Agricultural Preserve Technical Advisory Committee
CARB	California Air Resources Board
CCAA	California Clean Air Act

CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Construction General Permit	General NPDES Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities
CPUC	California Public Utilities Commission
CRAM	California Rapid Assessment Method
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIC	Eastern Information Center
EIR	Environmental Impact Report
EMFAC2017	Emission Factors 2017
EO	Executive Order
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ESA	Environmentally Sensitive Area
FEMA	Federal Emergency Management Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act

FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FRPP	Farm and Ranch Lands Protection Program
g	gravitational acceleration
GDE	groundwater-dependent ecosystem
GHG	greenhouse gas
GIS	geographic information system
GPS	global positioning system
HazMat	Hazardous Materials
HCP	Habitat Conservation Plan
HMBP	hazardous materials business plan
HOME	Home Investment Partnership Act
HUD	U.S. Department of Housing and Urban Development
Hz	Hertz
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
IS	Initial Study
ITP	incidental take permit
IWMP	integrated weed management plan
JCSD	Jurupa Community Service District
Judgment	Stipulated Judgment in the case of Orange County Water District v. City of Chino, et al., Case No. 117628-County of Orange
kHz	kilohertz
LCFS	Low Carbon Fuel Standard
L_{dn}	day-night sound level
LDV Rule	Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards Rule
L_{eq}	equivalent sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
LST	localized significance threshold
L_V	vibration velocity level
MBTA	Migratory Bird Treaty Act
mg/L	milligrams per liter
MRZ	mineral resource zone
MS4	Municipal Separate Storm Sewer System

MT	metric ton
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Planning
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NNL	National Natural Landmarks
NO	nitric oxide
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O&M	operation and maintenance
OES	Office of Emergency Services
OHWM	Ordinary High Water Mark
OPR	State Office of Planning and Research
OSHA	Occupational Health and Safety Administration
PCE	tetrachloroethene
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PMP	Paleontological Monitoring Plan
POL	Path of Life
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppm	part per million
PPV	peak particle velocity
PQP	Public/Quasi-Public
PRC	Public Resources Code
proposed project	Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program
RCFD	Riverside County Fire Department
RCRA	Resources Conservation and Recovery Act
rms	root-mean-square
ROG	reactive organic gas
RPS	Renewables Portfolio Standard

RPU	City of Riverside Public Utilities
RRG-CAP	Riverside Restorative Growthprint Climate Action Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
RWQCP	Riverside Water Quality Control Plant
SARCCUP	Santa Ana River Conservation & Conjunctive Use Program
SB	Senate Bill
SBBA	San Bernardino Basin Area
SBVRUWMP	San Bernardino Valley Regional Urban Water Management Plan
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SKR	Stephens' kangaroo rat
SLF	Sacred Lands File
SO_2	sulfur dioxide
SRA	Source Receptor Area
SVP	Society of Vertebrate Paleontology
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
Tanner Act	Toxic Air Contaminant Identification and Control Act
TBRA	tenant-based rental assistance
TCE	trichloroethene
TCRs	Tribal Cultural Resources
TDS	total dissolved solids
Upper SAR HCP	Upper Santa Ana River Habitat Conservation Plan
US DOT	U.S. Department of Transportation
USACE	U.S. Army Corps of Engineers
USARW	Upper Santa Ana River Watershed
USC	United States Code
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
VA	U.S. Department of Veterans Affairs

Valley District	San Bernardino Valley Municipal Water District
VOC	volatile organic compound
WDR	waste discharge requirement
WEAP	Worker Environmental Awareness Program
Western	Western Municipal Water District of Riverside County
Western Judgment	Western-San Bernardino Judgment
WRCMSHCP	Western Riverside County Multiple Species Habitat Conservation Plan

ES.1 Introduction

Pursuant to the California Environmental Quality Act (CEQA), San Bernardino Valley Municipal Water District (Valley District), as the lead agency, is proposing to construct and maintain four tributary restoration sites and create a Mitigation Reserve Program along the Upper Santa Ana River in the cities of Riverside and Jurupa Valley and in Riverside County. The four project sites are Anza Creek, Old Ranch Creek, Lower Hole Creek, and Hidden Valley Creek The proposed project would re-establish, enhance, rehabilitate, and/or preserve jurisdictional aquatic resource habitat and/or improve conditions for Santa Ana sucker. This would be accomplished by improving conditions in existing channels, excavating new channels, restoring associated floodplain surfaces and habitats, controlling nonnative invasive species, supporting the existing local community environmental education and recreational opportunities at each of the sites, and establishing a Mitigation Reserve Program that would provide opportunities for additional restoration activities on each of the sites.

This Draft Environmental Impact Report (EIR) evaluates the potential environmental impacts associated with the construction and operation of two components that would be implemented by Valley District: the Upper Santa Ana River Tributaries Restoration Project, including four tributary restoration sites referred to as Anza Creek, Old Ranch Creek, Lower Hole Creek, and Hidden Valley Creek; and creation of a Mitigation Reserve Program. This Draft EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program that compose the proposed project.

ES.2 Background

The proposed project would be located within three jurisdictions: the city of Riverside, the city of Jurupa Valley, and unincorporated areas of Riverside County. The proposed project is an early effort to implement conservation measures of the Upper Santa Ana River Habitat Conservation Plan (HCP). The four restoration sites would be designed to mitigate impacts on endangered and/or threatened species and jurisdictional aquatic resources identified by the Upper Santa Ana River HCP.

The Tributaries Restoration Project and Mitigation Reserve Program Phase I component of the proposed project is a primary component of the Santa Ana River Conservation & Conjunctive Use Program (SARCCUP) Phase 1, funded by a Proposition 84 Grant. SARCCUP is a multi-agency, watershed-wide collaborative program designed to improve the Santa Ana River watershed's water supply resiliency and reliability by implementing various watershed-wide projects for development of additional dry-year yield, reduction of water use, and habitat improvement for sustainable native species population. As a watershed-wide cooperative venture, SARCCUP will allow the regional water managers to combine groundwater resources and water conveyance infrastructure for the benefit of the watershed as a whole.

Valley District developed preliminary restoration designs for five sites in support of a Proposition 84 grant application for the proposed project. Valley District evaluated the selection of five sites that were chosen through preliminary work performed by staff with the Riverside-Corona Resource Conservation District, who are directly familiar with the site's existing conditions and enhancement opportunities, and discussions amongst the Riverside-Corona Resource Conservation District, Valley District, California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service (USFWS). Each site had key attributes that made it a strong candidate for enhancement and providing new Santa Ana sucker habitat, including large tracts of undeveloped land and tributaries with direct connections to the mainstem Santa Ana River. The tributaries will provide opportunities for sucker migration from the mainstem river into new creek habitat where there is refugia and hydrology independent of mainstem river flows. The result was an initial description of site characteristics as well as preliminary designs and cost estimates for features that would restore, enhance, and/or establish Santa Ana sucker habitat. For more details refer to the *Site Characteristics and Preliminary Design of Santa Ana River Tributary Restoration Projects* included in **Appendix A** of this Draft EIR.

ES.3 Project Location and Area

The proposed study areas for the Anza Creek and Hidden Valley Creek sites are within the jurisdiction of the cities of Riverside and Jurupa Valley and the County of Riverside (**Figure ES-1**). The Old Ranch Creek study area is within the cities of Riverside and Jurupa Valley. The Lower Hole Creek study area is within the city of Riverside.

The proposed Anza Creek and Old Ranch Creek sites occupy the same overall area on the Santa Ana River's south floodplain about 2 miles downstream of Mount Rubidoux. The Old Ranch Creek site is generally located in the eastern half of the site while the Anza Creek site occupies the western half of the site. Riverside County owns the majority of the sites' land, while some land along the eastern boundary adjacent to the closed Tequesquite landfill is owned by the City of Riverside. Access is available via public right-of-way.

The proposed Lower Hole Creek restoration site is to the west of Van Buren Boulevard and the closed Pedley landfill, south of the Santa Ana River, and north and east of the single-family housing developments located along Lower Hole Creek. The proposed Lower Hole Creek site begins downstream of Jurupa Avenue where the stream passes under the road through a large, newly installed 40-foot concrete box culvert. Lower Hole Creek meets the Santa Ana River at the downstream end. Most of the site is owned by CDFW but the upper 260 feet of the Lower Hole Creek channel and floodplain is owned by the City of Riverside. Additional privately held parcels are located in the southeastern corner of the site and elevated high above the creek. Access is available via public right-of-way.

The proposed Hidden Valley Creek site is on the inside of a meander bend on the south side of the Santa Ana River about 0.75 mile downstream of the Van Buren Boulevard Bridge and the City of Riverside's Regional Water Quality Control Plant. Nearly all of the land at the site is owned by the State of California (CDFW) and has a long history of management for conservation purposes. The State-owned land is managed by Riverside County Parks and Open Space District. Access is available via public right-of-way.

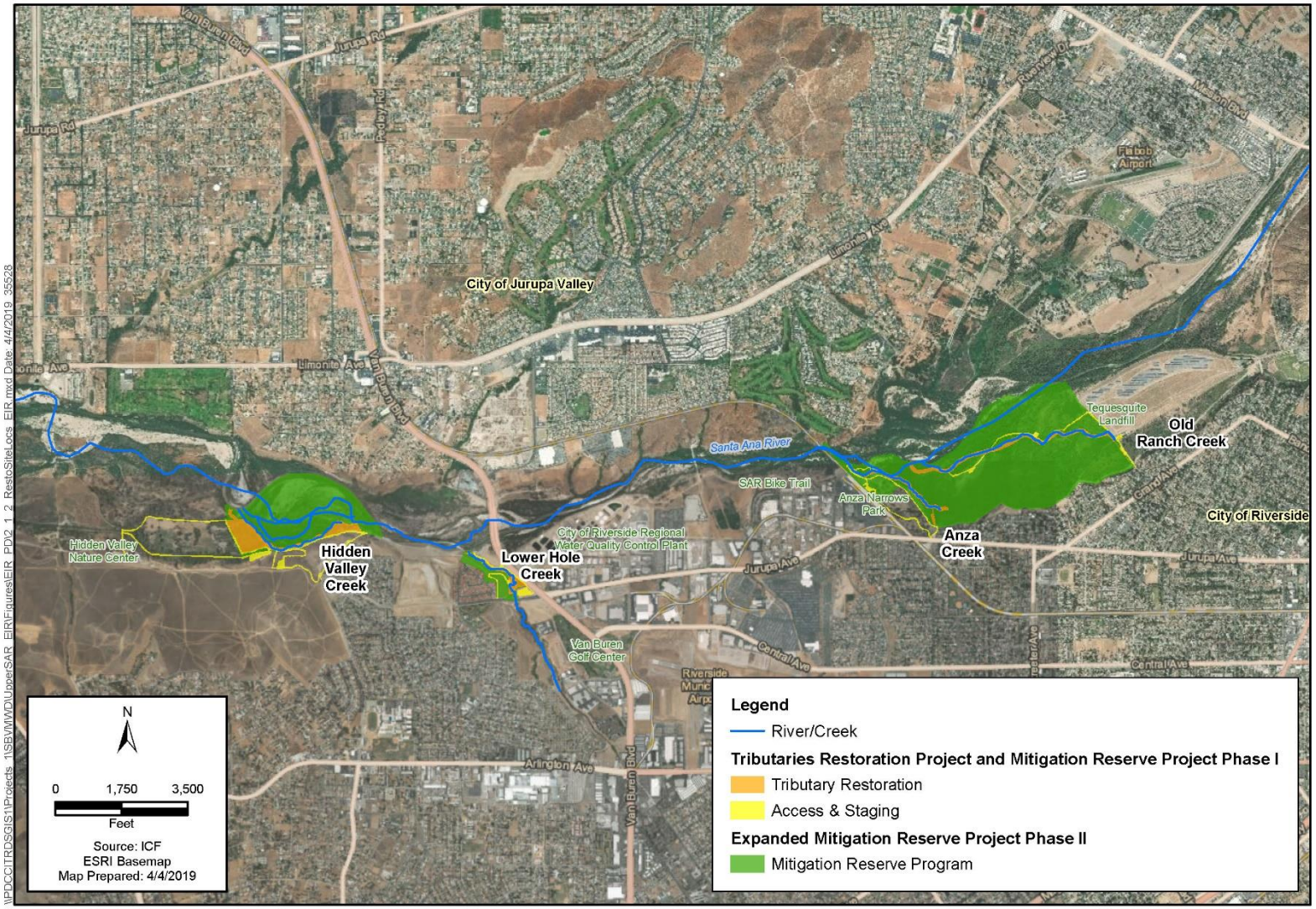

Figure ES-1. Project Location

Table ES-1 shows the project area by local jurisdiction and by project site and project component.

Table ES-1. Project Area by Local Jurisdiction and Proposed Project Component

Project Site	City of Riverside (acreage)	City of Jurupa Valley Area (acreage)	Riverside County Area (acreage)	Total (acreage)
Tributaries Restoration Project and Mitigation Reserve Program Phase I				
Old Ranch	18.8	0.0		18.8
Anza Creek	9.2	-	0.7	9.9
Lower Hole Creek	8.2	-		8.2
Hidden Valley Creek	1.2	-	29.2	30.5
Total	**37.3**	**0.0**	**29.9**	**67.3**
Expanded Mitigation Reserve Program Phase II				
Old Ranch	144.2	44.9		189.1
Anza Creek	94.4	7.4	4.3	106.1
Lower Hole Creek	11.6			11.6
Hidden Valley Creek	2.8	21.2	80.9	104.8
Total	**252.9**	**73.5**	**85.2**	**411.6**

ES.4 Project Objectives

The primary objectives of the proposed project are to:

- Create new or improved aquatic habitat for native aquatic species—the federally listed as threatened Santa Ana sucker (*Catostomus santaanae*) and the state species of special concern Arroyo chub (*Gila orcutti*)—in order to improve current status and security of the populations.
- Improve long-term hydrologic function to create and enhance sustaining native fish habitat through activities such as:

  (1) creating functional spawning and refugia habitat within tributaries hydrologically connected to the mainstem Santa Ana River,

  (2) preventing backwater habitat from developing within or at the mouth of the tributaries in order to reduce the habitat suitability for nonnative predator fishes,

  (3) creating hydrologic conditions that promote the availability of appropriate substrate for successful spawning and feeding,

  (4) creating tributaries with a reliable source of clean water, and

  (5) restoring the hydrologic connection with historic floodplains to provide additional areas to where overbank flows can spread into riparian zones,

  such that the project will enhance and/or create new habitat that results in resource conservation and benefits for other threatened and/or endangered species.

- Promote responsible access and use of public recreation in designated locations along the Upper Santa Ana River.
- Educate the public on responsible use and value of the natural resources on site.
- Maintain ecological value of restored sites for long-term vitality of the sites and secure funding for long-term maintenance.
- Create a Mitigation Reserve Program to create an ecologically functional, self-sustaining mosaic of aquatic and riparian habitats that are resilient to a range of natural disturbances (drought, flood, fire, etc.).
- Provide compensatory mitigation in the form of a Mitigation Reserve Program for future unavoidable adverse impacts on wetlands, waters of the United States and state, riparian habitat, and special-status species that result from activities authorized under Sections 401 and 404 of the Clean Water Act, California's Porter-Cologne Act, Section 1602 of the California Fish and Game Code, the California Endangered Species Act (CESA), and the federal Endangered Species Act (ESA).

ES.5 Project Description

Valley District is proposing to construct and maintain four tributary restoration sites within the cities of Riverside and Jurupa Valley and the County of Riverside. Valley District proposes two components of the proposed project: the Tributaries Restoration Project and the Mitigation Reserve Program. The Tributaries Restoration Project and Mitigation Reserve Program Phase I component of the proposed project totals 67.3 acres while the Expanded Mitigation Reserve Program Phase II component of the proposed project totals 411.6 acres.

ES.5.1 Project Components

Tributaries Restoration Project and Mitigation Reserve Program Phase I

The proposed project restoration sites would be designed to increase the amount and quality of habitat for the Santa Ana sucker and other native species and enhance jurisdictional aquatic resources. The common design features for all of the restoration sites include enhancement/ recreation of the existing channel, floodplain creation areas, wood and rock habitat structure design, nonnative vegetation removal, public education, and limiting human disturbance of restored habitat. A more detailed description of the restoration activities and the specific locations can be found in Chapter 2, *Project Description*.

Enhancement/Recreation of the Existing Channel

Portions of the Old Ranch Creek and Hidden Valley Creek restoration sites do not currently have an existing channel, or have a poorly defined channel, and thus would require new channel construction. Each new channel would have a morphology that is sustainable with the controlling physical processes and that meets Santa Ana sucker habitat requirements. In general, the enhanced or newly constructed channels would create conditions necessary for Santa Ana sucker sustainability, such as diversity in flow depths and velocities, diversity in substrate size without excessive fine sediment accumulation, intermittent areas of shading and cover provided by

vegetation on overhanging banks, and open canopy with appropriate substrate to promote algal growth and sucker feeding. A coarse channel liner composed of a sorted mixture of cobble, gravel, and fine sediment would be constructed under the bed of the new channel in specified reaches to limit water infiltration into the sandy and silty soils at the site, thereby limiting channel flow loss and maintaining flow depths and velocities in the new channel. The new channels would include sections constructed with pool and riffle morphology to create the topographic and hydraulic diversity necessary to sustain different habitats. Gravel would be added to new riffle sections and other areas that would have sufficient flow velocities to maintain suitable coarse substrate for Santa Ana sucker habitat. Many habitat features included in the stream design have been developed based on reference reaches currently occupied by Santa Ana sucker with similar influencing variables such as channel morphology, gradient, water supply, and riparian cover. This includes reference reach work that was performed for this project on the East Fork San Gabriel River and Haines Creek, a tributary to the Big Tujunga River with a similar urban, low-gradient setting as the tributary restoration sites.

Floodplain Creation Areas

The proposed project would include floodplain construction in channel reaches where the channel is incised and the banks are tall, oversteepened, and unstable. Construction of new 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.

Wood and Rock Habitat Structure Design

All of the restoration site designs include construction of wood and rock structures to add immediate habitat to the enhancement sites. Several structures have been designed specifically for the restoration project, and would be appropriately sized for the small channels in which they would be constructed. The objective of the wood and rock structures is to create a flow obstruction that would alter hydraulics in a manner necessary to keep sand from accumulating on the gravel substrate in the vicinity of the structure. The structures would also provide deeper pools and overhang for cover for Santa Ana suckers.

One instream woody material structure would be constructed for approximately every 200 feet of channel to aid in diversifying hydraulic conditions that would create and sustain habitat complexity at each of the restoration sites.

Nonnative Vegetation Removal

A goal of the proposed project is to create new riparian areas composed of native vegetation, as identified previously. 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 that are identified as important sources of existing shade or 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 results of the

survey will be discussed with CDFW and USFWS to develop a plan and schedule for nonnative tree removal. Some of the tall nonnative trees that may provide roosting habitat, such as the nonnative palms, may be treated with herbicide to kill the tree but leave the roosting habitat intact.

Public Education

The proposed project would include improvements for public education and outreach that would either enhance, or be developed in partnership with, the existing educational programs such as the City of Riverside Parks and Recreation Department and the Riverside County Parks staff at the Hidden Valley Nature Center. Community education opportunities proposed at all project sites include interpretive trails and signage promoting natural resource protection and native species conservation.

The Lower Hole Creek site currently supports a short trail along the eastern side that offers an opportunity to create a short trail with educational signage along the path and perhaps a picnic area near an existing grove of mature trees. However, the site is not currently used by the general public and safety issues associated with the homeless encampments are a high concern. If safety can be improved, Lower Hole Creek could be used for community outreach, with outdoor activities and seating, due to its easy accessibility to both the stream channel and adjacent floodplain native communities.

Martha McLean-Anza Narrows Park is directly adjacent to the Anza Creek site. Restoration of the Anza Creek site presents an opportunity to improve public access to the Anza Creek site from the adjacent park to reduce damage to vegetation and the channel integrity. Implementation of improvements at Martha McLean-Anza Narrows Park would occur in cooperation with the City of Riverside Parks and Recreation Department to facilitate safer public access while educating the public about responsible recreational use of the river. The goal of the improvements would be to enhance safe site access for recreational purposes and promote the protection of ecological resources.

Limiting Human Disturbance of Restored Habitat

The tributary restoration sites are highly disturbed, with trash dumping, frequent unauthorized human trails, and semi-permanent transient encampments. Measures would be implemented for successful management of the restored habitat to prevent or minimize habitat degradation by controlling human visitation and disturbance in appropriate ways, including eliminating intensive riparian corridor usage by permanent encampments, trash dumping, and off-road vehicle use and unintended social trails that degrade vegetation and disturb wildlife, including Santa Ana sucker. Managing human access to maintain appropriate levels and areas of visitation would require public education and collaboration with partner agencies and local stakeholders. City of Riverside Public Works staff currently patrol areas along the Santa Ana River approximately twice per week; however, additional patrols would be required to keep the transient populations from rebuilding structures and creating new encampment sites that could impair restored habitats and water quality for fish species. Part of the proposed approach for long-term maintenance for restoration success is deterrence and prevention rather than continued cleanup and removal of items caused by human disturbance. Valley District proposes to fund two full-time County of Riverside Parks and Open Space District ranger positions to patrol the project sites along the tributaries and Santa Ana River plus part-time maintenance staff. The cost of patrol and maintenance of these sites would be included in the long-term endowment set up for management of the restoration sites, in perpetuity.

Regular monitoring and onsite patrol presence of uniformed County Parks officers would deter homeless individuals from building or rebuilding semi-permanent structures in the project areas once they have been removed as part of the restoration activities.

Construction Activities

As part of the project, construction would primarily involve removing vegetation and altering existing ground elevations within the restoration sites to establish the proposed habitat distribution. Construction equipment would be brought to the restoration sites via existing access roads. Large equipment would be transported during off-peak traffic to minimize traffic congestion. Construction of the restoration sites would involve the use of a variety of heavy construction equipment on site. The majority of the equipment and vehicles would be associated with the intensive earthwork. Large construction equipment including backhoes, compactors, excavators, haul trucks, and rollers would be used during the construction phase of the proposed project. Following completion of construction activities, equipment would be demobilized and removed from the sites via the same route. To the extent practicable, temporary impact areas would be situated within disturbed areas such as access/maintenance roads and nearby trails. Temporary construction areas would also have controlled access to maintain public safety during construction. Staging areas, access routes, and other temporarily disturbed areas located within sensitive vegetation areas would be decompacted, revegetated, and restored to preconstruction conditions or as specified in the approved site plans and related construction documents. **Figure ES-2** shows the proposed temporary and permanent construction impacts areas and the staging and access areas for the Tributaries Restoration Project and Mitigation Reserve Program Phase I.

Long-Term Maintenance

Disturbed areas would be planted as appropriate to facilitate habitat establishment and recovery, and monitoring would occur to ensure success and inform adaptive management actions. The restoration sites would be monitored for physical characteristics, plant establishment, and sensitive species use after completion of construction. Short-term restoration monitoring (post-construction) would occur immediately following construction for a period of 5 to 10 years, to ensure that the habitat meets defined success criteria consistent with regulatory agency permitting requirements. A detailed monitoring program would be developed during the final design and permitting phase of the project and would identify the specific performance criteria that include adaptive management and that would be implemented for several years post-project to determine the level of success of the project. Post-construction monitoring of the restoration sites would be designed to document achievement of project goals and objectives, including success of revegetation efforts and functional stream hydrology, and use of the site by sensitive species. Post-construction monitoring would also be conducted through park ranger patrol of the project sites and other areas along the Santa Ana River to deter unauthorized human disturbances, including garbage disposal and homeless encampments, from disturbing and destroying restoration sites and to promote responsible public access. Furthermore, these restoration projects are meant to complement and provide benefit to a larger regional strategy to improve the long-term quality and function of riparian and riverine areas along the Santa Ana River. Therefore, in order to ensure the permanent benefits to the river and its native species are maintained, a non-wasting endowment would be established to ensure adequate funds for continued monitoring and maintenance of the sites in perpetuity.

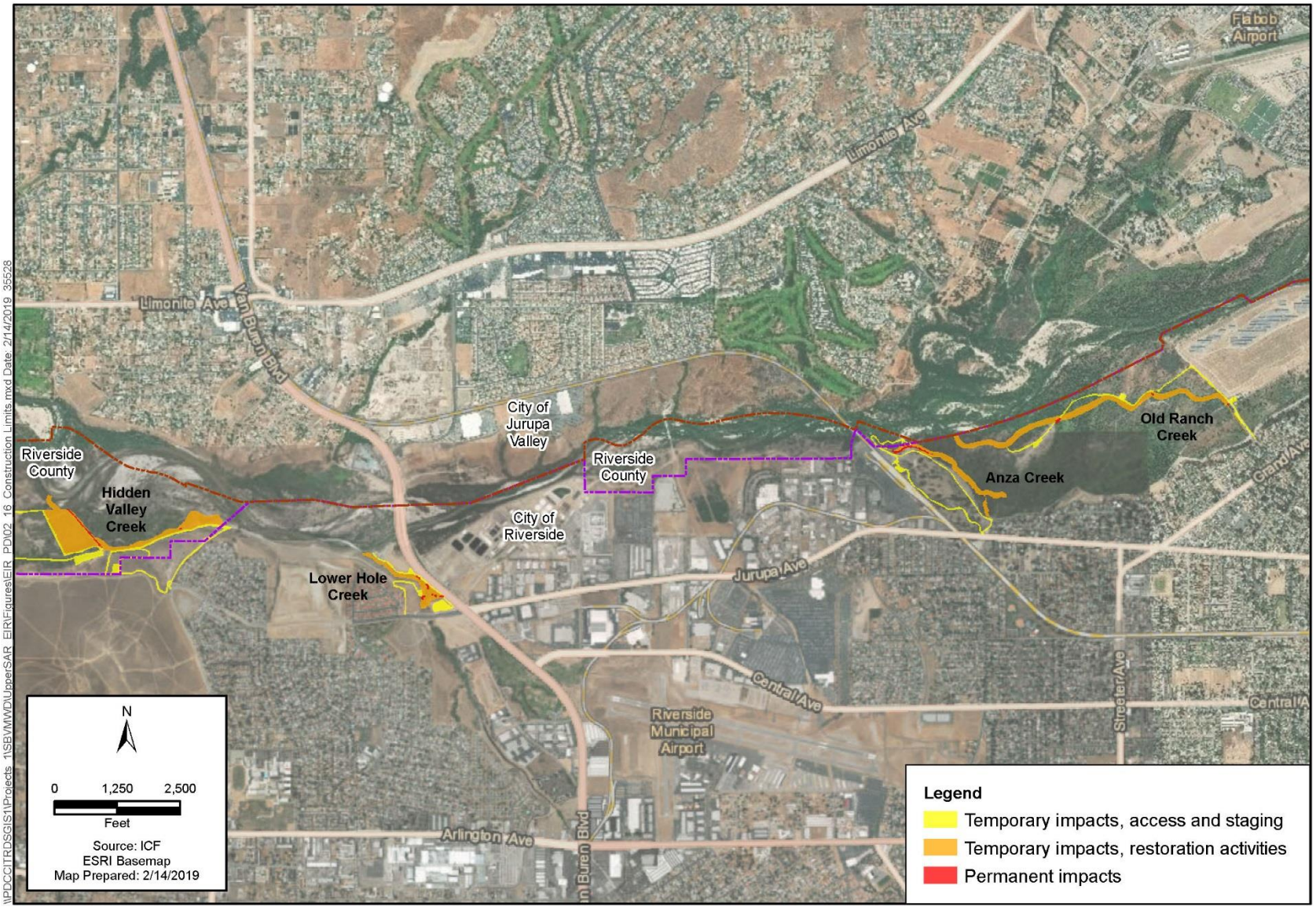

Figure ES-2. Construction Limits for Tributaries Restoration Project and Mitigation Reserve Program Phase I

Mitigation Reserve Program Phases I and II

The Mitigation Reserve Program Phases I and II would result in the development of a combined mitigation/ conservation bank and an advance Permittee-responsible mitigation credit program, as shown on **Figure ES-3**. Anza Creek and Old Ranch Creek would be entitled as two separate sites under a single mitigation/conservation bank, while Lower Hole Creek and Hidden Valley Creek would be a stand-alone advance Permittee-responsible mitigation credit program overseen by CDFW. The latter two project sites would not be part of the formal mitigation/conservation bank because they are primarily located on land owned by CDFW, which does not allow for a mitigation/conservation bank on its lands. Valley District, or its designated representative, would be the mitigation/conservation bank sponsor and would be responsible for installing, maintaining, and monitoring the mitigation/ conservation bank sites at Anza Creek and Old Ranch Creek. Valley District or its designee would be the mitigation/conservation bank owners. In addition to the mitigation/conservation bank sponsor, a long-term habitat manager would be responsible for managing the sites in perpetuity and an endowment holder would be responsible for distributing funds associated with long-term management. Upon mitigation/conservation bank closure, the mitigation/conservation bank is proposed to be managed in perpetuity by Valley District or its designated representative. Valley District would be the advance Permittee-responsible mitigation credit program sponsor and would be responsible for installing, maintaining, and monitoring the advance mitigation credit program projects at Lower Hole Creek and Hidden Valley Creek. U.S. Army Corps of Engineers (USACE), CDFW, USFWS, Regional Water Quality Control Board (RWQCB), and possibly the U.S. Environmental Protection Agency would be signatories to the mitigation/conservation bank, while CDFW would be the signatory for the advance Permittee-responsible mitigation credit program, with the potential involvement of the other resource agencies.

An advance Permittee-responsible mitigation credit project would be a form of Permittee-responsible compensatory mitigation constructed in advance of a permitted impact on waters of the state and possibly the United States. Even if compensatory mitigation activities are themselves authorized by a permit, establishing compensatory mitigation in advance of the impacts does not create any presumption or guarantee that a proposed future impact will be authorized, or that the advance compensatory mitigation will be considered adequate and/or suitable mitigation for any specific future project. Mitigation values may be generated on an “advance mitigation” basis by establishing an advance mitigation site designed to compensate for future expected impacts. Alternatively, advance mitigation can also be combined with concurrent mitigation required by a federal, state, or local permit, where the concurrent mitigation site provides additional area beyond the immediate mitigation requirements, and/or the site provides additional functions in excess of what is required for the permitted impact.

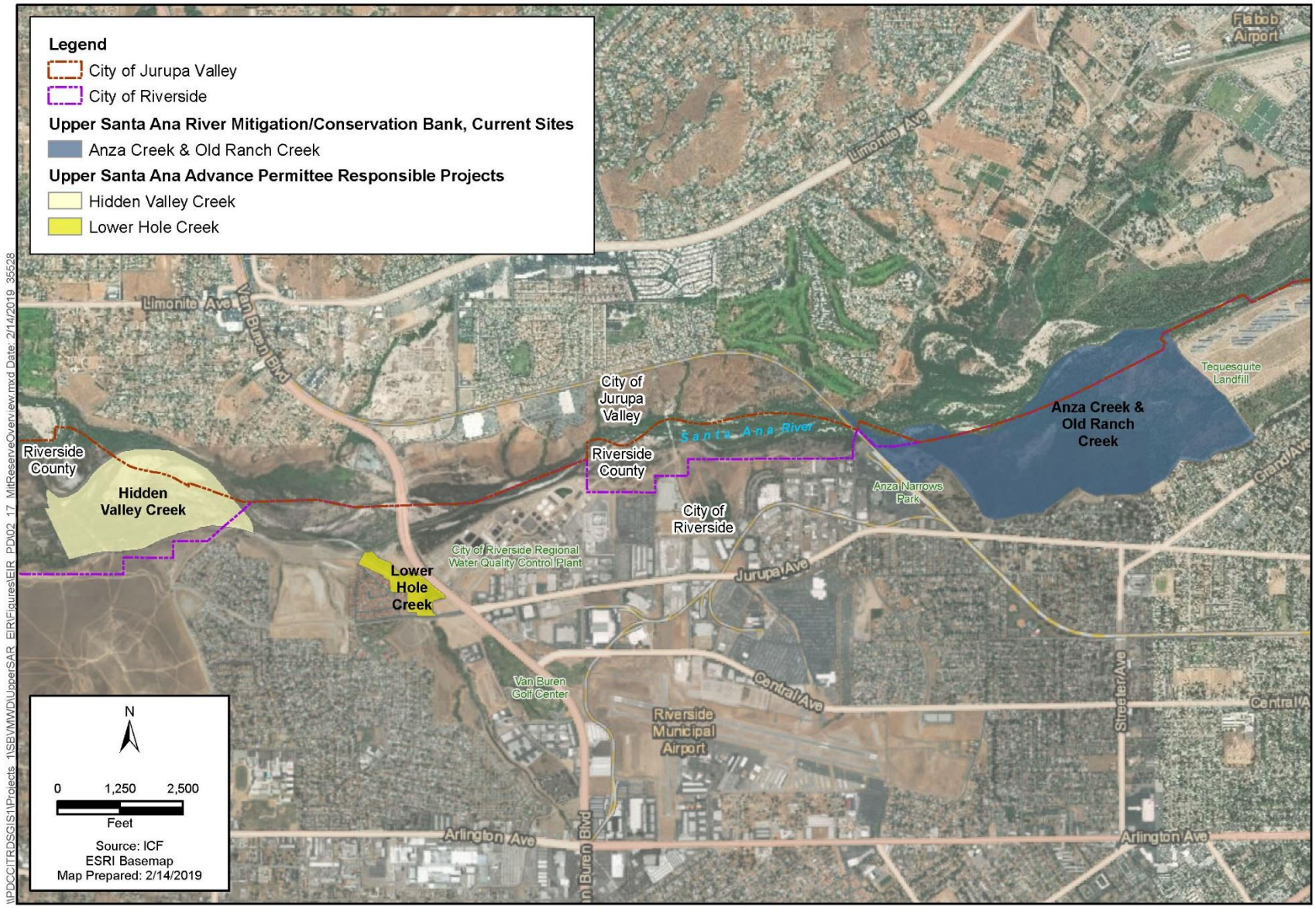

Figure ES-3. Mitigation Reserve Program Phases I and II

Valley District is anticipating the need for (1) compensatory aquatic resource mitigation to ensure that its water management activities are in compliance with environmental regulations that protect aquatic resources, and (2) endangered species habitat restoration to help implement future water projects being developed. The proposed Mitigation Reserve Program sites would provide sites for mitigation credits to be obtained for waters of the United States and state, as well as credits for species covered or that may be covered by the California Endangered Species Act and federal Endangered Species Act, including Santa Ana sucker, arroyo chub, western pond turtle (*Actinemys pallida*), two-striped garter snake (*Thamnophis hammondii*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), yellow-breasted chat (*Icteria virens*), California gnatcatcher (*Polioptila californica californica*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and Santa Ana River woolly-star (*Eriastrum densifolium*). Water management activities may also result in impacts on aquatic resources under the jurisdiction of USACE, RWQCB, and CDFW. Establishing the Mitigation Reserve Program would allow mitigation to be implemented prior to impacts, thus reducing temporal loss and aggregating mitigation into one larger area, thereby increasing the overall functions and services of the mitigation.

The Mitigation Reserve Program would have two phases. Phase I is the Tributaries Restoration Project described above. Phase II is the second component of the proposed project and includes development of an Expanded Mitigation Reserve Program described further below.

Expanded Mitigation Reserve Program Phase II

In addition to the various Tributaries Restoration Project and Mitigation Reserve Program Phase I components proposed for the four project sites as described above, other restoration activities have been considered for each site for inclusion in the Expanded Mitigation Reserve Program Phase II. These additional restoration opportunities were identified in the *Opportunities and Constraints for Tributary Restoration Sites Report* included in **Appendix B.** The scope of the Expanded Mitigation Reserve Program Phase II activities to be undertaken by Valley District may expand, depending on such factors as future assessments of habitat improvement needs and the availability of additional funding. Such potential expansions of activity could consist of more intense habitat restoration activities on the project sites evaluated in this EIR. It is not possible at this time to specifically identify where or when potential expansions of activity may occur; as such, expansions would depend on actions that may be taken in the future by other agencies, such as funding decisions by resource agencies. A more detailed description of the proposed Expanded Mitigation Reserve Program Phase II activities can be found in Chapter 2, *Project Description*.

Long-Term Management Plan

Management of the Mitigation Reserve Program is essential to ensure a mitigation program continues to provide high-quality habitat, and is key to the success of a mitigation or conservation bank. The purpose of the long-term management plan is to ensure the Mitigation Reserve Program property is managed, monitored, and maintained in perpetuity for its natural resource values. The long-term management plan establishes objectives, priorities, tasks, and reporting requirements. Management actions are tailored to achieve desired outcomes for the covered species and habitat, and must be designed to adapt to changing environmental factors (adaptive management).

The Mitigation Reserve Program sites would be protected through recordation of a real estate instrument such as a conservation easement, deed restriction, or restrictive covenant that would be

placed on the property title and obligate the Mitigation Reserve Program sponsor or its successor to maintain the sites as natural open space in perpetuity. The protection mechanism would ensure that the Mitigation Reserve Program sites are protected for the primary purpose of maintaining natural aquatic resource functions and services. The Mitigation Reserve Program sponsor would fund the long-term management and monitoring of the Mitigation Reserve Program sites by establishing a financial instrument such as a non-wasting endowment or other approved mechanism for the purposes of fulfilling the long-term responsibilities described in the long-term management plan.

ES.6 Summary of Impacts

Table ES-1 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, *Impact Analysis*. 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-1 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 related to implementing the Tributaries Restoration Project and Mitigation Reserve Program Phase I at a project-specific level and evaluates the Expanded Mitigation Reserve Program Phase II component of the proposed project at a programmatic level given the additional restoration opportunities at each of the sites have not been fully developed at the construction level of detail. The analysis in Chapter 3 separates the two distinct project components and provides conclusion statements and mitigation, as applicable, for each project component. However, for Table ES-1, 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
Agricultural Resources			
Impact AG-1: Conversion of Important Farmland to nonagricultural use. Existing land uses associated with the project sites would remain unchanged and there is no current or planned agricultural production. The proposed project would not result in conversion of existing agricultural land to non-agricultural land or convert existing Farmland of Local Importance, and impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Air Quality			
Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan. The project would comply with all applicable regulatory standards (e.g., South Coast Air Quality Management District [SCAQMD] Rule 403, Fugitive Dust) as required by SCAQMD. The project would not result in significant air quality impacts, and no mitigation measures are required to reduce emissions. As such, the project meets the Air Quality Management Plan consistency criterion. As the proposed project would be consistent with applicable SCAQMD and Southern California Association of Governments policies, impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact AQ-2: Violate any air quality standard or substantially contribute to an existing or projected air quality violation. Construction activities would not result in regional or localized emissions exceeding SCAQMD thresholds. Short-term, long-term, and in perpetuity maintenance activities would not result in regional or localized emissions exceeding SCAQMD thresholds. Therefore, the project would not contribute a	Less than significant	No mitigation necessary	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
significant level of air pollution such that regional or local air quality would be degraded, and the impact would be less than significant.			
Impact AQ-3: 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 (including releasing emissions that exceed quantitative thresholds for ozone precursors). Construction and maintenance activities would not result in regional emissions exceeding SCAQMD thresholds. Therefore, impacts of the project would not be cumulatively considerable, and this impact would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations. Given site characteristics and limited duration of exposure, construction activities would not expose sensitive receptors to substantial diesel particulate matter concentrations or health risks in excess of SCAQMD thresholds. Maintenance activities would not introduce any new substantial stationary or mobile sources of diesel particulate matter emissions. Implementation of the project would not result in localized violations of the health-protective federal or California ambient air quality standards, and, as such, would not expose sensitive receptors to significant pollutant concentrations or health effects. This impact would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact AQ-5: Generate objectionable odors affecting a substantial number of people. Construction, operational, and maintenance activities would not result in nuisance odors affecting a substantial number of people, as odor impacts would be intermittent and	Less than significant	No mitigation necessary	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
temporary and would dissipate rapidly as a function of distance. This impact would be less than significant.			
Biological Resources			
Impact BIO-1: Potential to have an 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-1.1: Construction-related Direct Impacts on Special-status Species**. Temporary construction and operation effects could potentially affect special-status species and/or their associated habitat, including sensitive wetland and riparian habitat. During construction, these impacts would include temporary habitat loss and degradation, fragmentation, interference with foraging/feeding behavior, interference with migration and reproduction, and direct injury or mortality. Long-term impacts are anticipated to be largely beneficial due to creation, re-establishment, and enhancement of aquatic, wetland, riparian, and upland habitats, although some habitats currently suitable for specific special-status species may be converted to other high-quality native habitat types as the habitat restoration progresses in time. Nonetheless, the species that are expected to benefit from the project are generally present and/or are expected to be present in greater density and distribution following project restoration. Direct impacts including physical injury, physiological impairment, or mortality of special-status plant or wildlife species as a result of construction and operational activities would be potentially significant. Implementation of mitigation measures BIO-1 through BIO-17 (for the Tributaries Restoration Project and Mitigation Reserve Program Phase I) and BIO-18 through	Potentially significant	**Mitigation Measure BIO-1: Consult with Agencies Regarding ESA and CESA Permitting**. The ESA provides regulatory protection for species listed as "threatened" or "endangered." The Tributaries Restoration Project and Mitigation Reserve Program Phase I shall obtain federal and state incidental take authorization as necessary for all federally listed species identified as potentially being adversely affected from the construction, operations, and/or maintenance of the Tributaries Restoration Project and Mitigation Reserve Program Phase I. The project shall require a permit from USACE in order to construct within waters of the United States. As required by Section 7 of the ESA, USACE analyzes the potential direct, indirect, and cumulative effects associated with the proposed project and makes determinations on each federally protected species that may be affected. We anticipate that USACE will likely initiate consultation with USFWS in order to receive a Biological Opinion and incidental take coverage for least Bell's vireo, Santa Ana sucker, and potentially Santa Ana River woolly-star, as adverse impacts on these species may be unavoidable. Therefore, formal consultation shall occur between the federal action agency, USACE, and USFWS in order to ensure the Tributaries Restoration Project and Mitigation Reserve Program Phase I is not likely to jeopardize the continued existence of any threatened or endangered species or result in the adverse modification of critical habitat. USFWS will issue a Biological Opinion, including terms and conditions, which shall then be included as terms and conditions of the USACE permit issued to the Applicant, Valley District. These terms and conditions	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
BIO-24 (for the Expanded Mitigation Reserve Program Phase II) would reduce these impacts to a less-than-significant level.		may include, for example, ensuring that an authorized and approved biological monitor is in place during construction and that any incidental take in excess of the authorized amount stated in the Biological Opinion is reported immediately to USFWS. The mitigation measures included in this EIR are intended to avoid and minimize harm to the species and will be included in the application to USACE and in the Biological Assessment submitted to USFWS for consultation. In order to receive incidental take coverage for the state-listed species for least Bell's vireo and potentially Santa Ana River woolly-star, it is anticipated that the Biological Opinion will provide the description and mitigation measures required for CDFW to issue a consistency determination, which states that the federal incidental take authorization is "consistent" with CESA under CFGC Section 2080.1. Expected terms and conditions may address take avoidance, habitat restoration and conservation, construction monitoring, and project operations for federally listed species identified or expected to occur within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits. **Mitigation Measure BIO-2: Conduct Pre-Construction Biological Clearance Surveys to Avoid or Minimize Direct Impacts on Special-status Terrestrial Species from Construction Activities**. To avoid or minimize direct impacts on special-status species from construction activities, a qualified biologist approved by USFWS and/or CDFW shall conduct preconstruction clearance surveys at all Tributaries Restoration Project and Mitigation Reserve Program Phase I sites for special-status species prior to any ground-disturbing and/or dewatering activities. During these surveys, the biologist shall inspect the Tributaries Restoration Project and Mitigation Reserve Program Phase I sites prior to	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		earthwork or other disturbance for any special-status wildlife species listed in Table 3.3-3 and prepare a list of species observed and record their activity before and during construction. Prior to construction each day, biological construction monitors will sweep survey at a reconnaissance level all areas scheduled for construction to confirm that special-status species are not present. Any species found shall be captured and relocated to an approved location in consultation with USFWS and/or CDFW by a biologist having appropriate permits, if required, and in compliance with regulatory permits and authorizations issued. **Mitigation Measure BIO-3: Conduct Preconstruction Nesting Bird Surveys Within 300 Feet of the Limits of Disturbance**. Vegetation clearing within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance shall be completed prior to bird nesting season to the maximum extent possible. Impacts on nesting birds will be avoided through the implementation of preconstruction surveys, ongoing monitoring, and, if necessary, establishment of minimization measures. Specific avoidance and minimization measures for nesting birds methods may include specific procedures as recommended by the CDFW and detailed below. **BIO-3.1: Designated Biologist and Survey Protocols** – Valley District shall designate a biologist experienced in: identifying local and migratory bird species; conducting bird surveys using appropriate survey methodology (e.g., Ralph et al. 1993 and USFWS and/or CDFW-accepted species-specific survey protocols, available here: https://www.wildlife.ca.gov/conservation/survey-protocols); nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		nest success (e.g., Martin and Geupel 1993); determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures. **BIO-3.2: Pre-construction Surveys** – Surveys shall be conducted by the designated biologist at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the property, density and complexity of the habitat, number of survey participants, and survey techniques employed; and shall be sufficient to ensure the data collected are complete and accurate. Pre-construction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior (e.g., copulation, carrying of food or nest materials, nest building, removal of fecal sacks, flushing suddenly from atypically close range, agitation, aggressive interactions, feigning injury or distraction displays, or other behaviors). If a nest is suspected, but not confirmed, the designated biologist shall establish a disturbance-free buffer until additional surveys can be completed, or until the location can be inferred based on observations. Surveyors shall not risk failure of the nest to determine the exact location or status and will make every effort to limit the nest to potential predation as a result of the survey/monitoring efforts (e.g., limit number of surveyors, limit time spent at/near the nest, scan the site for potential nest predators before approaching, immediately depart nest area if indicators of stress or agitation are displayed).	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		If a nest is observed, but thought to be inactive, the designated biologist shall monitor the nest for 1 hour (4 hours for raptors during the non-breeding season) prior to approaching the nest to determine status. The designated biologist shall use their best professional judgment regarding the monitoring period and whether approaching the nest is appropriate. Results of pre-construction surveys shall be provided to CDFW. **BIO-3.3: Establishment of Buffers** – When an active nest is confirmed, the designated biologist shall immediately establish a conservative buffer surrounding the nest based on their best professional judgment and experience. The buffer shall be delineated to ensure that its location is known by all persons working within the vicinity, but shall not be marked in such a manner that it attracts predators. Once the buffer is established, the designated biologist shall document baseline behavior, stage of reproduction, and existing site conditions, including vertical and horizontal distances from proposed work areas, visual or acoustic barriers, and existing level of disturbance. Following documentation of baseline conditions, the designated biologist may choose to make adjustments to the buffer based on site characteristics, stage of reproduction, and types of project activities proposed at/near that location. The designated biologist shall monitor the nest at the onset of project activities and at the onset of any changes in project activities (e.g., increase in number or type of equipment, change in equipment usage) to determine the efficacy of the buffer. If the designated biologist determines that project activities may be causing an adverse reaction, the designated biologist shall adjust the buffer accordingly. **BIO-3.4: Deterrents** – Valley District, under the direction of the designated biologist, may also take steps	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		to discourage nesting on the project site, including moving equipment and materials daily, covering material with tarps or fabric, and securing all open pipes and construction materials. The designated biologist shall ensure that none of the materials used pose an entanglement risk to birds or other species. **BIO 3.5: Reporting** – The designated biologist shall be responsible for providing summary reports, where relevant, to CDFW no less than once weekly regarding the nesting species identified on site, discovery of any of new nests, the status/outcome of any previously identified nest, buffer distances established for each nest, and any adjustments made to established buffers. If the project results in the abandonment of, or damage to, a nest, CDFW shall be notified within 24 hours **Mitigation Measure BIO-4: Conduct Pre-construction Surveys for Coastal California Gnatcatcher**. A qualified biologist shall conduct preconstruction surveys for coastal California gnatcatcher no more than 7 days prior to the start of ground-disturbing activities if work would occur between February 15 and August 31. Surveys for coastal California gnatcatcher shall be conducted in suitable habitat within 500 feet of the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance. If a breeding territory or nest is confirmed, USFWS shall be notified and, in coordination with USFWS, an exclusionary buffer shall be established around the nest. Construction activities in occupied coastal California gnatcatcher habitat shall be by a USFWS-approved qualified biologist at a frequency specified by USFWS. Unless otherwise authorized by USFWS, no proposed activities shall occur within the Tributaries Restoration Project and Mitigation Reserve Program Phase I established buffer until it is determined	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		by the qualified biologist that the young have left the nest. **Mitigation Measure BIO-5: Conduct Pre-construction Surveys for Least Bell's Vireo Within 500 Feet of the Limits of Disturbance**. A qualified biologist shall conduct preconstruction surveys for least Bell's vireo no more than 7 days prior to the start of ground-disturbing activities if work is to occur between March 15 and August 31. Surveys for least Bell's vireo shall be conducted in suitable habitat within 500 feet of the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance. If a breeding territory or nest is confirmed, USFWS shall be notified and, in coordination with USFWS, an exclusionary buffer shall be established around the nest. Construction activities in occupied least Bell's vireo habitat shall be monitored by a USFWS-approved qualified biologist at a frequency specified by USFWS. Unless otherwise authorized by USFWS, no proposed activities shall occur within the Tributaries Restoration Project and Mitigation Reserve Program Phase I established buffer until it is determined by the qualified biologist that the young have left the nest. **Mitigation Measure BIO-6: Conduct Protocol Preconstruction Western Burrowing Owl Surveys Within 500 Feet of the Limits of Disturbance**. Vegetation clearing within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance shall be completed during the non-nesting season to the extent feasible. If ground-disturbing activities or removal of any trees, shrubs, or any other suitable nesting or foraging habitat are scheduled within the western burrowing owl nesting season (February 1 to August 31), a protocol preconstruction clearance survey for western burrowing owl shall be conducted in	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		accordance with CDFW guidelines. If potential western burrowing owl burrows are found during non-nesting season, the occupiable areas of those burrows will be examined, with a burrow scope if needed, and collapsed if not occupied. If active burrows are found during nesting season, an avoidance buffer shall be established through consultation with CDFW and in accordance with CDFW guidelines and remain around the occupied nest(s) until all young have fledged and the nest is confirmed by the qualified biologist to be no longer active. If active burrows are found outside of the nesting season, then CDFW will be consulted for avoidance and minimization methods. Specific avoidance and minimization measures for burrowing owl may include the following procedures as recommended by CDFW and detailed below. **BIO 6.1: Habitat Assessments** – Burrowing owl habitat assessments, surveys, impact assessments, and associated reports shall be completed. Methodology shall follow the recommendations and guidelines provided within the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Prior to the initiation of project activities, a burrowing owl habitat assessment shall be conducted by a biologist knowledgeable of burrowing owl habitat, ecology, and field identification of the species and burrowing owl sign and in accordance with the Staff Report on Burrowing Owl Mitigation. The assessment shall consist of walking all areas subject to project activities and adjoining areas within 150 meters (approximately 500 feet). If no suitable habitat is found on site (i.e., if the site is completely covered in chaparral habitat, cement, or asphalt), no additional surveys are necessary. A report	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		summarizing the results of the habitat assessment shall be submitted to CDFW. **BIO 6.2: Surveys** – If suitable habitat is found on site within areas subject to project activities, burrowing owl surveys shall be conducted by a qualified biologist in accordance with the Staff Report on Burrowing Owl Mitigation. As such, the Designated Biologist(s) shall conduct four survey visits: (1) at least one site visit between February 15 and April 15, and (2) a minimum of three survey visits, at least 3 weeks apart between April 15 and July 15, with at least one visit after June 15. **BIO 6.3: CDFW Coordination** – If breeding season surveys confirm occupied burrowing owl habitat in or adjoining areas subject to project activities, Valley District shall contact CDFW and conduct an impact assessment, in accordance with the Staff Report on Burrowing Owl Mitigation, prior to commencing project activities, to assist in the development of avoidance, minimization, and mitigation measures. **Mitigation Measure BIO-7A: Conduct Preconstruction Surveys and Minimization Measures Within the Limits of Disturbance for Sensitive Mammal Species**. No greater than 48 hours prior to initiation of ground disturbance, including vegetation-clearing activities, within suitable habitat, the limits of disturbance shall be surveyed for sensitive mammal species, including northwestern San Diego pocket mouse, SKR, San Diego black-tailed jackrabbit, San Diego desert woodrat, and Los Angeles pocket mouse. If sensitive mammal species are observed within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance and do not self-relocate out of the area by the start of scheduled construction, a qualified biologist may opt to relocate the	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		species to a suitable area out of the construction impact zone. Any capture and relocation shall occur in coordination with USFWS and/or CDFW and be implemented by a by a biologist having appropriate permits, if required, and in compliance with regulatory permits and authorizations issued. **Mitigation Measure BIO-7B: Conduct Preconstruction Surveys Within the Limits of Disturbance for Sensitive Bat Species.** To mitigate for potential construction-related impacts on special-status bats and maternity roosts during construction activities, the following measures shall be implemented prior to the commencement of construction activities at all Tributaries Restoration Project and Mitigation Reserve Program Phase I sites. A combination, as required by specific site conditions, of habitat suitability assessments, acoustic surveys of habitat around construction sites, nighttime surveys, maternity colony assessments, and exit counts shall be used to survey the area that may be directly or indirectly affected by the Tributaries Restoration Project and Mitigation Reserve Program Phase I. Avoidance and minimization measures for bats may include specific procedures as recommended by CDFW and detailed below. **BIO-7B.1: Roosting Habitat Suitability Assessment** – Prior to commencement of project activities, a CDFW-approved bat biologist shall conduct a bat roosting habitat suitability assessment of the structures and trees that may be removed, altered, or indirectly affected by the proposed project activities. As bats may utilize dense tree canopies, snags, rock crevices, or built structures over creeks/water, these habitat types shall be surveyed. Foraging areas and specific flight routes to those foraging areas shall be documented, as well.	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		If bat roosting habitat is detected during the pre-construction surveys, Valley District will implement a Bat Protection Plan. All contractors, subcontractors, and employees shall also comply with these measures and it shall be the responsibility of the Permittee to ensure compliance. Valley District shall submit to CDFW for review and approval a Bat Avoidance, Monitoring, and Protection Plan (BAMPP). The BAMPP shall include project-specific avoidance and minimization measures to ensure that impacts on bats are avoided or minimized. The BAMPP shall be created and be implemented by the CDFW-approved bat biologist. The BAMPP shall include: monitoring protocols, survey timing and duration, procedures and frequency of direct reporting to CDFW, and project-specific avoidance and minimization measures that consider, but are not necessarily limited to, project phasing and timing; installation and monitoring of exclusionary materials, where and when appropriate; monitoring of project-related noise, vibration, and lighting; and installation of buffers. **BIO-7B.2: Nighttime Surveys** – Any locations identified as suitable bat roosting habitat by the CDFW-approved bat biologist shall be subject to additional nighttime surveys during the summer months (i.e., June–August) to determine the numbers and bat species using the roost(s). The information collected during these additional surveys shall be used by the CDFW-approved bat biologist to develop species-specific measures to minimize impacts on roosting bats. The surveys shall be conducted by the CDFW-approved bat biologist using an appropriate combination of structure inspection, sampling, exit counts, and acoustic surveys. If bats are found using any structures or trees within the project area, the biologist shall identify the bats to the species	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		level and evaluate the colony to determine its size and significance. The bat survey shall include: (1) the exact location of all roosting sites (location shall be adequately described and drawn on a map); (2) the number of bats present at the time of visit (count or estimate); (3) the names of each species of bat present (including how the species was identified); (4) the location, amount, and distribution of all bat guano described and pinpointed on a map; and (5) the type of roost, i.e., a night roost (resting at night while out feeding) versus a day roost (resting during the day), clearly stated. The results of the pre-construction bat surveys shall be submitted to CDFW for review. **BIO-7B.3: Maternity Colonies Avoidance and Minimization** – If the presence of a maternity colony is confirmed within a structure (e.g., bridge, culvert) during the maternity season survey and activities involving combustion engines and/or night lighting is deemed necessary during the recognized bat maternity season (April 1 through August 31), avoidance and minimization measures including the designation of buffers shall be developed and submitted to CDFW for review. **BIO-7B.4 Establishment of Buffer** – If any previously undiscovered roosting bats are discovered during project activities, all work shall stop on, under, around, or within an appropriate buffer as determined by the CDFW-approved bat biologist. To avoid disturbance of maternity-roosting bats during project-related activities, work activities within a predetermined buffer distance of the maternity roost sites shall avoid the recognized bat maternity season (April 1 through August 31) unless concurrence otherwise has been received from CDFW. The buffer distance shall be determined by a CDFW-approved bat	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		biologist and shall be based upon which bat species are found to compose the maternity colony, because different bat species are known to have different tolerance levels for certain construction activities. Project activities shall not occur at structures housing a maternity colony of bats during the recognized bat breeding season unless concurrence is received from CDFW. **Mitigation Measure BIO-8: Conduct Preconstruction Surveys Within the Limits of Disturbance for Sensitive Terrestrial Reptile Species**. Not greater than 48 hours prior to initiation of ground disturbance, the work area shall be surveyed for sensitive terrestrial reptile species, including southwestern pond turtle, California legless lizard, California glossy snake, coastal whiptail, red-diamond rattlesnake, coast horned lizard, and coast patch-nosed snake. If a sensitive reptile species is observed within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance, those reptiles shall be captured and relocated to an approved location in consultation with USFWS and/or CDFW by a biologist having appropriate permits, if required, and in compliance with regulatory permits and authorizations issued. **Mitigation Measure BIO-9: Conduct Preconstruction Surveys Within the Limits of Disturbance for Special-status Plant Species**. During the appropriate blooming period up to 1 year prior to initiation of ground disturbance, the work area shall be surveyed to confirm the presence/absence of special-status plant species, including: Santa Ana woolly-star, smooth tarplant, Parry's spineflower, snake cholla, paniculate tarplant, many-stemmed dudleya, Southern California black walnut, Coulter's goldfield, Robinson's pepper-grass, chaparral ragwort, San Bernardino aster, as well as WRCMSHCP narrow endemic species San Diego	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		ambrosia, Brand's phacelia, and San Miguel savory. Surveys shall be conducted in accordance with CNPS and CDFW rare plant survey guidelines and shall be conducted during the flowering period when each species is most readily identifiable, if necessary. A botanist shall determine the blooming period for each species and verify blooming during the growing season by visiting a reference site as necessary to observe if the target species is flowering or otherwise identifiable. A species-specific survey may be required for each special-status plant depending upon the blooming period. Any special-status plant populations shall be mapped. If the presence of any special-status plant species is confirmed, a copy of the survey results shall be forwarded to USFWS and CDFW. If individuals of a sensitive plant species are observed within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance, then prior to ground disturbance, the individuals shall be flagged and/or mapped for avoidance. If impacts on non-listed species are unavoidable, minimization measures shall be addressed within a 5-year onsite restoration mitigation and monitoring program developed and implemented for the Tributaries Restoration Project and Mitigation Reserve Program Phase I. If impacts on listed plant species are unavoidable, USFWS and/or CDFW shall be consulted prior to proceeding with the project. The following restoration success criteria shall be required. 1. Establishment of restoration site(s) within the Tributaries Restoration Project and Mitigation Reserve Program Phase I, where plant restoration shall occur. The restoration site shall include a restoration mitigation and monitoring program detailing: (1) a clear description of the restoration activities to be completed, including: (a) any	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		recontouring, (b) methods for de-compacting soils, (c) a planting/seeding plan and plant/seed palette, and (d) an irrigation plan; (2) a comprehensive monitoring and maintenance plan, including: (a) a detailed monitoring and maintenance schedule, (b) a nonnative plant removal plan, including procedures to ensure that nonnative plants are not introduced or allowed to sustain within the restoration areas, (c) success standards (e.g., survival, native plant establishment, diversity, nonnative cover), (d) locations of permanent photo stations, and (e) adaptive management measures; (3) graphics and accompanying geographic information system (GIS) shapefiles of the restoration areas; and (4) a contingency plan (e.g., purchase of additional mitigation credits, mitigation at a different offsite location) in the event that the restoration areas do not meet success criteria. 2. Seed collection/salvage, if feasible. 3. A qualified botanist will identify and submit for approval an appropriate plant palette and restoration methodology compatible with the specific affected special-status species. Mitigation sites could include existing habitats in the Tributaries Restoration Project and Mitigation Reserve Program Phase I of the same vegetation community type, depending on site conditions and locations of special-status plants found. 4. Topsoil salvage and reapplication. **Mitigation Measure BIO-10: Designate an Qualified Biologist(s) to Ensure Compliance with Avoidance and Minimization Measures**. A USFWS-approved qualified biologist(s) with knowledge of least Bell's vireo, coastal California gnatcatcher, Santa Ana sucker, and	

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		their habitats shall function as a biological monitor. Prior to initiating Tributaries Restoration Project and Mitigation Reserve Program Phase I activities, the name(s) and resumes of all prospective biological monitors shall be submitted to the appropriate USFWS and CDFW offices. The biological monitor shall ensure compliance with the Tributaries Restoration Project and Mitigation Reserve Program Phase I avoidance and minimization measures. The qualified biologist shall be present on site during construction within and adjacent to occupied least Bell's vireo habitat to ensure that avoidance and minimization measures are in place according to specifications, and shall monitor construction within the vicinity of the least Bell's vireo and coastal California gnatcatcher territories at a frequency necessary to ensure that avoidance and minimization measures are properly followed. The qualified biologist shall report any non-compliance within 24 hours to USFWS. The qualified biologist shall be familiar with other special-status species known, or having the potential to occur, at the restoration sites and shall be present during construction activities involving initial ground disturbance, dewatering, and vegetation removal. If a special-status species is observed within the limits of disturbance, the biologist shall have authority to stop work in order to prevent harm to the individual. The individual animal shall be allowed to leave the site of its own volition; however, should the biologist determine this is not possible, the individual shall be relocated outside of the Tributaries Restoration Project and Mitigation Reserve Program Phase I by the qualified biologist. **Mitigation Measure BIO-11: Conduct Preconstruction Surveys for Special-Status Semi-Aquatic Species**. Prior	

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		to construction activity, a qualified biologist familiar with the special-status species, including southwestern pond turtle, two-striped gartersnake, and south coast gartersnake, and approved by USFWS and/or CDFW, shall conduct a preliminary survey of the affected water body and surrounding suitable habitat, noting habitat present and any special-status semi-aquatic species. If special-status species are present, they shall be captured and relocated by a qualified biologist. A Capture and Relocation Plan shall be prepared, which shall include requirements for qualified biologists, methods for special-status semi-aquatic species capture, requirements for any information to be collected for captured special-status semi-aquatic species, procedures for temporary containment and transport of captured special-status semi-aquatic species, details for approved release locations for special-status semi-aquatic species, and periodic and final reporting requirements for all relocated special-status semi-aquatic species. **Mitigation Measure BIO-12: Conduct Preconstruction Surveys Within the Limits of Disturbance for Special-Status Aquatic Species**. Prior to construction activity, a USFWS-approved Authorized Biologist (i.e., a biologist approved by USFWS and qualified to survey for and evaluate impacts on specific listed special-status species) familiar with the special-status species, including Santa Ana sucker and arroyo chub, and approved by USFWS and CDFW, shall conduct a preliminary survey of the affected water body and surrounding suitable habitat, noting habitat present and any special-status fishes. If special-status species are present, a capture and relocation plan shall be implemented to safely relocate these species (see mitigation measure BIO-13). This plan shall include requirements for qualified biologists, methods for special-status aquatic species capture,	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		requirements for any information to be collected for captured special-status aquatic species, procedures for temporary containment and transport of captured special-status aquatic species, details for approved release locations for special-status aquatic species, and periodic and final reporting requirements for all relocated special-status aquatic species. **Mitigation Measure BIO-13: Develop a Tributaries Restoration Project and Mitigation Reserve Program Phase I-Specific Dewatering, Diversion, and Aquatic/Semi-aquatic Species Rescue Plan (Dewatering Plan)**. Prior to dewatering activities, a dewatering plan including site-specific measures shall be developed and submitted to USFWS and CDFW for approval. Dewatering structures may include the use of sand bag, Port-a-dams, water bladder dams, K-rails, or driven sheet metal coffer dams. USFWS and CDFW shall review the proposed water diversion method, to approve the plan or provide the requirements for that approval. Valley District shall not commence dewatering of a stream/diversion of water without explicit approval from CDFW. A qualified biologist, familiar with the special-status species, and approved by USFWS and CDFW, shall be present during implementation of the dewatering plan. The plan shall include the following standard measures for the avoidance and minimization of impacts on special-status species resulting from dewatering activities. • Dewater aquatic habitat that shall be disturbed or removed 15 days prior to the initiation of construction activities to allow time for construction areas to dry and management of any deficiencies in the dewatering effort. If complete dewatering is not possible, potential snake prey (i.e., fish and tadpoles) shall be removed so	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		that snakes and other wildlife are not attracted to the construction area. • Prior to dewatering, blocking nets or other fish barriers shall be installed at the upstream and downstream extents of the reach to be dewatered to prevent aquatic species from entering. • All aquatic species shall be removed by a team of qualified biologists as the stream is dewatered. Native species shall be relocated to nearby suitable habitat downstream of the project sites. Nonnative species shall be sacrificed. • Pumps used for flow diversion shall be appropriately screened to prevent entrainment of all life stages of aquatic and semi-aquatic species. • Diversion outflow structures shall be appropriately placed and silt screens, settling ponds, and other equipment shall be used to minimize erosion, sediment deposition, and increased turbidity at the site of outflow. • Draw-down rates shall be implemented to maintain water quality, reduce crowding of fish, and prevent stranding. • Water quality shall be regularly monitored during dewatering to ensure conditions are sufficient for aquatic life. • Other measures shall be implemented to ensure minimal mortality associated with relocation or holding of captured individuals. The dewatering plan shall also specify the following: • The removal methods shall be implemented so as to minimize potential injury or mortality to native fish. All captured native fish shall be placed in ice chests filled with Santa Ana River water. The ice chest shall be kept	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		shaded and aerated at all times. The water temperature in the ice chests and condition of captured native fish shall be closely monitored. Any native fish removed from the site shall be relocated in suitable habitat downstream of the Tributaries Restoration Project and Mitigation Reserve Program Phase I. When handling native fish, the hands of all participants shall be free of sunscreen, lotion, and insect repellent. The qualified biologist shall submit a report to USFWS and CDFW identifying the number of any native fish that were relocated and other measures that were taken to minimize impacts on native fish. The report shall be submitted to USFWS and CDFW no more than 60 days following capture and relocation activities. If a southwestern pond turtle nest is found, a 100-foot no-disturbance buffer zone shall be established around the nest using flagging, fencing, and/or signage as appropriate. No construction activities shall occur within the Tributaries Restoration Project and Mitigation Reserve Program Phase I established buffer until a qualified biologist has determined that the nest is not in use. If an active southwestern pond turtle nest is found, the turtle nest shall be relocated by a qualified biologist, in consultation with CDFW, and in accordance with the aquatic species rescue plan for the project. If a southwestern pond turtle is observed at any time before or during construction, it shall be left alone to move out of the area on its own or may be relocated by a qualified biologist to a suitable aquatic habitat outside of the Tributaries Restoration Project and Mitigation Reserve Program Phase I; translocation of turtles can only be performed in consultation with CDFW, and by an individual possessing a valid scientific collecting permit. **Mitigation Measure BIO-14: Develop a Nesting Bird Management Plan**. Construction is likely to occur during	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		nesting bird season. Therefore, the Tributaries Restoration Project and Mitigation Reserve Program Phase I shall develop a nesting bird management plan in consultation with USFWS and CDFW. Approval by both USFWS and CDFW are required before the plan can be implemented. The nesting bird management plan shall include measures, some of which may have been detailed above, and an adaptive management program to avoid and minimize impacts on special-status and MBTA- or CFGC-protected bird species during nesting periods. The qualified biologist shall notify USFWS and CDFW of all Tributaries Restoration Project and Mitigation Reserve Program Phase I-related bird injuries or mortalities within 48 hours of discovery and shall follow the agencies' recommended actions, if any. This plan shall include a description of all federal, state, and local nesting bird policies, biologist qualifications, roles and responsibilities, definitions of active and inactive nest, survey requirements, active nest avoidance, nest buffer reductions, guidelines for working within nest buffers, notification and documentation, inactive nest management, and periodic and final reporting requirements. **Mitigation Measure BIO-15: Delineate Limits or Require Use of GPS-based exclusionary Technology on Construction Equipment to Prevent Encroachment of Construction Activities into Environmentally Sensitive Areas**. Before the start of construction activities, including establishment of staging areas, vegetation clearing, and/or grading activities, environmentally sensitive areas shall be mapped and either delineated with flagging or stakes, or the contractor shall be required to use global positioning system (GPS)-based exclusionary technology, along the limits of disturbance at each tributary restoration site to	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		prevent access into non-Tributaries Restoration Project and Mitigation Reserve Program Phase I areas. The limits of work shall be inspected during construction by a qualified biological monitor at a frequency necessary to ensure that protective measures are intact and construction activities are not encroaching into environmentally sensitive areas. Environmentally sensitive area fencing shall be inspected daily by the authorized biologist(s) or project construction personnel working under the direction of the authorized biologist(s). The authorized biologist(s) shall personally inspect the fencing no less than once per week. Environmentally sensitive area fencing shall be maintained in good working order for the duration of project activities. **Mitigation Measure BIO-16: Implement Best Management Practices**. The contractor will implement the following Best Management Practices (BMPs) during construction activities to protect aquatic habitat and other sensitive natural communities that provide habitat for special-status species. • Reduce the risk of wildfire ignition using spark arresters. • Limit personnel activities, vehicles, equipment, and construction materials to the designated work area. • Confine the ingress and egress of construction equipment and personnel to designated access points. Prohibit cross-country travel by vehicles and equipment. • Leave no open trenches or holes overnight without covering, fencing, or providing escape ramps with a minimum 3:1 slope. If trenches are not covered, they shall be inspected for trapped wildlife by a qualified biologist or biological monitor. Animals found shall be	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		captured and moved to the nearest safe location outside the construction area. • Develop an integrated weed management plan (IWMP) to minimize the potential introduction of new weeds and to control the spread of weeds resulting from ground disturbance. The IWMP shall be developed within the first year following issuance of the ITP and shall be reviewed and approved by the Wildlife Agencies. The IWMP shall include biologist qualifications, roles, and responsibilities; definitions of noxious weeds and invasive plants; pre-construction, construction, and operations phase weed control methods; and periodic and final reporting requirements. • Maintain adequate fire suppression capability in active construction areas including having a water tender on site in active construction areas during periods of high fire danger. A water truck or water buffalo with adequate hoses for fire control shall be maintained on the site during all habitat-clearing and construction activities during fire season. • Implement litter control measures. Trash and food items shall be contained in closed containers and removed daily to reduce the attractiveness of the area to opportunistic predators. • Limit vehicle speeds to 15 miles per hour except on paved roads with posted speed limits. If work must take place at night, the speed limit shall be 10 miles per hour. • Conduct new construction during the daylight hours to the extent feasible. • Confine the construction site disturbances to the smallest practical area, considering topography, placement of facilities, location of Covered Species	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		habitat, public health and safety, and other limiting factors, and use previously disturbed areas to the extent possible. • Use secondary containment devices such as drip pans under stationary engines, such as compressors, generators, light plants, etc., to prevent any leakage from entering runoff or receiving waters. • Inspect all construction equipment for leaks and regularly maintain such equipment to avoid soil contamination. Leaks shall be fixed or the equipment shall be taken out of service until the leak is fixed. Smears of petroleum products shall be cleaned prior to use. • Clean up any hazardous waste or spills immediately and dispose at an offsite location that receives the required grade of hazardous waste. • Store spill kits capable of containing hazardous spills on site. **Mitigation Measure BIO-17: Implement a Worker Environmental Awareness Training**. Prior to construction, a Worker Environmental Awareness Program (WEAP) shall be implemented for work crews by a qualified biologist(s). Training materials and briefings shall include, but not be limited to, discussion of ESA and CESA, the consequences of noncompliance with Tributaries Restoration Project and Mitigation Reserve Program Phase I permitting requirements, identification and values of special-status plant and wildlife species and sensitive natural plant community habitats, fire protection measures, hazardous substance spill prevention, and containment measures. **Mitigation Measure BIO-18: Consult with Agencies Regarding ESA and CESA Permitting Needed for Expanded Mitigation Reserve Program Phase II**	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		Restoration Activities. The Expanded Mitigation Reserve Program Phase II shall obtain federal and state incidental take authorization as necessary for all federally listed species identified as potentially being adversely affected by construction, operations, and/or maintenance within the Expanded Mitigation Reserve Program Phase II limits of disturbance. Implementation of the Upper Santa Ana Wash Plan HCP is expected to provide coverage for federally listed and/or state-listed species when it is approved. Specific Expanded Mitigation Reserve Program Phase II projects that predate the approval of the Upper Santa Ana Wash Plan HCP shall require Valley District to initiate Section 7 consultation with the appropriate federal agency for the purpose of insuring that the specific Expanded Mitigation Reserve Program Phase II projects are not likely to jeopardize the continued existence of any threatened or endangered species identified within the Expanded Mitigation Reserve Program Phase II project limits of disturbance, or result in the destruction or adverse modification of critical habitat for these species within the limits of disturbance. Expected terms and conditions may address take avoidance, habitat restoration and conservation, construction monitoring, and project operations for federally listed species identified or expected to occur within the Expanded Mitigation Reserve Program Phase II limits. Furthermore, those specific Expanded Mitigation Reserve Program Phase II projects that predate the approval of the Upper Santa Ana Wash Plan HCP and result in a take of a state-only listed species identified within the project limits shall require Valley District to apply for a take permit under Section 2081(b). Expected terms and conditions may address take avoidance, habitat restoration and conservation, construction monitoring, and project	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		operations for state-listed species identified or expected to occur within the Expanded Mitigation Reserve Program Phase II limits. **Mitigation Measure BIO-19: Conduct Pre-Construction Biological Clearance Surveys to Avoid or Minimize Direct Impacts on Special-Status Wildlife and Plants From Construction Activities**. To avoid or minimize direct impacts on special-status species from construction activities, a qualified biologist approved by USFWS and/or CDFW shall conduct appropriate preconstruction clearance surveys of the specific projects of the Expanded Mitigation Reserve Program Phase II for special-status bird species—including nesting bird surveys, coastal California gnatcatcher surveys, least Bell's vireo surveys, western burrowing owl surveys—special-status mammal species, special-status terrestrial reptile species, special-status semi-aquatic species, and special-status native plants and narrow endemic plants prior to any ground-disturbing activities. **Mitigation Measure BIO-20: Designate a Qualified Biologist**. A USFWS qualified biologist with knowledge of special-status species and their habitats that may be affected by the construction activities shall function as a biological monitor. The qualified biologist shall ensure compliance with the avoidance and minimization measures of the Expanded Mitigation Reserve Program Phase II. **Mitigation Measure BIO-21: Develop a Nesting Bird Management Plan**. To address potential conflicts between construction activities and the activities of nesting birds in the specific projects of the Expanded Mitigation Reserve Program Phase II, the project shall develop a nesting bird management plan in consultation with USFWS and CDFW. Approval by both USFWS and	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		CDFW is required before the plan is implemented. This plan shall include a description of all federal, state, and local nesting bird policies, biologist qualifications, roles and responsibilities, definitions of active and inactive nest, survey requirements, active nest avoidance, nest buffer reductions, guidelines for working within nest buffers, notification and documentation, inactive nest management, and periodic and final reporting requirements. **Mitigation Measure BIO-22: Delineate Limits or Require Use of GPS-Based Exclusionary Technology on Construction Equipment to Prevent Encroachment of Construction Activities into Environmentally Sensitive Areas**. Before the start of construction activities, including establishment of staging areas, vegetation clearing, and/or grading activities, environmentally sensitive areas shall be mapped and either delineated with flagging or stakes or the contractor shall be required to use GPS-based exclusionary technology along the specific projects of the Expanded Mitigation Reserve Program Phase II limits of disturbance to prevent access into non-project areas. The limits of work shall be inspected during construction by a qualified biological monitor at a frequency necessary to ensure that protective measures are intact and construction activities are not encroaching into environmentally sensitive areas. Environmentally sensitive area fencing shall be inspected daily by the authorized biologist(s) or project construction personnel working under the direction of the authorized biologist(s). The authorized biologist(s) shall personally inspect the fencing no less than once per week. Environmentally sensitive area fencing shall be maintained in good working order for the duration of project activities.	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		Mitigation Measure BIO-23: Implement Best Management Practices to Avoid or Minimize Construction-Related Spills or Leaks of Toxic Substances. The contractor will implement the following BMPs during construction activities to protect aquatic habitat and other sensitive natural communities that provide habitat for special-status species: • Reduce the risk of wildfire ignition using spark arresters. • Limit personnel activities, vehicles, equipment, and construction materials to the designated work area. • Confine the ingress and egress of construction equipment and personnel to designated access points. Prohibit cross-country travel by vehicles and equipment. • Leave no open trenches or holes overnight without covering, fencing, or providing escape ramps with a minimum 3:1 slope. If trenches are not covered, they shall be inspected for trapped wildlife by a qualified biologist or biological monitor. Animals found shall be captured and moved to the nearest safe location outside the construction area. • Develop an IWMP to minimize the potential introduction of new weeds and to control the spread of weeds resulting from ground disturbance. The IWMP shall be developed within the first year following issuance of the ITP and shall be reviewed and approved by the Wildlife Agencies. The IWMP shall include biologist qualifications, roles, and responsibilities; definitions of noxious weeds and invasive plants; pre-construction, construction, and operations phase weed control methods; and periodic and final reporting requirements.	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		• Maintain adequate fire suppression capability in active construction areas, including having a water tender on site in active construction areas during periods of high fire danger. A water truck or water buffalo with adequate hoses for fire control shall be maintained on the site during all habitat-clearing and construction activities during fire season. • Implement litter control measures. Trash and food items shall be contained in closed containers and removed daily to reduce the attractiveness of the area to opportunistic predators. • Limit vehicle speeds to 15 miles per hour except on paved roads with posted speed limits. If work must take place at night, the speed limit shall be 10 miles per hour. • Conduct new construction during the daylight hours to the extent feasible. • Confine the area of construction site disturbances to the smallest practical area, considering topography, placement of facilities, location of Covered Species habitat, public health and safety, and other limiting factors, and locate sites in previously disturbed areas to the extent possible. • Use secondary containment devices such as drip pans under stationary engines, such as compressors, generators, light plants, etc. to prevent any leakage from entering runoff or receiving waters. • Inspect all construction equipment for leaks and maintain equipment regularly to avoid soil contamination. Leaks shall be fixed or the equipment shall be taken out of service until the leak is fixed. Smears of petroleum products shall be cleaned prior to use.	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		• Clean up any hazardous waste or spills immediately and dispose of at an offsite location that receives the required grade of hazardous waste. • Store spill kits capable of containing hazardous spills on site. **Mitigation Measure BIO-24: Implement a Worker Environmental Awareness Training**. Prior to construction, a WEAP shall be implemented for work crews by a qualified biologist(s). Training materials and briefings shall include but not be limited to discussion of ESA and CESA, the consequences of noncompliance with specific Expanded Mitigation Reserve Program Phase II project permitting requirements, identification and values of special-status plant and wildlife species and sensitive natural plant community habitats, fire protection measures, hazardous substance spill prevention, and containment measures.	
Impact BIO-1.2: Construction-related indirect impacts on special-status species. Effects on special-status aquatic species related to increased suspended sediment and turbidity would be short term and minor and are considered to be less than significant. The temporary loss of aquatic habitat due to dewatering during construction would be less than significant. However, indirect impacts on special-status species as a result of construction-related noise, dust, and vibration would be potentially significant. Implementation of mitigation measure BIO-25 would reduce construction related indirect impacts on special-status species from noise, dust, and vibration impacts to a less-than-significant level.	Potentially significant	**Mitigation Measure BIO-25: Implement Best Management Practices to Avoid or Minimize Impacts on Special-Status Species From Construction- and Operations-Related Impacts**. To avoid noise impacts on special-status species from construction and operations activities, the Tributaries Restoration Project and Mitigation Reserve Program Phase I shall include measures necessary to reduce construction noise levels to comply with local noise ordinances. All heavy equipment shall install and maintain mufflers or other noise-reducing features. A biological monitor shall monitor at the edge of the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance or areas not cleared of vegetation to ensure noise levels do not result in a disruption to nesting birds. If construction noise is negatively affecting nesting birds (e.g., a discernable negative change in behavior is	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		observed, such as nest flushing or adults not returning to the nest with prey) then work shall cease in the immediate area until adequate controls such as noise barriers can be established to reduce noise levels. Noise barriers may include temporary noise blankets or noise shrouds. If construction noise may affect nesting birds, it may be most effective to construct noise barriers well prior to February 15, the start of the nesting season, to ensure construction delays do not occur. All noise barriers shall be constructed within the Tributaries Restoration Project and Mitigation Reserve Program Phase I limits of disturbance. To control fugitive dust, active construction and operations areas shall be watered regularly to control dust and minimize impacts on adjacent vegetation.	
Impact BIO-1.3: Indirect Impacts on Special-Status Species Resulting from Habitat Modifications. Habitat improvements at each site would result in temporary impacts on native vegetation communities, nonnative and invasive vegetation communities, and other land cover types, including open water, disturbed habitat, and urban/developed areas. Indirect impacts on special-status species resulting from habitat modifications would be considered potentially significant. With implementation of mitigation measures BIO-1 through BIO-17 (for the Tributaries Restoration Project and Mitigation Reserve Program Phase I) and BIO-18 through BIO-24 (for the Expanded Mitigation Reserve Program Phase II), indirect impacts from habitat modifications would be avoided and/or minimized to a less-than-significant level. By design, the project would: increase the amount and quality of habitat for the Santa Ana sucker and other sensitive native species and enhance jurisdictional aquatic resources, restore existing channels	Potentially significant	Mitigation measures BIO-1 through BIO-24	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
and existing floodplain tributaries, enhance existing riparian and floodplain habitats, limit human disturbance, and control nonnative invasive species.			
Impact BIO-2: Potential to result in 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. Although the proposed project would result in a net gain in riparian habitat or other sensitive habitat types for the long term, construction would cause the temporary loss or degradation of habitat potentially used by native species. Approximately 0.55 acre of native vegetation communities and approximately 31.26 acres of native vegetation communities are expected to be temporarily degraded through construction activities for the Tributaries Restoration Project and Mitigation Reserve Program Phase I and this impact would be significant. Implementation of mitigation measures BIO-16 and BIO-26 would reduce this impact to less-than-significant levels. Implementation of mitigation measure BIO-27 would reduce the Expanded Mitigation Reserve Program Phase II impacts resulting from any adverse effects on any riparian habitat or other sensitive natural community to less-than-significant levels.	Potentially significant	Mitigation measure BIO-16 **Mitigation Measure BIO-26: Restore Temporarily Affected Riparian Habitat or Other Sensitive Natural Communities**. Prior to any ground disturbances a site-specific revegetation plan shall be prepared by a qualified restoration ecologist that includes a description of existing conditions for each area, disturbances, site preparation, revegetation methods, maintenance and monitoring criteria, performance standards, and adaptive management practices. The plan shall identify cover standards that shall be developed for each plant community target, and cover values established for each layer (shrub, herb, and/or tree layers). The restoration plan shall include a restoration mitigation and monitoring program detailing: (1) a clear description of the restoration activities to be completed, including: (a) any recontouring, (b) methods for de-compacting soils, (c) a planting/seeding plan and plant/seed palette, and (d) an irrigation plan; (2) a comprehensive monitoring and maintenance plan, including: (a) a detailed monitoring and maintenance schedule, (b) a nonnative plant removal plan, including procedures to ensure that nonnative plants are not introduced or allowed to sustain within the restoration areas, (c) success standards (e.g., survival, native plant establishment, diversity, nonnative cover), (d) locations of permanent photo stations, and (e) adaptive management measures; (3) graphics and accompanying GIS shapefiles of the restoration areas; and (4) a contingency plan (e.g., purchase of additional mitigation credits, mitigation at a different offsite location) in the event that the restoration areas do not	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		meet success criteria. Revegetation shall be implemented immediately following construction activities to ensure no permanent net loss of sensitive habitats would occur. Seeds and container stock shall be from regional stock. **Mitigation Measure BIO-27: Restore Temporarily Affected Riparian Habitat or Other Sensitive Natural Communities**. Prior to any ground disturbances a site-specific revegetation plan shall be prepared by a qualified restoration ecologist that includes a description of existing conditions for each area, disturbances, compensation mitigation, site preparation, revegetation methods, maintenance and monitoring criteria, performance standards, and adaptive management practices. The plan shall identify cover standards that shall be developed for each plant community target, and cover values established for each layer (shrub, herb, and/or tree layers). The restoration plan shall include a restoration mitigation and monitoring program detailing: (1) a clear description of the restoration activities to be completed, including: (a) any recontouring, (b) methods for de-compacting soils, (c) a planting/seeding plan and plant/seed palette, and (d) an irrigation plan; (2) a comprehensive monitoring and maintenance plan, including: (a) a detailed monitoring and maintenance schedule, (b) a nonnative plant removal plan, including procedures to ensure that nonnative plants are not introduced or allowed to sustain within the restoration areas, (c) success standards (e.g., survival, native plant establishment, diversity, nonnative cover), (d) locations of permanent photo stations, and (e) adaptive management measures; (3) graphics and accompanying GIS shapefiles of the restoration areas; and (4) a contingency plan (e.g., purchase of additional mitigation credits, mitigation at a different offsite location) in the event that the restoration areas do not meet success	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		criteria. Revegetation shall be implemented immediately following construction activities to ensure no permanent net loss of sensitive habitats would occur. Seeds and container stock shall be from regional stock.	
Impact BIO-3: Potential to result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (e.g., marshes, vernal pools, coastal wetlands) through direct removal, filling, hydrological interruption, or other means. The proposed project may adversely affect wetland and non-wetland waters of the U.S. and state and CDFW jurisdictional resources by direct modification (i.e., restoration and creation) of these habitats. This direct impact would be considered potentially significant. With implementation of mitigation measure BIO-28, adverse effects on federally protected wetlands, non-wetland waters, and state waters (riparian and streambed) would result in a net increase in area as well as functions and values within state and federal jurisdiction following restoration activities. Therefore, this impact would be reduced to a less-than-significant level with mitigation.	Potentially significant	**Mitigation Measure BIO-28: Obtain Clean Water Act Section 404 and 401 Authorization and California Fish and Game Code Section 1600 et seq. Authorization**. The Tributaries Restoration Project and Mitigation Reserve Program Phase I shall require authorization from USACE pursuant to Section 404 of the CWA, the RWQCB pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act, and from CDFW pursuant to Section 1602 of the CFGC, as a result of temporary and permanent impacts on jurisdictional aquatic resources. Authorizations from these agencies shall be obtained prior to construction. Terms and conditions may include: compensatory mitigation requirements, aquatic life movement requirements, spawning area requirements, migratory bird breeding area requirements, water flow management requirements, 100-year floodplain requirements, soil erosion and sediment control requirements, water quality requirements, and pre-construction notification and coordination requirements.	Less than significant
Impact BIO-4: Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites. Impacts from the project on the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, and the impedance of the use of native wildlife nursery sites, would be considered significant. Implementation of mitigation measures BIO-2	Potentially significant	Mitigation measures BIO-2 through BIO-9, BIO-11, BIO-12, BIO-19, BIO-26, and BIO-28	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
through BIO-9, BIO-11 and BIO-12, BIO-19, BIO-26, and BIO-28 would avoid or minimize environmental effects on migratory fish, wildlife species, established wildlife corridors, and native wildlife nursery sites. Overall, the project would increase the quantity and quality of aquatic habitat, native riparian habitat, native scrub habitat, and grassland habitat, thereby increasing the functions and values related to breeding and connectivity for wildlife movement through the sites and within the larger Santa Ana River floodplain.			
Impact BIO-5: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. The project sites are within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan and portions are within the Stephens' Kangaroo Rat HCP. The proposed project is intended to align with the provisions, goals, and objectives of these HCPs as well as the draft Upper Santa Ana River HCP. The proposed project would be consistent with these adopted plans and is expected to provide a net improvement to stream, wetland, riparian, scrub, and grassland habitat quality. Implementation of mitigation measures BIO-2 through BIO-9, BIO-11 and BIO-12, BIO-18 through BIO-23, BIO-25, BIO-26, and BIO-28 and compliance with city/county policies would ensure compliance with the goals of the HCPs for the region and would reduce impacts to a less-than-significant level.	Potentially significant	Mitigation measures BIO-2 through BIO-9, BIO-11, BIO-12, BIO-18 through BIO-23, BIO-25, BIO-26, and BIO-28	Less than significant
Cultural Resources			
Impact CUL-1: Substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines. Ground-disturbing activities associated with the Tributaries	Potentially significant	**Mitigation Measure CUL-1: Retain a Qualified Archaeologist.** The applicant shall retain a qualified archaeologist, defined as an archaeologist who meets the Secretary of the Interior's Standards for professional	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
Restoration Project and Mitigation Reserve Program Phase I may result in the discovery of previously unidentified historical resources. One historical-period built environment resource (P-33-003361) is located within the Expanded Mitigation Reserve Program Phase II study area. With implementation of mitigation measures CUL-1 and CUL-2 (for the Tributaries Restoration Project and Mitigation Reserve Program Phase I and the Expanded Mitigation Reserve Program Phase II) and CUL-3 (for the Expanded Mitigation Reserve Program Phase II), impacts would be reduced to a less-than-significant level.		archaeology, to carry out all mitigation measures related to archaeological and historical-period resources. The qualified archaeologist shall work under the direction of a qualified archaeological Principal Investigator. **Mitigation Measure CUL-2: Unanticipated Discoveries.** If an above-surface artifact, cultural resources of potential significance, or archaeological deposit of potential significance is discovered, the qualified archaeologist shall have the authority to temporarily halt construction activities within 25 feet of the find and shall be given reasonable time to map its location with a global positioning system device and recover the item. If buried cultural resources of potential significance are discovered inadvertently during ground-disturbing activities, work shall be temporarily halted in the area and within 50 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the lead agency. If the find is prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest regarding the project shall be undertaken. The Principal Investigator will notify the lead agency to discuss the significance determination and shall also submit a letter to the lead agency indicating whether additional mitigation is required. If the discovery is determined to be not significant 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-period research questions,	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		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. **Mitigation Measure CUL-3: Avoidance of Significant Historical Resource through Establishment of Environmentally Sensitive Areas (ESAs).** Impacts on significant historical resources and/or archaeological resources identified in Table 3.4-3 and Table 3.4-4 should be avoided through establishing fencing around the boundaries of these known resources and delineating these locations as ESAs. The placement of protective fencing can include a buffer beyond the known boundaries of archaeological or historical sites to account for potentially unknown buried resources. Buffers of 25 feet have been recommended for sites P-33-000621, P-33-000622, P-33-03361, and P-33-009652. Due to conditions surrounding the sites, a 10-foot buffer is recommended for P-33-000127 and no buffer is recommended for site P-33-000884. Worker training should include language to the effect that ESAs must be avoided and cannot be entered on foot or with heavy equipment. Reasonable signage indicating the fenced area is an ESA should be posted. Should sacred objects or objects of religious importance to Native American groups be identified, consultation with local Native American tribes who have expressed interest regarding the project shall be undertaken and those materials should be preserved in place to the extent feasible to maintain the critical relationship between built	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		environment resources and archaeological artifacts and their archaeological context.	
Impact CUL-2: Substantial adverse change in the significance of an archaeological resources as defined in Section 15064.5 of the State CEQA Guidelines. Seven previously recorded archaeological sites are located within the Tributaries Restoration Project and Mitigation Reserve Program Phase I study areas and would be affected by ground disturbance associated with this work. Twelve previously recorded archaeological resources and two newly discovered isolated artifacts are located within the Expanded Mitigation Reserve Program Phase II study area. Implementation of mitigation measures CUL-1 and CUL-3 would provide further evaluation regarding onsite archaeological resources. If it is determined that avoidance is not possible, then mitigation measures CUL-2, CUL-4, and CUL-5 would be implemented to lessen the significance of impacts.	Potentially significant	Mitigation measures CUL-1, CUL-2, and CUL-3 **Mitigation Measure CUL-4: Provide Archaeological and Native American Monitoring and Prepare Archaeological Monitoring Plan.** If avoidance is not feasible, and if project-related ground disturbance is anticipated to occur at archaeological sites identified in Tables 3.4-3 and 3.4-4, a qualified archaeologist shall be present to monitor the ground-disturbing activity. If ground-disturbing activities are to proceed at prehistoric archaeological sites, a Native American monitor shall be retained in addition to an archaeologist. The Native American monitor, if required, should be affiliated with a local Native American tribe. Prior to the commencement of ground-disturbing activity, 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 must also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP must include roles and responsibilities for cultural resources staff and contact information for any Archaeological Principal Investigator, archaeological and Native American monitors, and appropriate management staff. The AMP must 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.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		The AMP must also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present. The AMP must require attendance by construction personnel at a preconstruction meeting led by either the Principal Investigator or qualified archaeologist in which the Principal Investigator or qualified archaeologist will explain the anticipated likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if such a resource is discovered. The AMP must include an example proposed letter regarding transfer of salvaged materials to an appropriate museum curation facility, an example daily monitoring report form, and all other pertinent archaeological resources recordation and analysis forms. Should unanticipated discoveries be made during archaeological monitoring, then the unanticipated discoveries protocol described in CUL-2 will be enacted. In the event of an unanticipated discovery of human remains, the archaeological monitor will follow the unanticipated discovery protocols (CUL-6) described below. **Mitigation Measure CUL-5: Development and implementation of an Archaeological Treatment Plan (ATP).** To evaluate archaeological sites for which information regarding the potential for listing in the NRHP or CRHR is not available due to a lack of data on the full vertical and horizontal extents and the archaeological integrity of the site, the lead agency shall develop an Archaeological Treatment Plan (ATP) prior to ground-disturbing activities that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. Development of the ATP should include consultation with local Native American tribes	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		who have expressed interest regarding the project. Implementation of such a plan may include mechanical and/or manual excavations to provide data on the cultural constituents at the site and the depositional context of such materials (if found to exist). These data can be used to determine the integrity of the site and to make a formal evaluation based on the eligibility criteria set forth in CEQA and Section 106 of the National Historic Preservation Act for inclusion in the CRHR and NRHP. The ATP should define the parameters of archaeological testing at the site, and the extent of excavation and analysis of any materials recovered. The ATP must also include guidelines for treatment and curation of any materials recovered during the testing process. Following implementation of the ATP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment shall be completed.	
Impact CUL-3: Significant impact if it would disturb any human remains, including those interred outside of formal cemeteries. The proposed project could unearth, expose, or disturb previously unknown human remains. Implementation of mitigation measure CUL-6 provides a plan if human remains are found, which would reduce impacts to less-than-significant levels.	Potentially significant	**Mitigation Measure CUL-6: Human Remains and Associated or Unassociated Funerary Objects**. The discovery of human remains is always a possibility during ground-disturbing activities; if human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, all work within 50 feet of the find shall be halted until the remains have been evaluated by the county coroner, and appropriate action taken in coordination with the NAHC, in accordance with Section 7050.5 of the California Health and Safety Code or, if the remains are Native American, Section 5097.98 of the PRC. If the human remains are determined to be prehistoric,	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		the coroner will notify the NAHC, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	
Geology, Soils, and Paleontological Resources			
Impact GEO-1: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature. There is the potential for deeper excavations to have the potential to affect unique (significant) paleontological resources. Mitigation measures PALEO-1 and PALEO-2 would be implemented to ensure that the proposed project would result in less-than-significant impacts on unique paleontological resources or sites or unique geologic features.	Potentially significant	**Mitigation Measure GEO-1: Retain a Qualified Paleontologist and Develop a Paleontological Monitoring Plan (PMP)**. The applicant shall retain a qualified paleontologist defined as a paleontologist who meets the requirements as a Principal Investigator/ Project Paleontologist per the guidelines of the Society of Vertebrate Paleontologists. The Principal Investigator/ Project Paleontologist will review any paleontological finds encountered during monitoring and provide input for significance determinations and procedures for recovery (if necessary). A Paleontological Monitoring Plan (PMP) shall be developed by the qualified paleontologist prior to the start of ground-disturbing activities and paleontological monitoring. The PMP shall detail and emphasize training for construction workers and qualifications necessary for paleontological monitors. The plan will also detail the locations where paleontological monitoring will take place (Lower Hole Creek, southeastern portion of Hidden Valley Creek, and southern Anza Creek/Old Ranch Creek sites) and the depths of excavation that will require monitoring (deeper than 9 feet). The PMP will include contact information for the Principal Investigator/Project Paleontologist, paleontological monitors, and appropriate management staff.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		The PMP will detail procedures for collecting macro to micro fossils; general procedures for recovered specimens and specimen identification, repository institution identification and associated repository fees, and permits for collecting; and guidelines for preparing the paleontological monitoring and mitigation final report. The PMP will also include protocols for communication and response should an unanticipated discovery be made at times that paleontological monitors are not present. The PMP will require attendance at a preconstruction meeting led by a Qualified Principal Investigator/Project Paleontologist. The Project Paleontologist will explain the likelihood for encountering paleontological 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 PMP will include an example letter regarding donating salvaged fossils to an appropriate museum repository, an example of a daily monitoring report form, and an example of a paleontological training acknowledgement form. **Mitigation Measure GEO-2: Provide Paleontological Monitoring**. Paleontological monitoring will be conducted by a paleontological monitor that meets the qualifications set forth by the Society of Vertebrate Paleontology (SVP) as a Paleontological Resource Monitor. Oversight of paleontological monitoring and recovery of any fossils will be conducted by a professional paleontologist that meets the requirements as a Principal Investigator, Project Paleontologist per the guidelines of the SVP. Paleontological monitoring will be conducted under the direction of the Paleontological Principal Investigator/ Project Paleontologist. Paleontological monitors will	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		record observations on a daily monitoring report form and will notify the Principal Investigator/Project Paleontologist immediately upon the identification of a paleontological resource (fossil) during monitoring. The paleontological 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. Monitoring efforts can be reduced or ended based upon field conditions, site assessment, and professional judgment of the Paleontological Principal Investigator/Project Paleontologist. The monitor shall have authority to temporarily divert grading away from exposed fossils in order to professionally and efficiently recover the fossil specimens and collect associated data. All efforts to avoid delays in project schedules shall be made. To prevent construction delays, paleontological monitors shall be equipped with the necessary tools for the rapid removal of fossils and retrieval of associated data. This equipment shall include handheld global positioning system receivers, digital cameras, and cell phones, as well as a tool kit with specimen containers, matrix sampling bags, field labels, field tools (awls, hammers, chisels, shovels, etc.), and plaster kits. At each fossil locality, field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples shall be collected and submitted for analysis. Fossils collected, if any, shall be transported to a paleontological laboratory for processing where they shall be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		analysis, and deposited in a designated paleontological curation facility (such as the Western Science Center). Following analysis, a Report of Findings with an appended itemized inventory of specimens shall be prepared. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, shall signify completion of the program to mitigate impacts on paleontological resources.	
Greenhouse Gas Emissions			
Impact GHG-1: Generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Because project emissions would not exceed SCAQMD's bright-line screening threshold or be inconsistent with state plans, greenhouse gas (GHG) emissions produced by the project would not result in a significant impact.	Less than significant	No mitigation necessary	Less than significant
Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Because GHG reduction measures are typically designed for reducing GHG emissions associated with human elements (e.g., building energy consumption, vehicle travel, landfill waste), the GHG reduction measures are largely not applicable to the project. Therefore, the project would not conflict with implementation of regional plans enacted to reduce GHG emissions.	Less than significant	No mitigation necessary	Less than significant
Hazards and Hazardous Materials			
Impact HAZ-1: Creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the	Less than significant	No mitigation necessary	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
environment. Construction-related hazardous materials would be used during construction of the proposed project, including fuel, solvents, chemicals, and oils, and these substances could be released in small amounts. Upon completion of the proposed project, operation and maintenance would not require the use of substantial quantities of hazardous materials. No significant hazard to the public or environment through release of hazardous materials is likely as a result of restoration work or program implementation.			
Hydrology and Water Quality			
Impact HYD-1: Substantial depletion of groundwater supplies or substantial interference with groundwater recharge. The implementation of groundwater wells and withdrawal of up to 4,501 acre-feet per year would not result in substantial depletion of groundwater supplies from the Riverside-Arlington groundwater basin or San Bernardino Basin Area. The proposed project would also not result in substantial interference with groundwater recharge because most of the pumped groundwater would ultimately be infiltrated back into the watershed. The Expanded Mitigation Reserve Program Phase II component would not result in the need for additional groundwater supplies and would not result in a substantial interference with groundwater recharge. Therefore, impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact HYD-2: Substantial alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation on site or off site. Activities associated with the proposed project would not result in substantial alteration of existing drainage patterns or lead to erosion or siltation on site or off site	Less than significant	No mitigation necessary	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
as compared to existing conditions; therefore, impacts would be less than significant.			
Impact HYD-3: Substantial alteration of existing drainage patterns in a manner that would result in flooding on site or off site. During construction, the drainage pattern of the site or area may be temporarily altered and could result in local onsite and temporary flooding. However, implementation of the Stormwater Pollution Prevention Plan would reduce the potential for flooding on site/off site as a result of altering existing drainage patterns. Following construction and other ground-disturbing activities such as floodplain enhancement, drainage patterns would be restored and improved. Therefore, impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact HYD-4: Placement of structures that would impede or redirect floodflows within a 100-year flood hazard area. While the project areas are within the 100-year flood hazard area of the Santa Ana River, the proposed bank stabilization and habitat structure construction on the tributaries and mitigation areas would have a negligible or positive effect on the Santa Ana River 100-year flood hazard area. Because the proposed project would not result in the placement of structures that would impede or redirect flood flows within a 100-year flood hazard area, impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact HYD-5: Exposure of people or structures to significant risk involving flooding, including flooding as a result of the failure of a levee or dam. The primary flood risk in the area is the Santa Ana River and the proposed project would have a negligible or positive impact on Santa Ana River flood risk. Therefore, the proposed project would not expose people or structures	Less than significant	No mitigation necessary	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
to significant risk involving flooding, including flooding as a result of the failure of a levee or dam, and impacts would be less than significant.			
Impact HYD-6: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The proposed project would not introduce any new pollutant sources that could degrade water quality within the Santa Ana River or its tributaries. The proposed project would comply with local stormwater and grading and erosion control ordinances, and the Construction General Permit. The proposed project would not result in a substantial interference with groundwater recharge, and the project would utilize groundwater for surface flow in the channels and then the water would be returned to the mainstem Santa Ana River to flow downstream. The project would not conflict with or obstruct implementation of a sustainable groundwater management plan, and impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Noise			
Impact NOI-1: Exposure of persons to or generation of noise levels in excess of applicable standards. The primary sources of noise associated with the project are construction, maintenance activities, and operation of onsite groundwater wells. Construction work associated with the proposed project would comply with all requirements under the City of Riverside Municipal Code, City of Jurupa Valley Municipal Code, and Riverside County Code with respect to noise standards. There would be no impacts related to the short-term noise associated with construction of the proposed project. Improvement measure IM-NO-1 is suggested to further reduce noise emitted by construction and maintenance	Potentially significant	**Improvement Measure NOI-1: Construction and Maintenance Noise Minimization and Notification**. In order to minimize disruption and potential annoyance during project construction and maintenance, the project sponsor should implement the following construction and maintenance activity noise minimization measures: (a) Maintain all mechanized equipment to be used at the project site in good working order. (b) Ensure that all mechanized equipment utilizes noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
equipment and to schedule high noise-producing activities appropriately. The only permanent noise sources that would potentially be introduced as a result of the project would be groundwater well pumps at Old Ranch Creek and Hidden Valley Creek (one well at each site). No exemptions for pump noise would apply for receptors located in the city of Riverside, and the City's operational noise limits would apply. Groundwater pump noise levels are anticipated to exceed nighttime noise standards by up to 8 dB at the closest homes to the south of the potential groundwater well at Hidden Valley Creek. The noise levels are also anticipated to exceed nighttime noise standards by up to 2 dB at the closest homes to the south of the potential groundwater well at Old Ranch Creek. Implementation of mitigation measure NOI-1 would reduce groundwater well pump noise impacts to a less-than-significant level.		(c) Mechanized equipment shall be operated only when necessary, and shall be switched off when not in use. (d) Schedule high noise-producing activities during times when they would be least likely to interfere with the noise-sensitive activities of the neighboring land uses, when possible. (e) Provide advance notification to surrounding land uses disclosing the construction schedule, including the various types of activities that would be occurring throughout the duration of the construction period. (f) The construction contractor shall provide the name and telephone number of an onsite construction liaison. If construction noise is found to be intrusive to the community (complaints are received), the construction liaison shall investigate the source of the noise and require that reasonable measures be implemented to correct the problem. The lead agency may choose to impose improvement measure IM-NO-1 on the proposed project as a condition of project approval. **Mitigation Measure NOI-1: Reduce Groundwater Well Pump Noise to Comply with the City of Riverside Municipal Code**. This mitigation measure would only apply if the groundwater wells are utilized by the project. If either the Hidden Valley Creek or Old Ranch Creek groundwater wells are eliminated from the project, then their associated noise impact would also be eliminated and this mitigation measure would no longer be necessary for the eliminated location(s). In the event that the groundwater pumps are included as part of the project, they must be designed and installed to ensure that their operation complies with the City of Riverside's	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		noise limits at the closest residential receptors. This may be achieved using one or more of the following methods: (a) Specify a well design at Hidden Valley Creek that limits combined pump and motor noise levels to a total sound pressure of 100 dBA or less at a distance of 1 meter, and a well design at Old Ranch Creek that limits combined pump and motor noise levels to a total sound pressure of 106 dBA or less at a distance of 1 meter. Techniques for achieving these specifications may include, but are not limited to: • Selecting quieter pumps and motors. • Shielding pumps and motors with noise barriers or enclosures. The design of such shielding should be based on final location details and pump/motor noise data; or (b) Provide an acoustical study based on final plans and pump/motor noise data that demonstrates compliance with the City's noise ordinance; or (c) Restrict pump operation to the daytime hours of 7:00 a.m. to 10:00 p.m. in order to avoid the affected nighttime hours.	
Impact NOI-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. Heavy construction equipment would generate groundborne vibration that could affect nearby structures or residents. Vibration impacts with respect to human annoyance and potential building damage would be less than significant for the Tributaries Restoration Project and Mitigation Reserve Program Phase I. Maintenance and operational impacts would be less than construction impacts. The impact would be greater for the Expanded Mitigation Reserve Program Phase II because a few buildings are inside the impact distances for human annoyance. As a result, impacts at these	Potentially significant	**Mitigation Measure NOI-2: Implement Measures to Avoid Groundborne Vibration**. Implement the following measures to avoid groundborne vibration impacts at the nearby residential structures. (a) During all construction and maintenance activities, avoid the use of full-size earthmoving equipment (e.g., excavators, graders, backhoes) within 9 feet of any building or 52 feet of any habitable structure (auxiliary buildings such as garages, sheds, etc. are not considered to be habitable structures). (b) During all construction and maintenance activities, avoid the use of loaded trucks on rough terrain within 8 feet of any building or 45 feet of any	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
locations would be potentially significant and implementation of the avoidance measures in mitigation measure NOI-2 would reduce the impact to less-than-significant levels.		habitable structure (auxiliary buildings such as garages, sheds, etc. are not considered to be habitable structures). Alternately, loaded trucks shall use paved roads or travel at low speeds (10 miles per hour or less) on properly maintained dirt roads. (c) During all construction and maintenance activities, avoid the operation of small earthmoving equipment (e.g., skid steers, mini excavators, bobcats) within 1 foot of any building or 3 feet of any habitable structure (auxiliary buildings such as garages, sheds, etc. are not considered to be habitable structures). (d) If the avoidance distances specified in (a), (b), or (c) above cannot be observed, then additional steps shall be taken on a project-by-project basis to reduce impacts. These steps may include, but are not limited to: o Notification and coordination with potentially affected residents to provide advance notice of potential groundborne vibration, including the dates and times when it may occur. o Site-specific analyses that include additional details such as specific soil conditions, specific equipment to be used, and details of the potentially affected structure(s) (e.g., age, conditions). o Assessment by a qualified structural or geotechnical engineer to determine if there are any risks to buildings from the vibration. If the engineer identifies any potential risks, it may be prudent to survey (including photographing and/or videotaping) the potentially affected buildings in order to provide a record of the existing conditions before construction.	

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
		○ If considered appropriate by the structural/geotechnical engineer, tests, observations, or monitoring should be performed on site during the construction activities to ensure the structural stability of the buildings. This may include vibration measurements obtained inside or outside of the buildings.	
Impact NOI-3: Generation of a substantial permanent increase in existing ambient noise levels in the project vicinity. Construction and maintenance activities would be temporary or periodic and, as such, would not cause any permanent increase in existing ambient noise levels. The only permanent noise sources that would potentially be introduced as a result of the project would be a groundwater well at Old Ranch Creek and/or Hidden Valley Creek. The analysis indicates that noticeable noise increases with groundwater well noise levels exceeding local ordinance standards would occur during nighttime hours at receivers 2 and 11. The impact at these locations would be potentially significant.	Potentially significant	Mitigation measure NOI-1	Less than significant
Impact NOI-4: Creation of a substantial temporary or periodic increase in existing ambient noise levels in the project vicinity. As discussed in Impact NOI-1 above, construction work associated with the proposed project would comply with all requirements under the City of Riverside Municipal Code, City of Jurupa Valley Municipal Code, and Riverside County Code with respect to noise standards for any construction work occurring within each respective jurisdiction. Periodic maintenance activities would be carried out using a mix of hand tools and/or construction equipment such as backhoes. Because this activity would be similar to the original construction activity, but on a much-reduced scale,	Less than significant	Improvement measure IM-NO-1	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
average noise levels and the associated noise increases would be less than construction. Maintenance work would be temporary and would be conducted only within the daytime hours permitted by the applicable local noise ordinances and subject to any permitting requirements therein. The impact during maintenance activities would be less than significant.			
Population and Housing			
Impact POP-1: Displacement of a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere. The proposed project is not expected to affect population and housing, as this project would not include removal or construction of any permanent residences. Relocation of transient individuals, removal of homeless encampments, and cleanup of remaining refuse would be coordinated among the County of Riverside, City of Riverside Office of Homeless Solutions, and City of Jurupa Valley prior to construction of the proposed project. Therefore, impacts would be less-than-significant.	Less than significant	No mitigation necessary	Less than significant
Impact POP-2: Displacement of a substantial number of people, necessitating the construction of replacement housing elsewhere. The proposed project would not result in the displacement of homeless encampments in order to conduct and maintain tributary restoration sites and implement projects associated with the Mitigation Reserve Program because the relocation of transient individuals and removal of homeless encampments would occur prior to construction by local jurisdictions. Construction of replacement housing units elsewhere is unlikely, as the displaced homeless population would be transitioned into suitable residences by existing local agency homeless programs	Less than significant	No mitigation necessary	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
and services prior to construction. Therefore, impacts would be less than significant.			
Recreation			
Impact REC-1: Increased use of existing recreational facilities, resulting in substantial physical deterioration. Improvements to the proposed project sites would result in an increase in recreational use by the public. This increase in recreational use would be considered an overall benefit to the community and would not result in substantial physical deterioration of any parks or recreational facilities. Therefore, impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact REC-2: Construction or expansion of recreational facilities that might have an adverse physical effect on the environment. The proposed project would involve restoration of degraded parks and recreational facilities within the County of Riverside and the cities of Riverside and Jurupa Valley, which would be considered an overall benefit to the community and would not result in adverse effects on the environment. Therefore, impacts would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Tribal Cultural Resources			
Impact TCR-1: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). While no tribal cultural resources (TCRs) were identified through Assembly Bill 52 consultation or through a search of the records held by the Native American Heritage Commission, one archaeological site was identified	Potentially significant	Mitigation measures CUL-1, CUL-2, CUL-3, CUL-4, and CUL-5. **Mitigation Measure TCR-1: Protection of P-33-000884 (CA-RIV-884)**. Based on recommendations from consultation with a representative of the Morongo Tribe of Mission Indians, TCR-1 would be implemented prior to project-related ground disturbance to protect archaeological site P-33-000884. Because P-33-000884 has already been damaged by vandalism, additional protective measures are necessary to preserve this site. Protective measures can include, but are not limited to,	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
within the project area that has cultural value to a California Native American tribe and is potentially eligible for inclusion in the California Register of Historical Resources. Mitigation measure TCR-1 is proposed to preserve and protect the site as much as is feasible. Mitigation measures CUL-1 and CUL-2 would be implemented to avoid impacts on this resource to the maximum extent feasible. While avoidance of the resources (known and unknown) is the preferred method of treatment, if avoidance of the resource and any unknown TCRs associated with it is not feasible, then mitigation measures CUL-3, CUL-4, and CUL-5 would be implemented. Therefore, impacts would be reduced to a less-than-significant level with mitigation.		the placement of protective fencing surrounding the feature and/or the planting of repellent plant species such as poison oak to prevent further vandalism of the site.	
Impact TCR-2: Potential to cause a substantial adverse change in the significance of a tribal cultural resource with cultural value to a California Native American tribe and that is a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Because the proposed project would involve ground disturbance adjacent to the resource, it is possible that the project could cause a substantial adverse impact on buried archaeological deposits associated with this site (if they exist). Mitigation measure TCR-1 is proposed to both preserve and protect the site as much as is feasible. Implementation of mitigation measure CUL-4 would provide for archaeological and Native American monitoring. Mitigation measure CUL-5 relates to the treatment of unanticipated discoveries during the monitoring process. Mitigation measure CUL-6 involves the treatment of human remains or associated or unassociated funerary objects that may be uncovered during ground-disturbing activities for the proposed project. With implementation	Potentially significant	Mitigation measures TCR-1, CUL-1, CUL-2, CUL-3, CUL-4, CUL-5 and CUL-6.	Less than significant

Impact Statement	Level of Significance	Mitigation Measure	Level of Significance After Mitigation
of these mitigation measures, impacts would be reduced to a less-than-significant level.			
Utilities and Service Systems			
Impact UT-1: Construction of new water or wastewater treatment facilities or expansion of existing facilities, with the potential to cause significant environmental effects. The proposed project would not require expansion of existing water facilities, as Valley District has existing water supplies and water infrastructure to support the implementation of the proposed project and water exchange with Riverside Public Utilities. There would be no need for alterations to water treatment infrastructure, service would not be required from a facility that has insufficient capacity, and the project would not cause an exceedance of available capacity from existing water treatment facilities. Therefore, impacts on water supply would be less than significant.	Less than significant	No mitigation necessary	Less than significant
Impact UT-2: Creation of a need for new or expanded entitlements or resources for sufficient water supply. Valley District has enough water supplies in the San Bernardino Basin Area to exchange the groundwater anticipated to be used by the proposed project within the Riverside Public Utilities service area. Therefore, impacts on water supply from the groundwater wells would be less than significant.	Less than significant	No mitigation necessary	Less than significant

ES.6.1 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 not result in significant and unavoidable adverse environmental impacts.

ES.7 Project Alternatives

An EIR must describe a range of reasonable alternatives to the proposed project or alternative project locations that could feasibly attain most of the basic project objectives and would avoid or substantially lessen any of the significant environmental impacts to the proposed project. The alternatives analysis must include the "No Project Alternative" as a point of comparison. The No Project Alternative includes existing conditions and reasonably foreseeable future conditions that would exist if the proposed project were not approved (State CEQA Guidelines §15126.6). In Chapter 7, *Alternatives Analysis*, this Draft EIR evaluates two build tributaries restoration and mitigation program alternatives and a No Project Alternative. The first build alternative is the Proposed Project Plus Evans Creek Site and the second restoration alternative is the Reduced Proposed Project Alternative (Removal of the Mitigation Reserve Program). The goal for evaluating these alternatives is to identify alternatives that would avoid or lessen the significant environmental effects of the project, while attaining most of the project objectives. 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.

ES.7.1 Description of Project Alternatives

Three alternatives were selected for detailed analysis.

- Alternative A: No Project
- Alternative B: Proposed Project Plus Evans Creek Site
- Alternative C: Reduced Proposed Project Alternative (Removal of the Mitigation Reserve Program)

Alternative A: 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 represents a "no build" scenario in which the proposed project would not be constructed or operated. It assumes that the proposed restoration components of the four project sites would not be implemented and no project components would be constructed. Under the No Project Alternative, the project sites would continue to be degraded and would not support Santa Ana sucker habitat or connect with the Santa Ana River. There would be no creation and

enhancement of channels and floodplains, and the project sites would continue to be dominated by nonnative species. Any site cleanup effort would occur sporadically and when funding is available or when disturbance and destruction of the sites along the Santa Ana River cause them to become so degraded as to require emergency cleanup. The No Project Alternative would not improve the condition of the Upper Santa Ana River habitat and water quality, and these challenges noted previously within the upper Santa Ana River watershed would continue.

Alternative B: Proposed Project Plus Evans Creek Site Alternative

In addition to the four restoration sites described in Chapter 2, *Project Description*, an additional site, Evans Creek, would be considered as an alternative for implementation of greater restoration activities, as described further below. The Proposition 84 grant provides funding to construct the four sites (Old Ranch Creek, Anza Creek, Hole Creek, and Hidden Valley Creek) identified by the proposed project. The restoration work proposed at Evans Creek was not included in the Proposition 84 grant application, as there was not sufficient funding for this additional site, and this and other sites were not included in the evaluation of the proposed project.

The Evans Creek site covers approximately 65 acres in the city of Riverside's Fairmount Park and is the farthest upstream on the Santa Ana River of the restoration sites proposed as a part of the project. The land at the site is owned by the City of Riverside. The Evans Creek site was burned in a homeless encampment fire in 2017 and provides an opportunity for restoration and enhancement. The Evans Creek site was previously evaluated as part of the *Site Characteristics and Preliminary Design of Santa Ana River Tributary Restoration Projects* (Appendix A of this EIR). Improvements at Evans Creek would include a new groundwater well and pump, new riparian corridor, new bank, channel bed complexity and rock and woody structures, fish passage, new channel, and recreational and educational amenities for Fairmount Park.

This alternative would involve all elements of the proposed project, both the Tributaries Restoration Project and Mitigation Reserve Program, and the addition of the Evans Creek site as a fifth tributaries restoration site, utilizing similar construction and operational elements as the proposed project. This alternative is being considered to include additional restoration opportunities on an existing disturbed site along the Santa Ana River.

Alternative C: Reduced Proposed Project Alternative (Removal of the Mitigation Reserve Program)

This alternative would remove other restoration opportunities associated with the mitigation and conservation bank, also known as the Mitigation Reserve Program, from the proposed project. This alternative would involve including only the Upper Santa Ana River Tributaries Restoration Project as a project component, which includes the smaller project area of 67.3 acres in comparison to the Mitigation Reserve Program area, which includes 411.16 acres that would be removed from consideration in this alternative. The Tributaries Restoration Project and Mitigation Reserve Program Phase I component of the proposed project restoration sites would be designed to increase the amount and quality of habitat for the Santa Ana sucker and other native species and enhance jurisdictional aquatic resources; restoration of existing channels and an existing floodplain tributary; enhancements to existing riparian and floodplain habitats; limiting of human disturbance; and control of nonnative invasive species. The four restoration sites are Anza Creek, Old Ranch Creek, Lower Hole Creek, and Hidden Valley Creek. The Mitigation Reserve Program, which is

evaluated at a programmatic level, is considered for removal with this alternative to result in a smaller project area, which could reduce project environmental impacts.

ES.7.2 Environmentally Superior Alternative

CEQA requires the identification of an environmentally superior alternative (State CEQA Guidelines §15126.6(a) and (e)(2)). The environmentally superior alternative is the alternative that would result in the least damage to the environment. Based on the analysis presented in Chapter 3, *Impact Analysis*, and Chapter 7, *Alternatives Analysis*, the environmentally superior alternative is Alternative A (No Project/No Build); however, project objectives would not be met with this alternative. Pursuant to §15126.6(e)(2) of the State CEQA Guidelines, if the environmentally superior alternative is the "no project" alternative, then the EIR must also identify another environmentally superior alternative among the list of alternatives. Impacts would be greater than those of the No Project Alternative but still less than the proposed project with implementation of Alternative C (Reduced Proposed Project Alternative: Removal of the Mitigation Reserve Program). Alternative C would be the only build alternative that meets the majority of the project objectives. Alternative B (Proposed Project Plus Evans Creek Site) would provide for a greater level of restoration, but would also have the largest impacts in comparison to the proposed project and its alternatives due to the expanded area that would be included in the Alternative B project footprint and additional construction activity that would be associated with implementation of Alternative B in comparison to the proposed project and its alternatives. However, it would also have the greatest beneficial impacts on the watershed due to the increased restoration. Alternative B would meet all project objectives and would provide additional restoration of areas near the Santa Ana River. With Alternative B, the environmental constraints would be reduced with the additional restoration of the site plus the addition of new recreational activities and opportunities. Without this alternative, any site cleanup effort at the Evans Creek site would occur sporadically and when funding is available or when disturbance and destruction of the sites along the Santa Ana River cause them to become so degraded as to require emergency cleanup. Table ES-3 includes a summary comparison of the proposed project and its alternatives.

Table ES-3. Summary of Comparison of Alternatives Impacts

Environmental Issue Area	Proposed Project	Alternative A No Project/ No Build	Alternative B Proposed Project Plus Evans Creek Site	Alternative C Reduced Proposed Project Alternative
Agricultural and Forestry Resources	Less than Significant	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project (but less than significant)	Reduced Impact Compared to Proposed Project
Air Quality	Less than Significant	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project (but less than significant)	Reduced Impact Compared to Proposed Project

Environmental Issue Area	Proposed Project	Alternative A No Project/ No Build	Alternative B Proposed Project Plus Evans Creek Site	Alternative C Reduced Proposed Project Alternative
Biological Resources	Less than Significant with Mitigation	Reduced (Temporary Impacts) Compared to the Proposed Project but No Beneficial Impacts From Restoration	Greater (Temporary Impacts) Compared to the Proposed Project (but less than significant); and Greater Beneficial Impacts Due to Increased Restoration	Reduced (Temporary Impacts) Compared to the Proposed Project but Fewer Beneficial Impacts From Restoration
Cultural Resources	Less than Significant with Mitigation	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project	Reduced Impact Compared to Proposed Project
Geology, Soils and Paleontological Resources	Less than Significant with Mitigation	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project (but less than significant)	Reduced Impact Compared to Proposed Project
Greenhouse Gases	Less than Significant	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project (but less than significant)	Reduced Impact Compared to Proposed Project
Hazards and Hazardous Materials	Less than Significant	Reduced (Temporary Impacts) Compared to Proposed Project	Greater (Temporary Impacts) Compared to Proposed Project (but less than significant)	Reduced (Temporary Impacts) Compared to Proposed Project
Hydrology and Water Quality	Less than Significant	Reduced (Temporary Impacts) Compared to Proposed Project	Greater (Temporary Impacts) Compared to Proposed Project (but less than significant) and Greater Beneficial Impacts Due to Increased Restoration	Reduced (Temporary Impacts) Compared to Proposed Project
Noise	Less than Significant with Mitigation	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project	Reduced Impact Compared to Proposed Project

Environmental Issue Area	Proposed Project	Alternative A No Project/ No Build	Alternative B Proposed Project Plus Evans Creek Site	Alternative C Reduced Proposed Project Alternative
Population and Housing	Less than Significant	Similar Impact Compared to Proposed Project but No Site Monitoring Benefits	Similar Impact Compared to Proposed Project (but less than significant) and Greater Beneficial Impacts for Site Monitoring	Similar Impact Compared to Proposed Project
Recreation	Less than Significant	Reduced (Temporary Impacts) Compared to Proposed Project but No Beneficial Recreation Impacts	Greater (Temporary Impacts) Compared to Proposed Project (but less than significant) and Greater Beneficial Impacts on Recreation	Reduced (Temporary Impacts) Compared to Proposed Project
Tribal Cultural Resources	Less than Significant with Mitigation	Reduced Impact Compared to Proposed Project	Greater Impact Compared to Proposed Project	Reduced Impact Compared to Proposed Project
Utilities and Service Systems	Less than Significant	Reduced Impact Compared to Proposed Project but No Water Supply Benefits	Greater Impact Compared to Proposed Project (but less than significant) and Greater Water Supply Benefits	Reduced Impact Compared to Proposed Project

ES.8 Potential Areas of Controversy/Issues to be Resolved

Pursuant to §15123(b)(2) of the State CEQA Guidelines, a lead agency is required to include areas of controversy raised by agencies and the public during the public scoping process in the EIR. Areas of controversy have been identified for the proposed project based on comments received on the Notice of Preparation during the 30-day public review period and comments expressed by interested stakeholders throughout the process. Issues of concern involved the following resource areas: cultural and tribal resources, biological resources, water resources availability, air quality, greenhouse gases, cumulative effects, recreational uses and access within the Santa Ana River area, long-term restoration success, and homeless encampments.

ES.9 How to Comment on this Draft EIR

In accordance with State CEQA Guidelines §15105, the Draft EIR has been submitted to the California 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 45-day review period. The Draft EIR or 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 written comments should be directed to:

Valley District
Heather Dyer, Water Resources Project Manager
380 East Vanderbilt Way, San Bernardino, CA 92408
Email: uppersarrestoration@icf.com

During the 45-day review period, Valley District will conduct one public meeting open to the general public to answer questions and receive oral comments on the Draft EIR. The meeting will be held at the following location, date, and time:

Wednesday, May 15, 2019
4:00 p.m.–6:00 p.m.
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408

All written comments received on the Draft EIR will be responded to and included in the Final EIR. Comments on the Draft EIR must be received by 5:00 p.m. on the last day of the 45-day review period unless Valley District grants an extension.