
Environmental Impact Report

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

SEPTEMBER 2021

Prepared for:

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

Tijuana River National Estuarine Research Reserve

301 Caspian Way

Imperial Beach, California 91932-3149

Contact: Lorena Warner-Lara

Prepared by:

DUDEK

605 Third Street

Encinitas, California 92024

Contact: Josh Saunders, AICP

Table of Contents

| SECTION | PAGE NO. |
|--|-----------------|
| List of Acronyms..... | ACR-i |
| ES Executive Summary..... | ES-1 |
| ES.1 Document Purpose..... | ES-1 |
| ES.2 Project Location..... | ES-1 |
| ES.3 Project Description | ES-1 |
| ES.3.1 Project Overview | ES-1 |
| ES.3.2 Project Background | ES-2 |
| ES.3.3 Project Objectives | ES-4 |
| ES.4 Summary of Environmental Impacts and Mitigation Measures | ES-5 |
| ES.5 Summary of Comments Received During the Notice of Preparation Review Period | ES-6 |
| ES.6 Summary of Project Alternatives | ES-6 |
| ES.7 Environmentally Superior Alternative..... | ES-8 |
| ES.8 References..... | ES-55 |
| 1 Introduction | 1-1 |
| 1.1 Purpose | 1-1 |
| 1.2 Intended Use of the Environmental Impact Report | 1-1 |
| 1.3 Scope of the Environmental Impact Report..... | 1-2 |
| 1.4 The California Environmental Quality Act and Environmental Review Process..... | 1-3 |
| 1.4.1 California Environmental Quality Act Overview | 1-3 |
| 1.4.2 Notice of Preparation and Scoping..... | 1-3 |
| 1.4.3 Draft Environmental Impact Report and Public Review | 1-4 |
| 1.4.4 Final Environmental Impact Report Publication and Certification | 1-5 |
| 1.4.5 Mitigation Monitoring and Reporting Program..... | 1-5 |
| 1.5 Organization and Content of the EIR..... | 1-5 |
| 2 Project Description..... | 2-1 |
| 2.1 Introduction..... | 2-1 |
| 2.1.1 Project Overview | 2-1 |
| 2.2 Project Background | 2-2 |
| 2.2.1 Nelson Sloan Quarry | 2-2 |
| 2.2.2 Tijuana River Valley Sediment Management | 2-3 |
| 2.2.3 Multijurisdictional Cooperation | 2-5 |
| 2.3 Project Objectives..... | 2-7 |
| 2.4 Project Description | 2-7 |
| 2.4.1 Site Preparation | 2-8 |
| 2.4.2 Phased Restoration and Revegetation..... | 2-9 |

| | | |
|--------|---|--------|
| 2.4.3 | Project Facilities..... | 2-13 |
| 2.4.4 | Sediment Sampling and Characterization..... | 2-15 |
| 2.4.5 | Sediment Placement and Grading..... | 2-17 |
| 2.4.6 | Stockpile Management | 2-18 |
| 2.4.7 | Stormwater and Erosion Control..... | 2-19 |
| 2.4.8 | Solid Waste and Debris Management..... | 2-19 |
| 2.4.9 | Operational Water Use | 2-20 |
| 2.4.10 | Operating Hours..... | 2-21 |
| 2.4.11 | Site Access | 2-21 |
| 2.4.12 | Transportation Routes and Truck Traffic..... | 2-22 |
| 2.4.13 | Safety and Security | 2-22 |
| 2.4.14 | Power Source and Distribution | 2-23 |
| 2.4.15 | Revegetation Component..... | 2-23 |
| 2.4.16 | Operations and Management Plan Component | 2-28 |
| 2.5 | Project Approvals/Permits | 2-29 |
| 2.6 | List of Past, Present, and Reasonably Anticipated Future Projects | 2-30 |
| 2.7 | References..... | 2-35 |
| 3 | Environmental Analysis..... | 3-1 |
| 3.1 | Aesthetics | 3.1-1 |
| 3.1.1 | Existing Conditions..... | 3.1-1 |
| 3.1.2 | Relevant Plans, Policies, and Ordinances..... | 3.1-10 |
| 3.1.3 | Thresholds of Significance | 3.1-13 |
| 3.1.4 | Impacts Analysis | 3.1-14 |
| 3.1.5 | Cumulative Impacts..... | 3.1-26 |
| 3.1.6 | Mitigation Measures..... | 3.1-28 |
| 3.1.7 | Level of Significance After Mitigation | 3.1-28 |
| 3.1.8 | References | 3.1-28 |
| 3.2 | Air Quality..... | 3.2-1 |
| 3.2.1 | Existing Conditions..... | 3.2-1 |
| 3.2.2 | Relevant Plans, Policies, and Ordinances..... | 3.2-8 |
| 3.2.3 | Thresholds of Significance | 3.2-17 |
| 3.2.4 | Impacts Analysis | 3.2-28 |
| 3.2.5 | Cumulative Impacts..... | 3.2-36 |
| 3.2.6 | Mitigation Measures..... | 3.2-37 |
| 3.2.7 | Level of Significance After Mitigation | 3.2-38 |
| 3.2.8 | References | 3.2-39 |
| 3.3 | Biological Resources | 3.3-1 |
| 3.3.1 | Existing Conditions..... | 3.3-1 |
| 3.3.2 | Relevant Plans, Policies, and Ordinances..... | 3.3-19 |
| 3.3.3 | Thresholds of Significance | 3.3-27 |

| | | |
|-------|---|--------|
| 3.3.4 | Impacts Analysis | 3.3-27 |
| 3.3.5 | Cumulative Impacts | 3.3-42 |
| 3.3.6 | Mitigation Measures | 3.3-42 |
| 3.3.7 | Level of Significance After Mitigation | 3.3-45 |
| 3.3.8 | References | 3.3-46 |
| 3.4 | Archaeological, Historic, and Tribal Cultural Resources | 3.4-1 |
| 3.4.1 | Existing Conditions | 3.4-1 |
| 3.4.2 | Relevant Plans, Policies, and Ordinances | 3.4-12 |
| 3.4.3 | Thresholds of Significance | 3.4-20 |
| 3.4.4 | Impacts Analysis | 3.4-21 |
| 3.4.5 | Cumulative Impacts | 3.4-23 |
| 3.4.6 | Mitigation Measures | 3.4-24 |
| 3.4.7 | Level of Significance After Mitigation | 3.4-24 |
| 3.4.8 | References | 3.4-25 |
| 3.5 | Geology and Soils | 3.5-1 |
| 3.5.1 | Existing Conditions | 3.5-1 |
| 3.5.2 | Relevant Plans, Policies, and Ordinances | 3.5-8 |
| 3.5.3 | Thresholds of Significance | 3.5-11 |
| 3.5.4 | Impacts Analysis | 3.5-12 |
| 3.5.5 | Cumulative Impacts | 3.5-20 |
| 3.5.6 | Mitigation Measures | 3.5-20 |
| 3.5.7 | Level of Significance After Mitigation | 3.5-23 |
| 3.5.8 | References | 3.5-24 |
| 3.6 | Hazards and Hazardous Materials | 3.6-1 |
| 3.6.1 | Existing Conditions | 3.6-1 |
| 3.6.2 | Relevant Plans, Policies, and Ordinances | 3.6-5 |
| 3.6.3 | Thresholds of Significance | 3.6-14 |
| 3.6.4 | Impacts Analysis | 3.6-15 |
| 3.6.5 | Cumulative Impacts | 3.6-18 |
| 3.6.6 | Mitigation Measures | 3.6-19 |
| 3.6.7 | Level of Significance After Mitigation | 3.6-19 |
| 3.6.8 | References | 3.6-19 |
| 3.7 | Hydrology and Water Quality | 3.7-1 |
| 3.7.1 | Existing Conditions | 3.7-1 |
| 3.7.2 | Relevant Plans, Policies, and Ordinances | 3.7-5 |
| 3.7.3 | Thresholds of Significance | 3.7-14 |
| 3.7.4 | Impacts Analysis | 3.7-16 |
| 3.7.5 | Cumulative Impacts | 3.7-26 |
| 3.7.6 | Mitigation Measures | 3.7-27 |
| 3.7.7 | Level of Significance After Mitigation | 3.7-27 |
| 3.7.8 | References | 3.7-27 |

| | | |
|--------|---|---------|
| 3.8 | Mineral Resources | 3.8-1 |
| 3.8.1 | Existing Conditions..... | 3.8-1 |
| 3.8.2 | Relevant Plans, Policies, and Ordinances | 3.8-2 |
| 3.8.3 | Thresholds of Significance | 3.8-7 |
| 3.8.4 | Impacts Analysis | 3.8-7 |
| 3.8.5 | Cumulative Impacts..... | 3.8-9 |
| 3.8.6 | Mitigation Measures..... | 3.8-10 |
| 3.8.7 | Level of Significance After Mitigation | 3.8-10 |
| 3.8.8 | References | 3.8-10 |
| 3.9 | Noise | 3.9-1 |
| 3.9.1 | Existing Conditions..... | 3.9-1 |
| 3.9.2 | Relevant Plans, Policies, and Ordinances | 3.9-5 |
| 3.9.3 | Thresholds of Significance | 3.9-13 |
| 3.9.4 | Impacts Analysis | 3.9-13 |
| 3.9.5 | Cumulative Impacts..... | 3.9-20 |
| 3.9.6 | Mitigation Measures..... | 3.9-20 |
| 3.9.7 | Level of Significance After Mitigation | 3.9-20 |
| 3.9.8 | References | 3.9-21 |
| 3.10 | Wildfire | 3.10-1 |
| 3.10.1 | Existing Conditions..... | 3.10-1 |
| 3.10.2 | Relevant Plans, Policies, and Ordinances | 3.10-4 |
| 3.10.3 | Thresholds of Significance | 3.10-11 |
| 3.10.4 | Impacts Analysis | 3.10-12 |
| 3.10.5 | Cumulative Impacts..... | 3.10-18 |
| 3.10.6 | Mitigation Measures | 3.10-19 |
| 3.10.7 | Level of Significance After Mitigation | 3.10-21 |
| 3.10.8 | References | 3.10-23 |
| 4 | Effects Found Not to Be Significant | 4-1 |
| 4.1 | Agriculture and Forestry Resources | 4-1 |
| 4.2 | Energy | 4-4 |
| 4.3 | Greenhouse Gas Emissions..... | 4-5 |
| 4.4 | Land Use and Planning | 4-7 |
| 4.5 | Population and Housing..... | 4-10 |
| 4.6 | Public Services | 4-11 |
| 4.7 | Recreation..... | 4-13 |
| 4.8 | Transportation | 4-15 |
| 4.9 | Utilities and Service Systems..... | 4-19 |
| 4.10 | References..... | 4-22 |
| 5 | Significant Irreversible Environmental Effects..... | 5-1 |
| 5.1 | Significant and Unavoidable Project Impacts..... | 5-1 |

5.2 Significant Irreversible Environmental Effects..... 5-1

5.3 Growth Inducement..... 5-2

5.4 Energy Conservation 5-4

6 Alternatives..... 6-1

6.1 Alternatives Considered in this Analysis 6-1

6.1.1 Project Overview 6-2

6.1.2 Alternatives Considered But Rejected..... 6-3

6.2 Alternatives Carried Forward For Consideration..... 6-6

6.2.1 Alternative 1 – No Project/No Development Alternative..... 6-6

6.2.2 Alternative 2 – Basic Reclamation (6,500 Cubic Yards) Alternative 6-8

6.2.3 Alternative 3 – Reduced Capacity (500,000 CY) Alternative 6-11

6.3 Conclusions..... 6-14

6.3.1 Environmentally Superior Alternative 6-14

6.4 References..... 6-15

FIGURES

2-1 Location Map..... 2-37

2-2 Potential Sediment Sourcing Sites 2-39

2-3a Aerial Photographs of Project Site 2-41

2-3b Aerial Photographs of Project Site 2-43

2-3c Aerial Photographs of Project Site 2-45

2-4 Project Site and Limits of Disturbance 2-47

2-5a Sediment Placement: Phase 1..... 2-49

2-5b Sediment Placement: Phase 2..... 2-51

2-5c Sediment Placement: Phase 3..... 2-53

2-5d Sediment Placement: Phase 4..... 2-55

2-5e Sediment Placement: Phase 5..... 2-57

2-5f Sediment Placement: Phase 6..... 2-59

2-6 Materials Screening Equipment..... 2-61

2-7a Restoration Plan: Phase 1..... 2-63

2-7b Restoration Plan: Phase 2 2-65

2-7c Restoration Plan: Phase 3..... 2-67

2-7d Restoration Plan: Phase 4..... 2-69

2-7e Restoration Plan: Phase 5 2-71

2-7f Restoration Plan: Phase 6 2-73

2-7g Restoration Plan: Final Restoration Phase..... 2-75

2-7h Restoration Plan: Plant Palette and Notes 2-77

2-8 Cumulative Projects 2-79

TABLE OF CONTENTS

3.1-1 Scenic Vistas and Overlooks3.1-31

3.1-2 Existing Conditions: Key Map3.1-33

3.1-3 Existing Conditions: Project Site.....3.1-35

3.1-4 Existing Conditions: Project Site.....3.1-37

3.1-5 Surrounding Area3.1-39

3.1-6 Existing Views from Local Roads: Dairy Mart Road and Monument Road3.1-41

3.1-7 Existing Views from Local Roads: Camino De La Plaza and Bibler Road3.1-43

3.1-8 TRVRP: Trails3.1-45

3.3-1 Property Ownership and Project Areas3.3-51

3.3-2a Biological Resources – Vegetation Communities and Jurisdictional Delineation.....3.3-53

3.3-2b Biological Resources – Special-Status Plants.....3.3-55

3.3-2c Biological Resources – Special-Status Wildlife3.3-57

3.3-2d Biological Resources – Quino Checkerspot Butterfly Adults and Host Plants3.3-59

3.3-3a Biological Resources and Proposed Phased Impacts –
Vegetation Communities and Jurisdictional Delineation3.3-61

3.3-3b Biological Resources and Proposed Phased Impacts – Special-Status Plants.....3.3-63

3.3-3c Biological Resources and Proposed Phased Impacts – Special-Status Wildlife.....3.3-65

3.3-3d Biological Resources and Proposed Phased Impacts –
Quino Checkerspot Butterfly Adults and Host Plants.....3.3-67

3.3-4a Biological Resources and Proposed Phased Restoration –
Vegetation Communities and Jurisdictional Delineation3.3-69

3.3-4b Biological Resources and Proposed Phased Restoration – Special-Status Plants.....3.3-71

3.3-4c Biological Resources and Proposed Phased Restoration – Special-Status Wildlife.....3.3-73

3.3-4d Biological Resources and Proposed Phased Restoration –
Quino Checkerspot Butterfly Adults and Host Plants.....3.3-75

3.5-1 Local Geology3.5-27

3.5-2 Regional Faulting3.5-29

3.5-3 Paleontological Sensitivity3.5-31

3.8-1 Mineral Resource Zones.....3.8-2

3.9-1 Noise Measurement Locations and Noise Sensitive Land Uses and Wildlife.....3.9-23

3.10-1 Fire Hazard Severity Zones.....3.10-25

3.10-2 Wildfire History3.10-27

TABLES

ES-1 Summary of Environmental Impacts and Mitigation Measures ES-9

ES-2 Comparison of Impacts of the Alternatives ES-54

2-1 Restoration Phasing and Estimated Sediment Volumes..... 2-10

2-2 Anticipated Equipment Required for Sediment Processing, Earthmoving and Restoration2-13

2-3 Estimated Water Usage2-21

TABLE OF CONTENTS

2-4 Estimated Haul Truck Trips by Phase 2-22

2-5 Interim Erosion Control Seed Mix..... 2-24

2-6 Coastal Sage Scrub Restoration and Enhancement Seed Mix – Type A..... 2-24

2-7 Coastal Sage Scrub Restoration and Enhancement Seed Mix – Type B..... 2-24

2-8 Restoration and Enhancement Container Plants 2-25

2-9a Performance Standards – Coastal Sage Scrub Type A (Slope)..... 2-27

2-9b Performance Standards – Coastal Sage Scrub Type B (Ridge)..... 2-28

2-10 Required Actions and Approvals (Anticipated) 2-29

2-11 Past, Present, and Reasonably Anticipated Future Projects 2-30

3.2-1 SDAB Attainment Classification 3.2-6

3.2-2 Local Ambient Air Quality Data 3.2-7

3.2-3 Ambient Air Quality Standards 3.2-10

3.2-4 SDAPCD Air Quality Significance Thresholds..... 3.2-19

3.2-5 Estimated Reclamation and Grading Phases..... 3.2-20

3.2-6 Emissions Estimation Assumptions 3.2-21

3.2-7 Regulatory Compliance Measures that Reduce Construction Criteria Air Pollutant Emissions 3.2-24

3.2-8 AERMOD Principal Parameters 3.2-27

3.2-9 Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Unmitigated 3.2-30

3.2-10 Construction Activity Health Risk Assessment Results – Unmitigated..... 3.2-34

3.2-11 Construction Activity Health Risk Assessment Results – Mitigated 3.2-38

3.3-1 Vegetation Communities and Land Cover Types in Study Area 3.3-5

3.3-2 Jurisdictional Resources in Study Area..... 3.3-16

3.3-3 MSCP Habitat Replacement for Impacts to On-site Vegetation Communities and Land Cover Types within the Reclamation Area (Acres) 3.3-28

3.3-4 Restored Habitat for Impacts to On-site Vegetation Communities and Land Cover Types within the Reclamation Area (Acres) 3.3-29

3.3-5 Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections..... 3.3-33

3.5.1 Regional Faulting 3.5-3

3.5-2 Restoration Phasing and Estimated Sediment Volumes..... 3.5-16

3.7-1 Beneficial Uses..... 3.7-2

3.7-2 Surface Water Quality Impairment and Total Maximum Daily Loads 3.7-3

3.7-3 Estimated Water Usage 3.7-22

3.9-1 Typical Sound Levels in the Environment and Industry..... 3.9-2

3.9-2 Measured Baseline Outdoor Ambient Noise Locations and Levels 3.9-5

3.9-3 City of San Diego Applicable Exterior Limits..... 3.9-6

3.9-4 City of San Diego Land Use - Noise Compatibility Guidelines 3.9-8

3.9-5 Predicted Noise from Project Haul Truck Traffic by Phase..... 3.9-14

3.9-6 Predicted On-Site Project Operations Noise by Phase and Activity (no terrain) 3.9-15

3.9-7 Predicted On-Site Project Operations Noise by Phase and Activity (with terrain) 3.9-16

3.9-8 Predicted Combined Project Truck Traffic and On-Site Activities (hourly L_{eq}) by Phase.....3.9-17

3.9-9 Predicted Combined Project Truck Traffic and On-Site Activities (CNEL) by Phase3.9-18

3.10-1 Emergency Response Times 3.10-18

4-1 Tijuana River Valley Local Coastal Program Land Use Plan Consistency Analysis..... 4.1-8

APPENDICES

AA NOP and Comment Letters

A Air Quality Technical Report

B Biological Resources Technical Report

C Cultural Resources Technical Report

D Built Environment Overview Letter Report

E-1 Preliminary Geotechnical Evaluation and Geologic Field Reconnaissance Report

E-2 Revegetation Monitoring and Management Plan

E-3 Paleontological Resources Review Memorandum

F Greenhouse Gas Emissions Analysis

G Noise Technical Report

H Phase I Environmental Site Assessment

I Traffic Technical Memorandum

J Mineral Resources Valuation Memorandum

K Thresholds of Significance Matrix

List of Acronyms

| Acronym | Definition |
|----------|--|
| AB | Assembly Bill |
| ACM | asbestos-containing material |
| AERMOD | American Meteorological Society/EPA Regulatory Model |
| AFY | acre-feet per year |
| ALUCP | Airport Land Use Compatibility Plan |
| amsl | above mean sea level |
| ANSI | American National Standards Institute |
| APE | area of potential effect |
| APN | Assessor's Parcel Number |
| ATCM | Airborne Toxic Control Measure |
| BMP | best management practice |
| CAA | federal Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CalARP | California Accidental Release Prevention |
| CalEEMod | California Emissions Estimator Model |
| CalOSHA | California Occupational Safety and Health Administration |
| CAP | Climate Action Plan |
| CARB | California Air Resources Board |
| CBC | California Building Code |
| CBP | U.S. Customs and Border Protection |
| CCA | California Coastal Act |
| CCC | California Coastal Commission |
| CDFW | California Department of Fish and Wildlife |
| CDP | coastal development permit |
| CDPR | California Department of Parks and Recreation |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act of 1970 |
| CFC | California Fire Code |
| CFGC | California Fish and Game Code |
| CGS | California Geological Survey |
| CHP | California Highway Patrol |
| CMP | Congestion Management Program |
| CNEL | community noise equivalent level |
| CO | carbon monoxide |
| COPC | contaminant of potential concern |
| COZ | coastal zone |
| CRHR | California Register of Historical Resources |
| CRPR | California Rare Plant Rank |
| CUP | conditional use permit |

LIST OF ACRONYMS

| Acronym | Definition |
|---------|--|
| CUPA | Certified Unified Program Agency |
| CWA | Clean Water Act |
| cy | cubic yards |
| CY | cubic yards |
| dB | decibel |
| dBA | A-weighted decibels |
| dBA | A-weighted decibel |
| DEH | Department of Environmental Health |
| DMR | Division of Mine Reclamation |
| DPM | diesel particulate matter |
| DTSC | Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| EIR | Environmental Impact Report |
| EOC | Emergency Operations Center |
| EOP | Operational Area Emergency Operations Plan |
| EPA | U.S. Environmental Protection Agency |
| ESA | Environmental Site Assessment |
| ESL | Environmental Screening Level |
| FEMA | Federal Emergency Management Agency |
| FESA | federal Endangered Species Act of 1973 |
| FHSZ | Fire Hazard Severity Zone |
| FIRM | Flood Insurance Rate Map |
| FPP | Fire Protection Plan |
| GHG | greenhouse gas |
| GSA | Groundwater Sustainability Agency |
| GSP | Groundwater Sustainability Plan |
| GVWR | gross vehicle weight rating |
| HMBP | Hazardous Materials Business Plan |
| HRA | health risk assessment |
| I | Interstate |
| IBWC | U.S. International Boundary and Water Commission |
| IFC | International Fire Code |
| ISO | International Organization of Standardization |
| LBP | lead-based paint |
| LCP/LUP | Tijuana River Valley Local Coastal Program/Land Use Plan |
| LDC | Land Development Code |
| Leq | equivalent sound level |
| LID | low impact development |
| LOS | level of service |
| MBTA | Migratory Bird Treaty Act |
| MHPA | Multi-Habitat Planning Area |
| MHPA | Multiple Species Habitat Area |
| MM | Mitigation Measure |
| MRZ | Mineral Resource Zone |

LIST OF ACRONYMS

| Acronym | Definition |
|-------------------|--|
| MS4 | Municipal Separate Storm Sewer System |
| MSCP | Multiple Species Conservation Program |
| Mw | moment magnitude |
| MWMP | Municipal Waterways Maintenance Plan |
| NAAQS | National Ambient Air Quality Standards |
| NAHC | Native American Heritage Commission |
| NO ₂ | nitrogen dioxide |
| NOP | Notice of Preparation |
| NO _x | oxides of nitrogen |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| O&M | Operations and Maintenance |
| O ₃ | ozone |
| OEHHA | Office of Environmental Health Hazard Assessment |
| PCBs | polychlorinated biphenyls |
| PCE | passenger car equivalent |
| PEER | Processing Equipment and Earthmoving/Restoration |
| PM ₁₀ | particulate matter less than or equal to 10 microns in diameter |
| PM _{2.5} | particulate matter less than or equal to 2.5 microns in diameter |
| PPV | peak particle velocity |
| PRM | Petra Resource Management |
| RandR | Restoration and Revegetation |
| RAQS | Regional Air Quality Strategy |
| RMS | root-mean square |
| RPO | Resources Protection Ordinance |
| RSL | regional screening levels |
| RWQCB | Regional Water Quality Control Board |
| SANDAG | San Diego Association of Governments |
| SAP | sampling and analysis plan |
| SB | Senate Bill |
| SCP | scientific collecting permit |
| SDAB | San Diego Air Basin |
| SDAPCD | San Diego Air Pollution Control District |
| SDFD | City of San Diego Fire-Rescue Department |
| SD-OHS | San Diego Office of Homeland Security |
| SGMA | Sustainable Groundwater Management Act |
| SIP | State Implementation Plan |
| SMARA | Surface Mining and Reclamation Act |
| SO ₂ | sulfur dioxide |
| SO _x | sulfur oxides |
| SSC | Species of Special Concern |
| SWMP | Stormwater Management Plan |
| SWPPP | stormwater pollution prevention plan |
| TAC | toxic air contaminant |

LIST OF ACRONYMS

| Acronym | Definition |
|----------|--|
| T-BACT | toxics best available control technology |
| TETRP II | Tijuana Estuary Tidal Restoration Program II |
| TMDL | total maximum daily load |
| TRVRP | Tijuana River Valley Regional Park |
| UBC | Uniform Building Code |
| USACE | U.S. Army Corps of Engineers |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| UST | underground storage tank |
| UWMP | Urban Water Management Plan |
| VdB | velocity decibel |
| VMT | vehicle miles traveled |
| VOC | volatile organic compound |
| WMA | Watershed Management Area |
| WPO | Watershed Protection, Stormwater Management, and Discharge Control Ordinance |

ES Executive Summary

This section provides a summary of the Draft Environmental Impact Report (EIR) for the proposed Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project). Included in this summary are areas of known controversy and issues to be resolved, a summary of project alternatives, a summary of all project impacts and associated mitigation measures, and a statement of the level of significance after mitigation is applied.

ES.1 Document Purpose

This EIR was prepared by an environmental consultant for use by the California Department of Parks and Recreation (CDPR), as lead agency, to inform decision makers and the public of the potential significant environmental effects associated with the Project. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines) (14 CCR 15000 et seq.) published by the Public Resources Agency of the State of California.

The purpose of this EIR is to put forth a reasonable range of alternatives that provide a preferred alternative that both meets the goals of the Project and keeps environmental impact to a minimum. The chosen alternative will then focus the discussion on those potential effects on the environment resulting from implementation of the Project which the lead agency has determined may be significant. Feasible mitigation measures are recommended, where applicable, that could reduce significant environmental impacts or avoid significant environmental impacts.

ES.2 Project Location

The Project site is located in southwestern San Diego County and consists of land owned by the County of San Diego Parks and Recreation in Tijuana River Valley Regional Park but within the jurisdictional boundary of the City of San Diego (City). Situated within the City's Tijuana River Valley planning area, the Project Impact Area (approximately 20 acres) includes an eroded hillside that was previously mined/quarried for construction materials and aggregate from 1982 to approximately 2002. The Project site is located west of Interstate 5 off Monument Road near the intersection of Monument Road and Dairy Mart Road (see Figure 2-1, Project Location, in Chapter 2, Project Description). Further, the Project site is located west of the City's South Bay Water Reclamation Plant and north of the U.S./Mexico international border (proximity to the U.S./Mexico border is illustrated on Figure 2-1).

ES.3 Project Description

ES.3.1 Project Overview

CDPR proposes the beneficial reuse of excess sediment excavated from managed sources (e.g., sediment basins, flood control facilities and conveyances, habitat restoration and enhancement projects) from a range of ongoing, approved, and/or permitted sediment management activities, or proposed sediment management activities, in the Tijuana River Valley. Beneficial reuse of excess sediment is proposed to facilitate quarry/mine ID closure with the California Department of Conservation, Division of Mine Reclamation (DMR); historic landform reclamation; and habitat restoration of the abandoned Nelson Sloan quarry site. A map depicting the locations of the previous conditional use permit (CUP) boundary associated with the quarry (approximately 70 acres) and the Project site

(i.e., the two easternmost parcels within the former quarry property) in a regional and local context is provided as Figure 2-1, Location Map. The Project Impact Area comprises approximately 20 acres within the Project site. Currently, sediment management activities are undertaken by City, County of San Diego (County), state, and federal entities and their partners in the Tijuana River Valley. These entities typically haul the excess sediment off site to regional landfills or construction sites. If approved, implementation of the Project would instead allow these entities to place appropriate material in the Project Impact Area as part of a phased landform reclamation, creation, and habitat restoration project. The locations of flood control facilities and habitat restoration and enhancement projects from which source sediment could be used for topographical reclamation on the Project site are depicted on Figure 2-2, Potential Sediment Sourcing Sites. A phased approach would be used to reclaim previously mined portions of the property. Through a series of phases, the Project would place approximately 1,000,000 cubic yards (CY) total of fill material/sediment for the purpose of landform reclamation, creation, and habitat restoration.

The initial phase of the Project includes regrading of visible highwall, placement of approximately 6,500 CY of excess managed sediment to soften the highwall topography, implementation of erosion control measures, and revegetation via natural recruitment of coastal sage scrub vegetation on the new landform to a stabilized condition. These first-phase activities are intended to satisfy previous Reclamation Plan requirements and release the site from regulatory oversight under the Surface Mining and Reclamation Act (SMARA).

The project also includes phased restoration of natural coastal sage scrub vegetation. Interim grading phases would include the application of an erosion control vegetation hydroseed mix and implementation of appropriate erosion control best management practices on slopes. Final revegetation of finished graded slopes would include installation of coastal sage scrub container plants and seed mix application analogous to naturally occurring coastal sage scrub found on the adjacent mesa and slopes.

Proposed landform reclamation (and creation) and habitat restoration would occur on an approximately 20-acre site and proposed activities are estimated to occur over an up to 15-year timeframe. Once restoration activities are completed, the Project site would be managed by the County as open space/habitat.

ES.3.2 Project Background

Nelson Sloan Quarry

In 1982, the City issued a 20-year CUP (Document No. 497-PC in the office of the City Clerk in the City of San Diego) to Nelson and Sloan, a California Corporation, for the extraction of sand and gravel from the Border Highlands Pit (also known as the Nelson Sloan Quarry; Mine ID No. 91-37-0037). A Reclamation Plan detailing the slopes and reclamation and revegetation requirements for the quarry once operations ceased was submitted with the CUP. The 20-year CUP permitted the extraction of approximately 7.5 million CY of sand and gravel from the site. Approximately one-third of the permitted volume of sand and gravel was actively mined from the site over the 20-year operational life of the quarry. In 2002, the CUP expired, and the quarry site was not formally reclaimed in accordance with the approved CUP Reclamation Plan.

In 2003, the property was purchased by the County through a grant provided by the California Coastal Conservancy to add to the Tijuana River Valley Regional Park. The grant required that the property be used for the purpose of habitat protection and open space. In addition, the grant required the development of the Tijuana River Valley Regional Park habitat management plan, which was completed in 2006. The Tijuana River Valley Regional Park comprises nearly 1,800 acres of open space and is a biological core area of the Multiple Species Conservation

Program. The quarry site is included in the Multi-Habitat Planning Area of the City's Subarea Plan for the Multiple Species Conservation Program.

Though CUP No. 497-PC expired in 2002, the conditions of approval and original Reclamation Plan commitments are still open under SMARA. The City of San Diego is identified as the lead agency for implementation of the Reclamation Plan under SMARA. The City has requested that DMR determine whether the current site conditions meet the requirements of the California Coastal Conservancy grant and existing Reclamation Plan for Mine ID No. 91-37-0037. Currently, disturbed diegan coastal sage scrub and ruderal lands are mapped on the flatter portions of the site; however, the mined, east-facing slope remains visibly eroded and oversteepened. This steep slope area is mapped as Disturbed Land – Xeric Cliff Face and Escarpment. See Appendix B, Biological Resources Technical Report, for additional information concerning existing on-site vegetation communities.

Correspondence in 2013 from DMR staff has indicated non-concurrence with assertions that the site currently meets Reclamation Plan requirements. Site observations by DMR staff included significant riling and erosion issues related to runoff on the mined east-facing slope on the property. Due to the instability of the oversteepened slope, DMR stated that the slopes would need to be re-graded, erosion and drainage control measures would need to be installed, and the area would need to be revegetated. DMR correspondence in 2019 indicated the initial phase of the Project to restore the west highwall to a 2:1 (horizontal to vertical) slope and revegetate via natural recruitment of coastal sage scrub vegetation would be sufficient to meet reclamation requirements, close the Mine ID, and release of financial assurance obligations of the City under SMARA (Meehan, pers. comm. 2019).

Tijuana River Valley Sediment Management

As discussed in the Tijuana River Valley Historical Ecology Investigation, “estuarine habitats have undergone both loss (approximately 40% decrease in total area) and large-scale conversion . . . the most significant loss of salt marsh has occurred in the southern part of the estuary (i.e., south of Tijuana River Slough), [and is] related to elevation increases due to excess sedimentation from hillside erosion in Tijuana canyons and decreases in tidal prism since the mid-19th century” (SFEI 2017). These findings point toward the need for continued efforts to restore intertidal habitats, particularly in the heavily impacted southern arm of the estuary, to maintain desired functions. Restoration efforts may be aided by sediment management approaches (e.g., sediment catch basins and source control in the communities of Tijuana) and managing the tidal regime to increase tidal prism, which is estimated to have decreased by 55%–85% over time (SFEI 2017).

Under existing conditions, land managers are tasked with and permitted to perform regular/annual channel and basin maintenance. Sediment removal is typically allowed up to the as-built original design or established maintenance baseline of the facility and does not include expansion of the facility capacity beyond the original design. Methods used for sediment removal include excavation (both with equipment in the channel and equipment staged outside the channel). In addition, support activities including temporary access/loading, temporary staging, stockpiling, temporary diversions, and installation of best management practices may be required during channel and basin maintenance. For excavation with equipment in the facility, equipment enters/exits the maintenance area via an access point selected to minimize direct and indirect short-term (e.g., removal of native vegetation) and long-term (e.g., destabilization of channel banks) impacts. Most concrete channels have existing paved access ramps that allow equipment to enter/exit directly in/out of the channel. When a ramp is not available, smaller equipment can be attached to a crane or excavator to be lowered into the channel or facility from an adjacent bank or staging area. Where feasible, equipment is staged outside of the channel and vegetation, sediment, trash, or debris is removed without placing equipment within the channel.

The main feasibility factors concerning access include the existence of a disturbed or developed access area along the entire length of the facility that is sufficiently wide to allow equipment to reach the full facility, the condition of the material within the channel (e.g., excessively deep and saturated soils may not be suitable for equipment to operate within the channel), and the time needed to complete the work. Where feasible, excavators are stationed above the channel bank and directly reach into the channel or facility to remove accumulated material. Each bucket of material is then typically loaded into a dump truck to be transported to an approved off-site sorting or disposal area. As channel and basin maintenance performed by land managers in the Tijuana River Valley is conducted under existing permits and environmental documents, these activities are not assessed for environmental impacts in this EIR. Additional information concerning sediment management activities in the Tijuana River Valley is provided in Chapter 2 (see Section 2.2.2, Tijuana River Valley Sediment Management).

Multijurisdictional Cooperation

Local, state, and federal governments have been actively collaborating to resolve cross-border pollution in the Tijuana River Valley since the 1980s. More recently, a significant focus of this work has included the management of sediment, with the Project consistently highlighted as an important component.

Efforts of the Tijuana River Valley Recovery Team represent some of the most directed work on cross-border sedimentation. Formed in 2008, the Tijuana River Valley Recovery Team (Recovery Team) includes over 30 stakeholders from both sides of the international border that came together to address the issues of sediment and trash in the watershed. The San Diego Regional Water Quality Control Board serves as the lead agency of the Recovery Team. From 2011 to 2012, the Recovery Team prepared a Recovery Strategy identifying the first phase of actions needed to address sediment and trash issues in the Tijuana River Valley. The Regional Water Quality Control Board endorsed the Recovery Strategy in 2012. In 2015, the Recovery Team developed a Five-Year Action Plan endorsed by the Regional Water Quality Control Board. A key project described in the Five-Year Action Plan is restoration of the Nelson Sloan Quarry through the placement of sediment excavated from the Tijuana River Valley by government entities.

The Project is also included in the County's 2017 Senate Bill 507-funded Tijuana River Valley Needs and Opportunities Assessment. In October 2017, Senate Bill 507, sponsored by Senator Ben Hueso, was enacted by the State of California. Senate Bill 507 provided grant funding to the County to complete a comprehensive needs assessment to review and assess potential U.S.-side solutions to transboundary flows associated with the Tijuana River Valley.

Multijurisdictional cooperation in the Tijuana River Valley is further described in Section 2.2.3, Multijurisdictional Cooperation, of this EIR.

ES.3.3 Project Objectives

The purpose of the Project is the beneficial reuse of excess sediment deposited in the Tijuana River Valley towards the reclamation and restoration of the Nelson Sloan Quarry. As proposed, it is anticipated that this Project would improve Tijuana River Valley land managers' abilities to conserve and restore high-quality habitat impacted by sedimentation and to better protect valley-wide infrastructure from sedimentation and flooding. The Project also represents a significant opportunity to protect sensitive downstream habitats, including riparian and salt marsh vegetation communities, and help land managers realize cost savings associated with hauling managed excess sediments to regional landfills.

Project objectives allow for the analysis of reasonable alternatives to the Project. Reasonable alternatives must be analyzed in accordance with Section 15126.6 of the CEQA Guidelines. The purpose of the Project is guided by the following Project objectives:

- Consistent with Objective 3, Strategy 1 of the Tijuana River Valley Recovery Team Five-Year Action Plan, restore the landform, ecological functions, and values of the impacted habitats on the Project site that were significantly altered by past mining activity. As proposed, the Nelson Sloan Quarry would be restored and stabilized consistent with DMR reclamation standards.
- Divert sediment from landfills and reduce emissions associated with regional haul truck trips.
- Improve water quality within the watershed and reduce public health and safety hazards associated with cross-border flows.
- Reduce opportunities for downstream erosion, run-off, and water quality impairment through stabilization of the Project site. Implement interim and permanent design features to reduce erosion and stormwater runoff.
- Facilitate cost-effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley.
- Advance efforts to meet the intent of the recorded grant deed for the transfer of the property from the California Coastal Conservancy to the County; the deed states that the property must be used for habitat protection, restoration, and open space in perpetuity.
- Release the existing Mine ID No. 91-37-0037 associated with Border Highlands, also known as the Border Area Borrow Pit or Nelson Sloan Quarry; City Project No. 308715 and CUP No. 497-PC.

ES.4 Summary of Environmental Impacts and Mitigation Measures

Table ES-1 provides a summary of the impact analysis and a summary of environmental impacts resulting from implementation of the Project pursuant to CEQA Guidelines Section 15123(b)(1). In addition, Section 15123(b)(2) of the CEQA Guidelines requires that areas of controversy known to the lead agency must be stated in the executive summary prepared as part of the EIR. Table ES-1 also lists the level of significance of impacts prior to mitigation and lists all applicable mitigation measures identified for significant impacts, as well as providing the level of significance after mitigation. The following topics are evaluated in Chapter 3 of the EIR, as they were considered to have potential to result in significant impacts: aesthetics; air quality; biological resources, archaeological, historic, and tribal cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; mineral resources; noise; and wildfire. Impacts to these environmental issue areas were determined to be less than significant or less than significant with mitigation.

The following topics were evaluated in Chapter 4, Effects Found Not to be Significant, of this EIR, as impacts were determined to be less than significant (or no impact): agriculture and forestry resources, energy, greenhouse gas emissions, land use and planning, population and housing, public services, recreation, transportation, and utilities and service systems.

ES.5 Summary of Comments Received During the Notice of Preparation Review Period

Section 15123(b)(2) of the CEQA Guidelines requires that areas of controversy known to the lead agency must be stated in the executive summary prepared as part of the EIR. Issues of interest to the public and public agencies were identified during the 30-day public comment period for the Notice of Preparation (NOP) that was subsequently extended 1 week based on a request received from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife.

Written comments in response to the NOP were received from the following agencies and organizations:

- City of San Diego Planning Department
- City of Imperial Beach (Chris Helmer; comments received during NOP meeting on April 30, 2019)
- County of San Diego Parks and Recreation
- San Diego Audubon Society
- State of California Governor's Office of Planning and Research, State Clearinghouse
- U.S. Fish and Wildlife Service and California Department of Fish and Wildlife (joint comment letter submitted)

In addition to the agencies and organizations listed above, one member of the public, Jim Peugh, Conservation Committee Chair of the San Diego Audubon Society, attended the NOP meeting held on April 30, 2019, and submitted written comments to CDPR following the NOP meeting presentation. The NOP and comment letters received during the NOP review period are included in Appendix AA of this EIR.

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR identify issues to be resolved; this includes the choice among alternatives and whether or how to mitigate significant impacts. The major issues to be resolved for the Project include concerns over impacts to existing biological resources, including vegetation communities and special-status species.

ES.6 Summary of Project Alternatives

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to a project should occur. As stated in this section of the guidelines, alternatives must focus on those that are reasonably feasible and that attain most of the basic objectives of the project. Each alternative should be capable of avoiding or substantially lessening any significant effects of the project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required, per Section 15126.6.

This EIR includes an evaluation of the following alternatives:

- Alternative 1 - No Project/No Development Alternative
- Alternative 2 - Basic Reclamation (6,500 CY) Alternative
- Alternative 3 - Reduced Capacity (500,000 CY) Alternative

Alternative 1 - No Project/No Development Alternative

The No Project/No Development Alternative assumes that the Project would not be developed meaning that the eroded and oversteepened slope resulting from former mining activities would not be reclaimed, the MINE ID would

not be closed out with DMR, the restoration to historic (pre-mining operations) topography and vegetation patterns would not occur. Furthermore, the No Project/No Development Alternative would deny land managers an opportunity to implement effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley, and would compromise efforts to improve water quality and reduce public health and safety hazards from cross-border flows.

Although this alternative would not meet the objectives identified for the Project, CEQA requires analysis of an alternative that forgoes the Project. Therefore, the No Project/No Development Alternative is evaluated in Chapter 6, Alternatives.

Alternative 2 – Basic Reclamation (6,500 CY) Alternative

This alternative is based on the anticipated minimum volume of sediment necessary to fulfill the requirements of the Reclamation Plan for the previous Nelson Sloan Quarry. This alternative, which generally consists of Phase 1 of the Project's proposed grading plan, would (subject to DMR concurrence and revegetation via natural recruitment of coastal sage scrub vegetation for erosion control purposes) release the existing Mine ID No. 91-37-0037 associated with the previous quarry operation and fulfill all reporting requirements in compliance with SMARA. Assuming an average total available sediment volume of 75,000 CY from in-valley source locations, the duration of sediment placement activities on the Project site under this alternative would be less than 10% of one season of in-valley sediment management. Further, based on the minimal sediment needs to reclaim the eroded, oversteepened slope centrally located on the Project site, participation from multiple land managers would not be necessary to achieve the sediment placement goal of this alternative.

As with the No Project/No Development Alternative, the Basic Reclamation (6,500 CY) Alternative would deny land managers an opportunity to implement effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley, and would compromise efforts to improve water quality and reduce public health and safety hazards from cross-border flows.

Alternative 3 – Reduced Capacity (500,000 CY) Alternative

The Reduced Capacity (500,000 CY) Alternative proposes the placement of 500,000 CY of managed excess sediment from annual basin and channel maintenance activities for reclamation, landform creation, and habitat restoration efforts on the Project site. This alternative would entail half the intended placement volume of the Project and, thus, the duration of on-site activities would be approximately half that of the Project (7–8 years). Due to a reduced volume of sediment to be placed on the Project site, the landforms created under this alternative would have a smaller footprint than those associated with the Project. As such, this alternative would not fully restore the site to historic (i.e., pre-mining operations) topography and vegetative patterns. Similar to the Project, this alternative may include on-site sediment processing and placement and interim and permanent revegetation, and once reclamation and restoration activities are complete, the Project site would be managed as open space.

The Reduced Capacity (500,000 CY) Alternative would significantly limit an opportunity to implement effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley, and compromise efforts to improve water quality and reduce public health and safety hazards from cross-border flows.

ES.7 Environmentally Superior Alternative

Table ES-2 provides a summary of the alternatives impact analysis considered in the EIR, identifies the areas of potential environmental effects per CEQA, and ranks each alternative as better, the same, or worse than the Project with respect to each issue area.

As indicated in Table ES-2, Alternative 1, the No Project/No Development Alternative, would result in the fewest environmental impacts, and subsequently would be considered the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Of the alternatives evaluated above, the Reduced Capacity (500,000 CY) was found to be the environmentally superior alternative because it is feasible to implement and reduces the severity (and duration) of potentially significant impacts associated with the Project. This alternative also results in reduced temporary impacts to existing biological resources as final revegetation of the Project site would occur on a less delayed timeline than the Project. The Reduced Capacity (500,000 CY) Alternative was found to have reduced impacts related to air quality; biological resources; archaeological, historic, and tribal resources; geology and soils; noise; and wildfire. The Reduced Capacity (500,000 CY) also partially addressed all the Project objectives, albeit with a reduced total capacity for beneficial reuse of sediment on the Project site. Although the Reduced Capacity (500,000 CY) Alternative was found to be the environmentally superior alternative from a site-based analysis, considering the Tijuana River Valley more broadly, this alternative does not maximize Project objectives and falls short of achieving potential environmental and public health benefits of the Project. Furthermore, by reducing sediment placement capacity, this alternative does not achieve the longer-term habitat and landform restoration benefits of the Project and would result in reduced protection of downstream sensitive salt marsh and riparian habitats in the Tijuana River Valley.

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|-----------------------|-----------------------|--|
| Aesthetics | | | |
| Would the Project introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines? | Less than Significant | None | Less than Significant |
| Would the Project result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), trees, and rock outcroppings? | Less than Significant | None | Less than Significant |
| Would the Project substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from: a public road; a trail within an adopted County or State trail system; a scenic vista or highway; or a recreational area? | Less than Significant | None | Less than Significant |
| Would the Project result in the loss of any distinctive or landmark tree(s), or stand of mature trees as identified in a community plan? | No Impact | None | No Impact |
| Would the Project result in a substantial change in the existing landform? | Less than Significant | None | Less than Significant |
| Would the Project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code? | Less than Significant | None | Less than Significant |
| Would the Project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code? | Less than Significant | None | Less than Significant |
| Would the Project generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property? | Less than Significant | None | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|-----------------------|-----------------------|--|
| Would the Project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties? | Less than Significant | None. | Less than Significant |
| Would the Project not conform to applicable Federal, State, or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on aesthetics? | Less than Significant | None | Less than significant |
| Agricultural and Forestry Resources | | | |
| Would the Project convert a substantial amount of Prime Farmland, Unique Farmland or Farmland of statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | No Impact | None. | No Impact |
| Would the Project conflict with existing zoning for agricultural use, or Williamson Act contract? | No Impact | None | No Impact |
| Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? | No Impact | None | No Impact |
| Would the Project result in the loss of forest land or conversion of forest land to non-forest use? | No Impact | None | No Impact |
| Does the Project propose a non-agricultural land use within one-quarter mile of an active agricultural operation or land under a Williamson Act Contract (Contract) and as a result of the Project, land use conflicts between the agricultural operation or Contract land and the proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use? | No Impact | None | No Impact |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|--------------------------------|---|--|
| Does the Project propose a school, church, day care or other use that involves a concentration of people at certain times within one mile of an agricultural operation or land under Contract and as a result of the Project, land use conflicts between the agricultural operation or Contract land and the proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use? | No Impact | None | No Impact |
| Does the Project involve other changes to the existing environment, which due to their location or nature, could result in the conversion of off-site agricultural resources to a non-agricultural use or could adversely impact the viability of agriculture on land under a Williamson Act Contract? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on agricultural and forestry resources? | No Impact | None. | No Impact |
| Air Quality | | | |
| Would the Project conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP? | Less than Significant | None. | Less than Significant |
| Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is nonattainment under an applicable federal or state ambient air quality standard? | Less than Significant | None. | Less than Significant |
| Would the Project expose sensitive receptors to substantial pollutant concentrations? | Potentially Significant | MM-AQ-1: Prior to the lead and/or responsible agency's approval of any construction-related permits, the California Department of Parks and Recreation (and/or designee or responsible agency) shall place the following requirements on all plans, which shall be implemented during each construction phase to minimize diesel particulate matter emissions: a. Heavy-duty diesel-powered construction equipment shall be | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>equipped with Tier 4 Final or better diesel engines for engines 75 horsepower or greater. The City of San Diego and/or County of San Diego shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards. Vehicles in loading and unloading queues shall not idle for more than 5 minutes and shall turn their engines off when not in use to reduce vehicle emissions.</p> <ul style="list-style-type: none"> b. All construction equipment shall be properly tuned and maintained in accordance with manufacturer specifications. c. When construction equipment units that are less than 50 horsepower would be employed, that equipment shall be electrical or natural-gas-powered, where available. d. A Construction Traffic Control Plan shall be developed to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the amount of large pieces of equipment operating simultaneously during peak construction periods, schedule vendor and haul truck trips to occur during non-peak hours, establish dedicated | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|--------------------------------|---|--|
| | | construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling. | |
| Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | Less than Significant | None. | |
| Would the Project have a cumulative effect on air quality resources? | Less than Significant. | None. | Less than Significant. |
| Biological Resources | | | |
| Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | Potentially Significant | <p>MM-BIO-1 Restoration of Vegetation. Temporary impacts to Diegan coastal sage scrub shall require restoration. Restoration shall be provided at a minimum 1.5:1 ratio (restoration acreage: impact acreage). Due to the extended period of sediment placement on site, restoration will be phased to correspond to construction phases. The Restoration Plan shall include the responsible parties, revegetation implementation plan, 5-year maintenance plan, monitoring plan, contingency measures, and notification of completion of the restoration.</p> <p>To avoid impacts to high-quality host plants for Quino checkerspot butterfly, the Restoration Plan requires a biologist to survey the mesa for Quino checkerspot butterfly host plants prior to the pre-restoration phase activities. All host plant</p> | Less than Significant. |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>populations shall be flagged and a 20-foot buffer established around the host plant populations. Restoration activities within this avoidance area shall be restricted to hand weeding and/or herbicide application only. No mechanical work shall be done in this avoidance area. Existing roads or disturbed areas within the 20-foot buffer can be excluded from the avoidance area as determined by the Project biologist.</p> <p>MM-BIO-2 Special-Status Species Take Avoidance Surveys. Prior to initiation of each phase of site clearing, the applicant shall develop a relocation and exclusion plan for special-status terrestrial reptiles, Dulzura pocket mouse, Northwestern San Diego pocket mouse, and San Diego desert woodrat with the potential to occur on site. The relocation and exclusion plan shall be submitted to the California Department of Parks and Recreation (and/or designee or Responsible Agency) for review and approval prior to site clearing for each phase of the Project. The plan shall at minimum include the timing and locations where surveys should be conducted, the habitat and conditions in the proposed relocation site(s), the methods that would be used for trapping and relocating the individual species, the method for documentation/recordation of the species and number of animals</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>relocated, and the method of exclusion so that species cannot re-enter active construction areas.</p> <p><i>Pre-Construction Surveys.</i> No more than 7 days prior to each phase of site clearing, a qualified biologist shall conduct a preconstruction survey within areas of suitable habitat for special-status species wildlife. The biologist shall survey for special-status species that may be located within or immediately adjacent to the Project work areas, as permitted by access. If determined by the qualified biologist that based on the construction activities, time of year, and location of the special-status wildlife species relocation is necessary, relocation will occur to nearby undisturbed areas within suitable habitat in the open space preserve as specified in the plan and a California scientific collecting permit (SCP) (if applicable), but as close to their origin as possible (consistent with the approved plan). The biologist relocating the species shall possess a California SCP to handle these species if required by applicable California Department of Fish and Wildlife regulations.</p> <p><i>Monitoring.</i> A qualified biologist shall be present during each phase of initial ground-disturbing activities (i.e., vegetation removal) immediately adjacent to or within</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>the vegetation communities and/or disturbed habitats that could support populations of special-status wildlife species to monitor vegetation and topsoil removal. If special-status species reptiles or small mammals are detected in the work area during biological monitoring, the individual(s) will be documented and relocated as per the approved plan and in accordance with the SCP conditions as applicable. Periodic monitoring shall also be conducted by a qualified biologist following initial ground-disturbing activities, to ensure that exclusion fencing remains in place to minimize the potential for special-status species to re-enter active construction area.</p> <p>MM-BIO-3 Coastal California Gnatcatcher Avoidance and Surveys.</p> <p>No clearing, grubbing, grading, or other ground-disturbing activities shall occur during the coastal California gnatcatcher breeding season (March 1 through August 15) on Multi-Habitat Planning Area (MHPA) lands, until the following requirements have been met to the satisfaction of the California Department of Parks and Recreation (CDPR) (and/or designee or Responsible Agency):</p> <p>A Qualified Biologist (possessing a valid Endangered Species Act Section 10[a][1][a] Recovery Permit) shall survey</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 A-weighted decibels (dBA) hourly average for the presence of the coastal California gnatcatcher. Surveys for coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of any construction.</p> <ol style="list-style-type: none"> 1. If coastal California gnatcatchers are present, then the following conditions must be met: <ol style="list-style-type: none"> a. March 1 through August 15 on MHPA lands, no clearing, grubbing, or grading of occupied coastal California gnatcatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; and b. March 1 through August 15 on MHPA lands, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dBA hourly average at the edge of occupied coastal California gnatcatcher habitat. An | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>analysis showing that noise generated by construction activities would not exceed 60 dBA hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by CDPR (and/or designee or Responsible Agency) at least 2 weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the nesting season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; or</p> <p>c. At least 2 weeks prior to the commencement of construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities would not exceed 60 dBA hourly average at the edge of habitat occupied by the coastal California gnatcatcher.</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dBA hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the nesting season (August 16). Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. If not, other measures shall be implemented in consultation with the biologist and CDPR (and/or designee or Responsible Agency), as necessary, to reduce noise levels</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>to below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.</p> <p>2. If coastal California gnatcatchers are not detected during the protocol survey, the Qualified Biologist shall submit substantial evidence to CDPR (and/or designee or Responsible Agency) and applicable resource agencies that demonstrates whether or not mitigation measures such as noise walls are necessary from March 1 through August 15 on MHPA lands as follows:</p> <p>a. If this evidence indicates that the potential is high for coastal California gnatcatcher to be present based on historical records or site conditions, then Condition 1(a) shall be adhered to as specified above.</p> <p>b. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.</p> <p>MM-BIO-4: Quino Checkerspot Butterfly Take Authorization. The California Department of Parks and Recreation (CDPR) (and/or designee or Responsible</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>Agency) shall consult with the U.S. Fish and Wildlife Service (USFWS) to determine if take authorization is required for impacts to Quino checkerspot. If such take authorization is required, CDPR (and/or designee or Responsible Agency) shall demonstrate to the satisfaction of the City of San Diego that it has secured any necessary take authorization prior to the issuance of the first grading permit that impacts suitable Quino checkerspot butterfly habitat. Take authorization may be obtained through the Section 7 Consultation or Section 10 incidental take permit requirements. The Project applicant will comply with any and all conditions, including preconstruction surveys that USFWS may require for take of Quino checkerspot butterfly pursuant to the Endangered Species Act. If required as a permit condition, a preconstruction survey will be conducted in accordance with USFWS protocols unless USFWS authorizes a deviation from those protocols.</p> <p>MM-BIO-5: Nesting Bird Surveys. To avoid direct impacts to nesting birds (exclusive of coastal California gnatcatcher; see MM-BIO-3), removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the nesting season for these species (January 15 to September 15). If removal</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>of habitat in the proposed area of disturbance must occur during the nesting season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to removal of vegetation. The California Department of Parks and Recreation (CDPR) (and/or designee or Responsible Agency) shall submit the results of the pre-construction survey to the City and/or County of San Diego for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City of San Diego's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of nesting activities is avoided. The report or mitigation plan shall be submitted to the City and/or County of San Diego for review and approval and implemented to the satisfaction of the City and/or County of San Diego. A CDPR (and/or designee or Responsible Agency) Biologist shall verify</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|--------------------------------|---|--|
| | | and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. If more than 14 days lapse between clearing, grubbing, grading, or other ground-disturbing activities, nesting bird surveys should be reinitiated prior to commencing activities and follow the methods described above. MM-AQ-1: See Air Quality, above. MM-WF-1: See Wildfire, below. | |
| Would the Project have a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS? | Potentially Significant | See MM BIO-1 above. | Less than Significant |
| Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means? | No Impact | None | No Impact |
| Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | No Impact | None | No Impact |
| Would the Project conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan? | Less than Significant | None | Less than Significant |
| Would the Project introduce a land use within an area adjacent to the MHPA that would result in adverse edge effects? | Less than Significant | None | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|--------------------------------|--|--|
| Would the Project introduce invasive species of plants into a natural open space area? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on biological resources? | Less than Significant | None | Less than Significant |
| Archaeological, Historic, and Tribal Cultural Resources | | | |
| Would the Project result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a historic building (including an architecturally significant building), structure, or object or site? | Less than Significant | None. | Less than Significant |
| Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines? This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory. | Potentially Significant | <p>MM-ARCH-1: An archaeological survey of the direct Project area of potential effects shall be conducted to update the recordation of current site conditions prior to the start of any future ground-exposing or ground-disturbing activities.</p> <p>MM-ARCH-2: An archaeological and Native American monitor shall be present on site for any project-related future ground-exposing or ground-disturbing activities (e.g., brushing/grubbing of vegetation or grading of road surfaces) outside of the previously mined footprint, such as brushing/grubbing of vegetation or grading of road surfaces. Should any archaeological resources be discovered on site that are unable to be avoided, a formal evaluation for listing on the California Register of Historical Resources should be conducted prior to construction activities.</p> | Less than Significant |
| Would the Project disturb any human remains, including those interred outside of formal cemeteries? | Potentially Significant | MM-ARCH-3: Pursuant to Section 7050.5 of the California Health and Safety Code, if | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|--------------------------------|---|--|
| | | human remains are discovered during Project operations, no further work shall occur in the immediate vicinity of the discovered remains until the Medical Examiner has made the necessary findings as to the origin of the remains. If the remains are determined to be Native American in origin, the Medical Examiner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the Most Likely Descendant/s (MLD) of the deceased. As provided in California Public Resources Code, Section 5097.98, the MLD may make recommendation for treatment or disposition with appropriate dignity of the human remains and any associated grave goods. The remains shall be left in place and free from disturbance until recommendations for treatment have been made. | |
| Would the Project have any impact to existing religious or sacred uses within the potential impact area? | No Impact | None. | No Impact |
| Would the Project propose activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources? | Less than Significant | None. | Less than Significant |
| Would the Project, as designed, cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC, Section 11074, as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, | Potentially Significant | MM-ARCH-1 through MM-ARCH-3 | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|------------------------------|-----------------------|--|
| <p>sacred place, or object with cultural value to a California Native American tribe, and that is:</p> <p>a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC, Section 5020.1(k), or</p> <p>b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC, Section 5024.1(c). In applying the criteria set forth in PRC, Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.</p> <p>Would the Project cause a substantial adverse change in the significance of a tribal cultural resource? This shall include the destruction or disturbance of a tribal cultural resource that is important to local tribal communities?</p> | | | |
| <p>Would the Project have a cumulative effect on cultural resources?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Energy</p> | | | |
| <p>Would the Project result in the use of excessive amounts of fuel or energy (e.g. natural gas)?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Would the Project result in the use of excessive amounts of power?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Would the Project have a cumulative effect on energy?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Geology and Soils</p> | | | |
| <p>Would the Project propose any building or structure to be used for human occupancy over or within 50 feet of the trace of an Alquist-Priolo fault or County Special Study Zone fault?</p> | <p>No Impact</p> | <p>None.</p> | <p>No Impact</p> |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|-----------------------|-----------------------|--|
| <p>Would the Project propose the following uses within an Alquist-Priolo Fault Zone, which are prohibited by the County:</p> <p>i. Use containing structures with a capacity of 300 people or more? Any use having the capacity to serve, house, entertain, or otherwise accommodate 300 or more persons at any one time?</p> | No Impact | None. | No Impact |
| <p>ii. Uses with the potential to severely damage the environment or cause major loss of life? Any use having the potential to severely damage the environment or cause major loss of life if destroyed, such as dams, reservoirs, petroleum storage facilities, and electrical power plants powered by nuclear reactors?</p> | No Impact | None. | No Impact |
| <p>iii. Have specific civic uses, such as police and fire stations, schools, hospitals, rest homes, nursing homes, and emergency communication facilities?</p> | No Impact | None. | No Impact |
| <p>Would the Project be located within a County Near-Source Shaking Zone or within Seismic Zone 4, and not conform to the Uniform Building Code (UBC)?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project have the potential to expose people or structures to substantial adverse effects because:</p> <p>i. The Project site has potentially liquefiable soils?</p> | Less than Significant | None. | Less than Significant |
| <p>ii. The potentially liquefiable soils are saturated or have the potential to become saturated?</p> | Less than Significant | None. | Less than Significant |
| <p>iii. In-situ soil densities are not sufficiently high to preclude liquefaction?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving landslides?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project be located on a geologic unit or soil that is unstable, or would become unstable as a result of the Project, potentially resulting in an on- or off-site landslide?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project lie directly below or on a known area subject to rockfall, which could result in the collapse of structures?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project result in a substantial increase in wind or water erosion of soils, either on or off the site?</p> | Less than Significant | None. | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|--------------------------------|---|--|
| Would the Project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | Less than Significant | None. | Less than Significant |
| Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), and not conform with the Uniform Building Code? | Less than Significant | None. | Less than Significant |
| Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | No Impact | None. | No Impact |
| Would the Project require over 1,000 cubic yards of excavation in a high resource potential geologic deposit/formation/rock unit? | Potentially Significant | <p>MM-PAL-1: Prior to Permit Issuance or Bid Opening/Bid Award.</p> <p>A. Entitlements Plan Check Prior to issuance of any construction permits, including, but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the City Engineer and/or Building Inspector (BI) shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.</p> <p>1. The applicant shall submit a letter of verification to Resident Engineer and/or BI identifying the qualified Principal</p> | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>Investigator (PI) for the Project and the names of all persons involved in the paleontological monitoring program. A qualified PI is defined as a person with a PhD or MS or equivalent in paleontology or closely related field (e.g., sedimentary or stratigraphic geology, evolutionary biology, etc.) with demonstrated knowledge of Southern California paleontology and geology, and documented experience in professional paleontological procedures and techniques.</p> <p>MM-PAL-2: Prior to Start of Construction.</p> <p>A. Verification of Records Search</p> <ol style="list-style-type: none"> 1. The Principal Investigator (PI) shall provide verification to Resident Engineer (RE) and/or Building Inspector (BI) that a site-specific records search has been completed. Verification includes but is not limited to a copy of a confirmation letter from the San Diego Natural History Museum or another relevant institution that maintains paleontological collections recovered from sites within the City of San Diego. | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.</p> <p>B. PI Shall Attend Preconstruction Meetings</p> <p>1. Prior to beginning any work that requires monitoring, the applicant shall arrange a Preconstruction Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, RE, and BI, as appropriate. The qualified paleontologist (PI) shall attend any grading/excavation related Preconstruction Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the CM and/or Grading Contractor.</p> <p>a. If the PI is unable to attend the Preconstruction Meeting, the applicant shall schedule a focused Preconstruction Meeting with the PI, RE, CM or BI, if appropriate, prior to the</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>start of any work that requires monitoring.</p> <p>2. Identify Areas to be Monitored Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11 × 17) to RE and/or BI identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site-specific records search and information regarding existing known geologic conditions (e.g., geologic deposits as listed in the Paleontological Determination Matrix below).</p> <p>3. When Monitoring Will Occur</p> <p>a. Prior to the start of any work, the PI shall also submit a construction schedule to the RE and/or BI indicating when and where monitoring will occur.</p> <p>b. The PI may submit a detailed letter to RE and/or BI prior to the start of work or during construction requesting a</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents and geotechnical reports that indicate conditions such as depth of excavation and/or thickness of artificial fill overlying bedrock, presence or absence of fossils, etc., which may reduce or increase the potential for resources to be present.</p> <p>MM-PAL-3: During Construction.</p> <ul style="list-style-type: none"> A. Monitor Shall be Present During Grading/Excavation/Trenching <ul style="list-style-type: none"> 1. The paleontological monitor shall be present full-time during grading/excavation/trenching activities as identified on the Paleontological Monitoring Exhibit (PME) that could result in impacts to formations with high and moderate resource sensitivity. The Construction Manager (CM) is responsible for notifying the Principal Investigator (PI), Resident | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>Engineer (RE), and/or Building Inspector (BI) of changes to any construction activities, such as in the case of a potential safety concern within the area being monitored. In certain circumstances, Occupational Safety and Health Administration safety requirements may necessitate modification of the PME.</p> <p>2. The PI may submit a detailed letter to the RE and/or BI during construction requesting a modification to the monitoring program after the occurrence of a field condition, such as trenching activities that do not encounter previously undisturbed and paleontologically sensitive geologic deposits as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>3. The paleontological monitor shall document field activity via the Consultant Site Visit Record (CSV). The CSVs shall be emailed by the CM to the RE and/or BI the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries.</p> <p>B. Discovery Notification Process</p> <p>1. In the event of a discovery, the paleontological monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and notify the RE and/or BI. The contractor shall also process a construction change for administrative purposes to formalize the documentation and recovery program, including modification to Mitigation Monitoring and Compliance (MMC).</p> <p>2. The paleontological monitor shall notify the PI (unless paleontological monitor is the PI) of the discovery.</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>3. The PI shall immediately notify MMC of the discovery, and shall submit documentation to MMC within 24 hours by email with photos of the resource in context.</p> <p>C. Recovery of Fossils If a paleontological resource is encountered:</p> <ol style="list-style-type: none"> 1. The paleontological monitor shall salvage unearthed fossil remains, including simple excavation of exposed specimens or, if necessary, as determined by the PI, plaster-jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits. 2. The paleontological monitor shall record stratigraphic and geologic data to provide a context for the recovered fossil remains, including a detailed description of all paleontological localities within the Project site, as well as the lithology of fossil-bearing strata within the measured stratigraphic | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>section, and photographic documentation of the geologic setting.</p> <p>MM-PAL-4: Post Construction.</p> <p>A. Preparation and Submittal of Draft Paleontological Monitoring Report</p> <p>1. The Principal Investigator (PI) shall submit two copies of the Draft Monitoring Report (even if negative), prepared to the satisfaction of the Development Services Department. The Draft Paleontological Monitoring Report shall describe the methods, results, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to Mitigation Monitoring and Compliance (MMC) for review and approval within 90 days following the completion of monitoring.</p> <p>a. For significant or potentially significant paleontological resources encountered during monitoring, as identified by the PI, the Paleontological Recovery Program shall be</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|---|--|
| | | <p>included in the Draft Monitoring Report.</p> <p>b. The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines (revised November 2017), and submittal of such forms to the San Diego Natural History Museum and MMC with the Draft Paleontological Monitoring Report.</p> <p>2. MMC shall return the Draft Paleontological Monitoring Report to the PI for revision or for preparation of the Final Report.</p> <p>3. The PI shall submit revised Draft Paleontological Monitoring Report to MMC for approval.</p> <p>4. MMC shall provide written verification to the PI of the</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>approved Draft Paleontological Monitoring Report.</p> <p>5. MMC shall notify the Resident Engineer (RE) and/or Building Inspector (BI) of receipt of all Draft Paleontological Monitoring Report submittals and approvals.</p> <p>B. Handling of Fossil Remains</p> <p>1. The PI shall ensure that all fossil collected are cleaned to the point of curation (e.g., removal of extraneous sediment, repair of broken specimens, and consolidation of fragile/brittle specimens) and catalogued as part of the Paleontological Monitoring Program.</p> <p>2. The PI shall ensure that all fossils are analyzed to identify stratigraphic provenance, geochronology, and taphonomic context of the source geologic deposit; that faunal material is taxonomically identified; and that curation has been completed, as appropriate.</p> | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>C. Curation of Fossil Remains: Deed of Gift and Acceptance Verification</p> <ol style="list-style-type: none"> 1. The PI shall be responsible for ensuring that all fossils associated with the paleontological monitoring program for this Project are permanently curated with an accredited institution that maintains paleontological collections (such as the San Diego Natural History Museum). 2. The PI shall include an acceptance verification from the curation institution in the Final Paleontological Monitoring Report submitted to the RE and/or BI, and MMC. <p>D. Final Monitoring Report(s)</p> <ol style="list-style-type: none"> 1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report. 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|--------------------------------|---|--|
| | | Monitoring Report from MMC that includes the Acceptance Verification from the curation institution. | |
| Would the Project require over 2,000 cubic yards of excavation in a moderate resource potential geologic deposit/formation/rock unit? | Potentially Significant | See MM-PAL-1 through MM-PAL-4 , above. | Less than Significant |
| Would the Project have a cumulative effect on geology and soils? | Less than Significant | None. | Less than Significant |
| Greenhouse Gas Emissions | | | |
| Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | Less than Significant | None. | Less than Significant |
| Would the Project conflict with the City’s Climate Action Plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on greenhouse gas emissions? | Less than Significant | None. | Less than Significant |
| Hazards and Hazardous Materials | | | |
| Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | Less than Significant | None. | Less than Significant |
| Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | Less than Significant | None | Less than Significant |
| Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | No Impact | None | No Impact |
| Would the Project be located on or within one-quarter mile from a site identified in one of the regulatory databases compiled pursuant to Government Code Section 65962.519 or is otherwise known to have been the subject of a release of hazardous substances, and as a result | Less than Significant | None | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|-----------------------|-----------------------|--|
| the Project may result in a significant hazard to the public or the environment? | | | |
| Would the Project propose structure(s) for human occupancy and/or significant linear excavation within 1,000 feet of an open, abandoned, or closed landfill (excluding burnsites) and as a result, the Project would create a significant hazard to the public or the environment? | No Impact | None | No Impact |
| Would the Project be proposed on or within 1,000 feet of a FUDS and it has been determined that it is probable that munitions or other hazards are located on site that could represent a significant hazard to the public or the environment? | Less than Significant | None | Less than Significant |
| Would the Project result in human or environmental exposure to soils or groundwater that exceed EPA Region 9 PRG's, Cal/EPA CHHSL's, or Primary State or Federal Maximum Contaminant Levels (MCLs) for applicable contaminants and the exposure would represent a hazard to the public or the environment? | Less than Significant | None | Less than Significant |
| Would the Project involve the demolition of commercial, industrial or residential structures that may contain ACM, LBP and/or other hazardous materials and as a result, the Project would represent a significant hazard to the public or the environment? | No Impact | None | No Impact |
| Would the Project result in a safety hazard for people residing or working in a designated airport influence area? | No Impact | None | No Impact |
| Would the Project result in a safety hazard for people residing or working within two miles of a private airstrip or a private airport or heliport facility that is not covered by an adopted Airport Land Use Compatibility Plan? | No Impact | None | No Impact |
| Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Less than Significant | None | Less than Significant |
| Would the Project have a cumulative effect on hazards and hazardous materials? | Less than Significant | None | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|-----------------------|-----------------------|--|
| Hydrology and Water Quality | | | |
| Is the Project a development project listed in County of San Diego, Code of Regulatory Ordinances (Regulatory Ordinances), Section 67.804(g), as amended, and does the Project comply with the standards set forth in the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, or the Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67? | Less than Significant | None | Less than Significant |
| Would the Project drain to a tributary of an impaired water body listed on the Clean Water Act Section 303(d) list, and contribute substantial additional pollutant(s) for which the receiving water body is already impaired? | Less than Significant | None | Less than Significant |
| Would the Project drain to a tributary of a drinking water reservoir and contribute substantially more pollutant(s) than would normally runoff from the Project site under natural conditions? | Less than Significant | None. | Less than Significant |
| Would the Project contribute pollution in excess of that allowed by applicable State or local water quality objectives or cause or contribute to the degradation of beneficial uses? | Less than Significant | None. | Less than Significant |
| Would the Project conform to applicable Federal, State, or local “Clean Water” statutes or regulations including but not limited to the Federal Water Pollution Control Act, California Porter-Cologne Water Quality Control Act, and the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance? | Less than Significant | None. | Less than Significant |
| Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin? | Less than Significant | None. | Less than Significant |
| Would the Project result in a substantial increase in impervious surfaces and associated increased runoff? | Less than Significant | None. | Less than Significant |
| Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | Less than Significant | None. | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|-----------------------|-----------------------|--|
| Would the Project increase water surface elevation in a watercourse within a watershed equal or greater than 1 square mile, by 1 foot or more in height, and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River and Otay River, 2/10 of a foot or more in height? | No Impact | None. | No Impact |
| Would the Project result in increased velocities and peak flow rates exiting the Project site that would cause flooding downstream or exceed the stormwater drainage system capacity serving the site? | Less than Significant | None. | Less than Significant |
| Would the Project be located in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation? | Less than Significant | None. | Less than Significant |
| Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | Less than Significant | None. | Less than Significant |
| Would the Project result in placing housing, habitable structures, or unanchored impediments to flow in a 100-year floodplain area or other special flood hazard area, as shown on a FIRM, a County Flood Plain Map or County Alluvial Fan Map, which would subsequently endanger health, safety, and property due to flooding? | Less than Significant | None. | Less than Significant |
| <p>Would the Project place structures within a 100-year flood hazard or alter the floodway in a manner that would redirect or impede flow resulting in any of the following:</p> <ol style="list-style-type: none"> 1. Alter the Lines of Inundation resulting in the placement of other housing in a 100-year flood hazard?; OR 2. Increase water surface elevation in a watercourse with a watershed equal to or greater than 1 square mile by 1 foot or more in height, and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River and Otay River 2/10 of a foot or more in height? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on hydrology and water quality? | Less than Significant | None. | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|--|-----------------------|-----------------------|--|
| Land Use and Planning | | | |
| Would the Project physically divide an established community? | Less than Significant | None. | Less than Significant |
| Would the Project result in a conflict with the environmental goals, objectives, and recommendations of the community plan in which it is located? | Less than Significant | None. | Less than Significant |
| Would the Project require a deviation or variance, and the deviation or variance would in turn result in a physical impact on the environment? | Less than Significant | None. | Less than Significant |
| Would the Project result in land uses which are not compatible with an adopted airport Comprehensive Land Use Plan (CLUP)? | No Impact | None. | No Impact |
| Would the Project have a cumulative effect on land use and planning? | Less than Significant | None. | Less than Significant |
| Mineral Resources | | | |
| <p>Would the Project result in the loss of a site:</p> <ul style="list-style-type: none"> ▪ On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2; or ▪ On land classified as MRZ-3; or ▪ Underlain by Quaternary alluvium; or ▪ On a known sand and gravel mine, quarry, or gemstone deposit; <p>AND</p> <p>The Project will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state;</p> <p>AND</p> <p>The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):</p> | Less than Significant | None. | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|--------------------------------|--|--|
| <ul style="list-style-type: none"> ▪ Construction materials (\$12,500,000) ▪ Industrial and chemical materials (\$2,500,000) ▪ Metallic and rare minerals (\$1,250,000) | | | |
| Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on mineral resources? | No Impact | None. | No Impact |
| Noise | | | |
| Would the Project generate noise levels in excess of the City's adopted noise ordinance? | Less than Significant | None. | Less than Significant |
| Would Project operation noise exceed City of San Diego CEQA Significance Thresholds Table K-4 noise limits with respect to nature preserves, parks, and single-family residential land uses? | Potentially Significant | MM-NOI-1 Construction Equipment Speed Limit: Due to predicted average daily volumes of sediment haul truck traffic during Project Phases 4, 5, and 6, Project sediment haul truck vehicle speed along the portion of Monument Road representing the haul route between Goat Canyon and the Project site shall be no greater than 22 miles per hour. | Less than Significant |
| Would the Project expose neighboring residential land uses to ground-borne vibration in excess of County guidance? | Less than Significant | None. | Less than Significant |
| Would the Project result in land uses which are not compatible with aircraft noise levels as defined by an adopted airport Comprehensive Land Use Plan (CLUP)? | Less than Significant | None. | Less than Significant |
| Would the Project expose persons to current or future transportation noise levels which exceed standards established in the Transportation Element of the General Plan or an adopted airport Comprehensive Land Use Plan? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on noise? | Less than Significant | None | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|-----------------------|-----------------------|--|
| Population and Housing | | | |
| Would the Project induce substantial population growth in an area, (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the community plan)? | Less than Significant | None. | Less than Significant |
| Would the Project substantially alter the planned location, distribution, density, or growth rate of the population of an area? | Less than Significant | None. | Less than Significant |
| Would the Project include extensions of roads or other infrastructure not assumed in the community plan or adopted Capital Improvements Project list, when such infrastructure exceeds the needs of the Project and could accommodate future developments? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on population and housing? | Less than Significant | None. | Less than Significant |
| Public Services | | | |
| Would the Project have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Police protection; Parks or other recreational facilities; Fire/Life Safety protection; Maintenance of public facilities, including roads; Libraries; Schools? | | | |
| Fire protection? | Less than Significant | None. | Less than Significant |
| Police protection? | Less than Significant | None. | Less than Significant |
| Schools? | Less than Significant | None. | Less than Significant |
| Parks? | Less than Significant | None. | Less than Significant |
| Other public facilities? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on public services resources? | Less than Significant | None. | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|-----------------------|-----------------------|--|
| Recreation | | | |
| Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | Less than Significant | None. | Less than Significant |
| Does the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on recreation resources? | Less than Significant | None. | Less than Significant |
| Transportation | | | |
| Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? | Less than Significant | None. | Less than Significant |
| Would the Project result in VMT exceeding thresholds identified in the City of San Diego Transportation Study Manual? | Less than Significant | None. | Less than Significant |
| Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | Less than Significant | None. | Less than Significant |
| Would the Project result in inadequate emergency access? | Less than Significant | None. | Less than Significant |
| Would the Project generate over 2,400 ADT or 200 peak hour trips and therefore must comply with the traffic study requirements of SANDAG's Congestion Management Program. Trip distributions for these Projects must also use the current regional computer traffic model. Projects that must prepare a CMP analysis should also follow the CMP traffic impact analysis guidelines. | Less than Significant | None. | Less than Significant |
| Would the Project have a cumulative effect on transportation? | Less than Significant | None. | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|--------------------------------|--|--|
| Utilities and Service Systems | | | |
| <p>Would the Project result in a need for new systems, or require substantial alterations to existing utilities, the construction of which would create physical impacts:</p> <ol style="list-style-type: none"> 1. Natural gas 2. Water 3. Sewer 4. Communication systems 5. Solid waste disposal | Less than Significant | None. | Less than Significant |
| <p>Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?</p> | No Impact | None. | No Impact |
| <p>Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?</p> | Less than Significant | None. | Less than Significant |
| <p>Would the Project have a cumulative effect on utilities and/or service systems resources?</p> | Less than Significant | None. | Less than Significant |
| Wildfire | | | |
| <p>Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?</p> | Less than Significant | None | Less than Significant |
| <p>Due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?</p> | Potentially Significant | <p>MM-AQ-1, See above. MM-WF-1 Pre-Construction Requirements. Vegetation management shall be conducted prior to the start of construction and throughout all phases of the Project. Adequate firebreaks</p> | Less than Significant |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <p>consisting of vegetation removal or thinning of dead and dry vegetation at least 50 feet wide or as required by local fire agencies shall be created around all grading, staging areas, and other construction activities in areas where there is flammable, non-irrigated vegetation (special-status species and irrigated native species planted as part of the Project would be exempt). The area around the sediment processing plant staging area shall be cleared and kept clear of all flammable vegetation, invasive plant species, debris, or other potentially flammable materials, in accordance with the City of San Diego Municipal Code Section 142.0412, Brush Management, and approved by the City of San Diego Fire-Rescue Department. The Project shall comply with the following risk reducing vegetation management guidelines:</p> <ul style="list-style-type: none"> ▪ Temporary construction power lines may be allowed in areas that have been cleared of combustible vegetation. Width of clearance along the temporary construction power line alignment shall be consistent with local fire agency and California Public Utilities Commission General Order 95. | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <ul style="list-style-type: none"> ▪ Caution must be used to avoid causing erosion or ground (including slope) instability or water runoff due to vegetation removal, vegetation management, maintenance, landscaping, or irrigation. <p>MM-WF-2 Fire Management and Prevention Plan. Prior to the start of Project work, the California Department of Parks and Recreation (and/or designee or Responsible Agency) shall prepare and implement a Fire Management and Prevention Plan to ensure the safety of workers and the public during site preparation, operation and maintenance, and future monitoring activities for the Project. CDPR (and/or designee or Responsible Agency) shall submit the Fire Management and Prevention Plan to the City of San Diego Fire-Rescue Department (SDFD) for review and approval prior to the commencement of Project activities. The Fire Management and Prevention Plan shall include fire prevention, training, and reporting procedures including, but not limited to:</p> <ul style="list-style-type: none"> ▪ Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, and hot work restrictions | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <ul style="list-style-type: none"> ▪ All personnel visiting the Project site shall receive training on fire prevention procedures, the proper use of fire suppression equipment, and procedures to be followed in the event of a fire. Fire prevention and suppression training shall be included in the Project's Worker Environmental Awareness Program (WEAP) and discussed during morning tailboard meetings prior to the start of work ▪ Designation of on-site personnel to serve as fire watch during all hot work or other spark-generating activities ▪ Designation of an emergency services coordinator from among the full-time on-site personnel who shall perform routine patrols of the site during the fire season equipped with a portable fire extinguisher and communications equipment ▪ Fire containment and extinguishing equipment shall be kept on site and readily accessible during Project activities. The location and proper use of fire containment and extinguishing equipment shall be included in the WEAP | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---------------------|---------|--|--|
| | | <ul style="list-style-type: none"> ▪ All internal combustion engines used at the Project site shall be equipped with spark arrestors and spark arrestors shall be in good working order ▪ Curtailment of Project activities in the event of a fire or when fuel and weather conditions result in Red Flag Warnings and High to Extreme Fire Danger days, as determined by the National Weather Service and SDFD, with specific Project-related activities to be allowed during very high or extreme weather conditions at the discretion of SDFD. The Project would be subject to additional requirements/restrictions, as required by SDFD ▪ Equipment staging and parking areas shall be cleared of all flammable materials ▪ Emergency response and evacuation measures that would be required to be followed during emergency situations ▪ Smoking shall be prohibited in all vegetated areas and within 50 feet of combustible materials storage and shall be limited to paved areas or areas cleared of all vegetation ▪ Fires ignited on site shall be immediately reported to SDFD | |

Table ES-1. Summary of Environmental Impacts and Mitigation Measures

| Environmental Topic | Impact? | Mitigation Measure(s) | Level of Significance After Mitigation |
|---|---------------------------------------|--|--|
| | | <ul style="list-style-type: none"> ▪ Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees | |
| <p>Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?</p> | <p>Potentially Significant</p> | <p>MM-WF-1 Pre-Construction Requirements. See above.</p> <p>MM-WF-2 Fire Management and Prevention Plan. See above.</p> | <p>Less than Significant</p> |
| <p>Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Would the Project not demonstrate compliance with all applicable fire codes?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>If a comprehensive Fire Protection Plan has been accepted, would the Project be inconsistent with its recommendations?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |
| <p>Would the Project not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives?</p> | <p>Less than Significant</p> | <p>None</p> | <p>Less than Significant</p> |
| <p>Would the Project have a cumulative effect on wildfire?</p> | <p>Less than Significant</p> | <p>None.</p> | <p>Less than Significant</p> |

Table ES-2. Comparison of Impacts of the Alternatives

| Environmental Issue Area | Project | Alternative 1 – No Project/No Development | Alternative 2 – Basic Reclamation (6,500 CY) Alternative | Alternative 3 – Reduced Capacity (500,000 CY) Alternative |
|--|---------|---|--|---|
| Aesthetics | LTS | ▼ | ▼ | ▼ |
| Air Quality | LTS/MM | ▼ | ▼ | ▼ |
| Biological Resources | LTS/MM | ▼ | ▼ | ▼ |
| Archaeological, Historical, and Tribal Cultural Resources | LTS/MM | ▼ | ▼ | ▼ |
| Energy | LTS | ▼ | ▼ | ▼ |
| Geology and Soils | LTS/MM | ▼ | ▼ | ▼ |
| Greenhouse Gas Emissions | LTS | ▼ | ▼ | ▼ |
| Hazards and Hazardous Materials | LTS | ▼ | ▼ | ▼ |
| Hydrology and Water Quality | LTS | ▼ | ▼ | ▼ |
| Land Use and Planning | LTS | — | — | ▼ |
| Mineral Resources | LTS | ▼ | ▼ | ▼ |
| Noise | LTS/MM | ▼ | ▼ | ▼ |
| Population and Housing | LTS | ▼ | ▼ | — |
| Public Services | LTS | ▼ | ▼ | — |
| Recreation | LTS | ▼ | ▼ | — |
| Transportation | LTS | ▼ | ▼ | ▼ |
| Utilities and Service Systems | LTS | ▼ | ▼ | — |
| Wildfire | LTS/MM | ▼ | ▼ | ▼ |

Notes:

- △ Alternative is likely to result in greater impacts to issue when compared to Project.
 - Alternative is likely to result in similar impacts to issue when compared to Project.
 - ▼ Alternative is likely to result in reduced impacts to issue when compared to Project.
- LTS = Less than significant impact; LTS/MM = Less than significant impact with mitigation

ES.8 References

Meehan, C. 2019. "Border Highlands Pit (91-37-0037) – options for closure." Email between C. Meehan (California Department of Conservation Division of Mine Reclamation) and L. Warner-Lara (California Department of Parks and Recreation).

SFEI (San Francisco Estuary Institute). *Tijuana River Valley Historical Ecology Investigation*. January 2017.

INTENTIONALLY LEFT BLANK

1 Introduction

1.1 Purpose

Described in this chapter of this Environmental Impact Report (EIR) are the purpose, scope, and legislative authority of the EIR, the intent of the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.), the environmental review process, and other pertinent environmental rules and regulations.

The environmental effects associated with restoration of the former Nelson Sloan sand and gravel quarry are addressed in this EIR. The California Department of Parks and Recreation (CDPR) proposes the beneficial reuse of excess sediment excavated from managed sources (e.g., sediment basins, flood control facilities and conveyances) from a range of ongoing, approved, and/or permitted sediment management activities and proposed habitat restoration and enhancement projects in the Tijuana River Valley. Beneficial reuse of excess sediment is proposed to facilitate quarry/mine ID closure with the California Department of Conservation Division of Mine Reclamation, as well as historic landform reclamation and habitat restoration of the abandoned Nelson Sloan quarry site, which is owned by County of San Diego Parks and Recreation and is within the land use jurisdiction of the City of San Diego. The Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) requires approval of certain discretionary actions by CDPR and, therefore, is subject to the environmental review requirements of CEQA. A detailed description of the Project is provided in Chapter 2, Project Description, of this EIR.

CDPR, as the CEQA lead agency, has prepared this EIR to provide decision makers, the public, trustee agencies, and responsible agencies with information about the potential environmental effects associated with the Project.

1.2 Intended Use of the Environmental Impact Report

This EIR was prepared in accordance with CEQA (California Public Resources Code, Section 21000 et seq.), CEQA Guidelines (14 CCR 15000 et seq.), and CDPR Environmental Review Procedures.

The EIR is an informational document that will provide CDPR's decision makers, public agencies, responsible and trustee agencies, and members of the public with information about (1) the potential for significant adverse environmental impacts that would result from the development of the Project, (2) possible ways to minimize any significant environmental impacts, and (3) feasible alternatives to the Project that would reduce or avoid significant impacts (California Public Resources Code, Section 21002.1[a]; 14 CCR 15121[a]). Responsible and trustee agencies may use this EIR to fulfill their legal authority to issue permits for the Project. The analysis and findings in this EIR reflect the independent judgment of CDPR.

CDPR is the lead agency for the EIR and will perform the entitlement processing of the Project. As the designated lead agency, CDPR has assumed responsibility for preparing this EIR, and the analysis and findings in this EIR reflect CDPR's independent judgment. When deciding whether to approve the Project, CDPR will use the information in this EIR to consider potential impacts to the physical environment associated with the Project. Subsequent to certification of the Final EIR, agencies with permitting authority over all or portions of the Project will use the Final EIR as the basis for their evaluation of environmental effects related to the Project, which will culminate with the approval or denial of applicable permits.

In addition to CDPR and permitting agencies, the EIR will be used by the City of San Diego (City) and County of San Diego (County) for their own decision-making and informational purposes. Anticipated actions and approvals of the Project by the City and other federal, state, and local agencies are listed in Table 2-10.

Because the Project impact area is located on County lands (i.e., within Tijuana River Valley Regional Park) but within the land use jurisdiction of the City, the EIR considers the CEQA significance guidelines of the City and County. In the fall/winter of 2019, based on direction provided by City and County staff, Dudek prepared a threshold matrix to determine the most suitable (and stringent) guidelines to use in the EIR. Dudek reviewed CEQA Appendix G and City and County CEQA significance guidelines for all environmental topics, and where similarities were identified, a determination was made by Dudek concerning the most stringent guideline to be used in the Project EIR. Rationale for the guidelines to be used is provided in the threshold matrix (see Appendix K to this EIR).

The threshold matrix was distributed to the City and County on January 22, 2020, and received approval for use in the Project EIR from the City (Rebecca Malone, Planning Department) on January 30 and the County of San Diego Parks and Recreation (Crystal Benham, Parks and Recreation) on February 5, 2020. Minor comments concerning updates to transportation significance thresholds (City) and preferred processes for greenhouse gas and wildfire analyses (County) were received and incorporated into the matrix and noted. Lastly, where relevant, the EIR includes text describing the “hybrid” approach concerning the use of CEQA Appendix G, City, and County guidelines/significance thresholds.

1.3 Scope of the Environmental Impact Report

For the Project, CDPR determined that a Project EIR, as defined by CEQA Guidelines Section 15161, is required. CDPR made this determination based on the scope and the location of the Project, the duration of proposed activities, and the potential for modifications to landform and existing environmental setting. As such, and in accordance with CEQA Guidelines Section 15060(d), CDPR opted not to prepare a detailed Initial Study and to instead immediately begin preparation of an EIR for the Project.

In the absence of an Initial Study, this Draft EIR considers all subject areas listed in Appendix G to the CEQA Guidelines, which include the following: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy consumption, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise and vibration, population and housing, public services, recreation, traffic and circulation, tribal cultural resources, utilities and service systems, cumulative impacts, and growth-inducing impacts. These resources are either evaluated in individual sections of the EIR or in Chapter 4, Effects Not Found to be Significant.

As a “Project EIR,” this EIR is “focused primarily on the changes in the environment that would result from the development project” (14 CCR 15161). In addition, as a Project EIR, this EIR examines all phases of the Project including planning, construction, and operation (14 CCR 15161). Where environmental impacts have been determined to be significant, mitigation measures are recommended that are directed at reducing or avoiding those significant environmental impacts. Alternatives to the Project are identified to evaluate whether there are ways to minimize or avoid significant impacts associated with the Project.

In regard to sediment placement, as proposed, the Project intends to source sediment from potentially multiple locations in the Tijuana River Valley. Additional background regarding sources of sediments is provided in Section 2.1.1, Project Overview. Sediment management operations at each of the potential source locations are subject

to existing permits and/or environmental approvals. As such, this document generally does not include an assessment of existing, ongoing sediment management operations (existing land uses) at potential source locations including the Goat Canyon Sedimentation Basins (managed by CDPH), Pilot Channel and Smuggler's Gulch (managed by the City), Smuggler's Gulch (south of Monument Road; managed by the County), and others. Other than utilizing the Project site as a receiving site for sediments, existing operations at sediment source locations are not anticipated to change. However, due to potentially increased daily traffic on local roads associated with shorter overall haul routes between sediment source locations and the end placement site (i.e., Project site instead of a regional landfill), predicted noise from Project haul truck traffic by phase is considered and assessed in Section 3.9, Noise. See Table 3.9-5 in this EIR.

1.4 The California Environmental Quality Act and Environmental Review Process

1.4.1 California Environmental Quality Act Overview

CEQA requires the preparation and certification of an EIR for any project that a lead agency determines may have a significant adverse effect on the environment. The following is stated in CEQA Guidelines Section 15151 (14 CCR 15151):

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which takes account of environmental consequences that enables them to decide intelligently. An evaluation of the environmental effects of a Project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

Accordingly, this EIR has been prepared to identify and disclose the significant environmental effects of the Project, identify mitigation measures to minimize significant effects, and consider reasonable project alternatives. The environmental impact analyses in this EIR are based on a variety of sources, including agency consultation, technical studies, and field surveys. CDPH will consider the information presented in this EIR, along with other factors, in considering approval of the Project.

1.4.2 Notice of Preparation and Scoping

CEQA establishes mechanisms to inform the public and decision makers about the nature of the Project and the extent and types of impacts that the Project and alternatives would have on the environment should they be implemented. Pursuant to Section 15082 of the CEQA Guidelines, CDPH circulated a Notice of Preparation (NOP) dated April 2019 to interested agencies, organizations, and parties. The NOP was filed with the County Clerk on April 16, 2019. The NOP was also sent to the State Clearinghouse at the California Office of Planning and Research. The State Clearinghouse assigned a state identification number (SCH No. 2019049100) to this EIR.

The NOP is intended to encourage interagency communication regarding the proposed action so that agencies, organizations, and individuals are afforded an opportunity to respond with specific comments and/or questions regarding the scope and content of the EIR. A public scoping meeting for the Project EIR was held on April 30, 2019 (6:00 p.m. to 7:30 p.m.) at the Tijuana Estuary Visitor Center (301 Caspian Way, Imperial Beach, California

91932) to gather additional public input. The NOP and other public notices associated with the project are viewable on CDPR's website for the Project (https://www.parks.ca.gov/?page_id=983) and the Tijuana River National Estuarine Research Reserve's website (<https://trnerr.org/about/public-notices/>). At the request of the U.S. Fish and Wildlife Service Carlsbad Office, the initial 30-day public scoping period was extended 1 week beyond its original end date (i.e., May 17, 2019) and ended on May 24, 2019.

Comments received during the NOP public scoping period were considered during preparation of this EIR. The NOP and written comments are included in Appendix AA to this EIR. Comments covered numerous topics, including consistency with the intent of the City's Multiple Habitat Planning Area; air quality, greenhouse gas emissions, and noise impacts associated with haul truck traffic; lane closures and other traffic-related issues associated with haul trucks; identification of the negative impacts associated with the No Project Alternative; conflicts with County trails; and potential impacts to biological resources. Public scoping comments regarding the Project's potential impact on the environment have been incorporated in the analysis presented in Chapters 3, 4, and 5 of this EIR.

1.4.3 Draft Environmental Impact Report and Public Review

This Draft EIR was prepared under the direction and supervision of CDPR. The Draft EIR will be made available to members of the public, responsible agencies, and interested parties for a 45-day public review period in accordance with CEQA Guidelines Section 15105.

Public review of the Draft EIR is intended to focus on the "sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (14 CCR 15204). The Notice of Completion of the Draft EIR will be filed with the State Clearinghouse as required by CEQA Guidelines Section 15085. In addition, the Notice of Availability of the Draft EIR will be distributed pursuant to CEQA Guidelines Section 15087. Interested parties may provide comments on the Draft EIR in written form. This EIR and related technical appendices are available for review during the 45-day public review period at the following locations:

- **Tijuana Estuary Visitor Center** (301 Caspian Way, Imperial Beach, California 91932)
- **Imperial Beach Branch of the San Diego County Library** (810 Imperial Beach Boulevard, Imperial Beach, California 91932)
- **San Ysidro Library** (4235 Beyer Boulevard, San Ysidro, California 92173)
- **CDPR website:** https://www.parks.ca.gov/?page_id=983
- **Tijuana River National Estuarine Research Reserve website:** <https://trnerr.org/about/public-notices/>

Interested agencies and members of the public may submit written comments on the adequacy of the Draft EIR to CDPR as follows:

ATTN: Lorena Warner-Lara
California State Parks
Tijuana River National Estuarine Research Reserve
301 Caspian Way
Imperial Beach, CA 91932-3149
SDCD.CEQA@parks.ca.gov

Comments on the Draft EIR must be received by the close of business on the last day of the 45-day review period unless CDPR grants an extension.

1.4.4 Final Environmental Impact Report Publication and Certification

Once the 45-day public review period has concluded, CDPR will review all public comments on the Draft EIR and provide a written response to all written comments pertaining to environmental issues as part of the Final EIR. The Final EIR will include all written comments received during the public review period, responses to comments, and, if applicable, edits and errata made to the Draft EIR. CDPR will then consider certification of the Final EIR (14 CCR 15090). If the EIR is certified, CDPR may consider Project approval (14 CCR 15092).

When deciding whether to approve the Project, CDPR will use the information provided in the Final EIR to consider potential impacts to the physical environment. CDPR will also consider all written comments received on the Draft EIR during the 45-day public review period in making its decision to certify the Final EIR as complete and compliant with CEQA and in making its determination whether to approve or deny the Project. Environmental considerations, as well as economic and social factors, will be weighed by CDPR to determine the most appropriate course of action.

Prior to approving the Project, CDPR must make written findings and adopt a Statement of Overriding Considerations with respect to any significant and unavoidable environmental effect identified in the Draft EIR (14 CCR 15091, 15093). If the Project is approved, CDPR will file a Notice of Determination with the State Clearinghouse and County Clerk within 5 working days after project approval (14 CCR 15094.)

Subsequent to certification of the Final EIR, agencies with permitting authority over all or portions of the Project will use the Final EIR's evaluation of the Project's environmental effects in considering whether to approve or deny applicable permits.

1.4.5 Mitigation Monitoring and Reporting Program

CEQA requires that a lead agency "adopt a reporting and mitigation monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment" (14 CCR 15097, 15091). If impacts are determined to be potentially significant and mitigation measures are identified, the final Mitigation Monitoring and Reporting Program will be incorporated into the Final EIR.

1.5 Organization and Content of the EIR

This EIR is organized as follows:

- **Executive Summary.** In this chapter, the Project and conclusions of the environmental analysis are outlined and a summary of the Project compared to the alternatives analyzed in the EIR is provided. Also included in this chapter is a summary of feasible mitigation measures proposed to reduce or avoid each significant project impact.
- **Chapter 1, Introduction.** The purposes of the EIR, the applicable environmental review process and procedures, and format and organization of the EIR are briefly discussed in this chapter.

- **Chapter 2, Project Description.** In this chapter a thorough description is provided of the Project, including its location, characteristics, project objectives, and required discretionary actions.
- **Chapter 3, Environmental Analysis.** In this chapter, the regulatory and environmental setting is discussed and an analysis of project impacts, proposed mitigation measures to reduce or avoid any significant impacts, and conclusions regarding the level of significance after mitigation is provided for each environmental impact issue.
- **Chapter 4, Effects Found Not to be Significant,** includes a summary of potential environmental topics that have been found to have a less-than-significant effect or no effect on the environment.
- **Chapter 5, Significant Irreversible Environmental Effects,** includes discussion of environmental areas where significant environmental effects cannot be avoided and any significant irreversible environmental changes that would result from implementation of the Project. In addition, any growth-inducing impacts associated with the Project are addressed in this chapter.
- **Chapter 6, Alternatives.** This chapter includes analysis of a range of reasonable alternatives to the Project that have the potential to reduce or avoid significant impacts associated with the Project.
- **Chapter 7, List of Preparers.** This chapter provides a list of persons, organizations, and agencies that contributed to the preparation of this EIR.
- **Appendices.** The appendices include various technical studies prepared for the Project, as listed in the table of contents.

2 Project Description

2.1 Introduction

As required by Section 15124 of the California Environmental Quality Act (CEQA) Guidelines, the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project), which is located in the Tijuana River Valley and the southeastern boundary of Tijuana River Valley Regional Park, is described in this chapter. This chapter also includes the Project objectives; a description of the proposed Project's technical, economic, and environmental characteristics; and a summary of the discretionary actions required to approve the Project. This Environmental Impact Report (EIR) includes design plans (80%) and an Operations and Maintenance (O&M) Plan to provide guidelines and standards for interim operation of the quarry site for reclamation, landform creation, and habitat restoration including sediment placement, grading, and revegetation.

Quarry reclamation is the process of returning or restoring land that has been mined to a natural or economically usable state. Habitat creation and restoration refers to landform creation and ecological restoration, which is the practice of renewing or restoring degraded, damaged, or destroyed ecosystems and habitats in the environment by human intervention. The Project design plans (80% grading and restoration plans) are included as Figures 2-5a through 2-5f and 2-7a through 2-7h of this EIR. The purpose of the Project is to beneficially reuse excess sediment deposited in the Tijuana River Valley towards the restoration of the Nelson Sloan Quarry (Quarry) and creation of new terrain and habitat. As proposed, it is anticipated that this Project would improve Tijuana River Valley land managers' ability to conserve and restore high-quality habitat impacted by sedimentation, and to better protect valleywide infrastructure from sedimentation and flooding.

2.1.1 Project Overview

California Department of Parks and Recreation (CDPR) proposes the beneficial reuse of excess sediment excavated from managed sources (e.g., sediment basins, flood control facilities and conveyances) from a range of ongoing, approved, and/or permitted sediment management activities (and proposed habitat restoration and enhancement projects) in the Tijuana River Valley towards landform and habitat restoration in the abandoned Quarry. A map depicting the location of the previous conditional use permit (CUP) boundary associated with the Quarry (approximately 70 acres) and the Project site (the two easternmost parcels within the previous CUP boundary) in a regional and local context is provided as Figure 2-1, Location Map. Within the Project site, the Project Impact Area would comprise approximately 20 acres of previously disturbed quarry lands.

Currently, sediment management activities are undertaken by City of San Diego (City), County of San Diego (County), state, and federal entities and their partners in the Tijuana River Valley. These entities typically haul the excess sediment off site to regional landfills or construction sites. The Project would instead allow these entities to place appropriate material at the Quarry as part of a phased landform reclamation, creation, and habitat restoration project. The location of flood control facilities and habitat restoration and enhancement projects from which sediment could be sourced for use on the Project site is depicted on Figure 2-2, Potential Sediment Sourcing Sites. A phased approach would be used to reclaim previously mined portions of the Project site and return the site to close to historic (i.e., pre-mining operations) topography and habitat. Through a series of phases (see Section 2.4.2, Phased Restoration and Revegetation), the Project would place approximately 1,000,000 cubic yards (cy) of fill material/sediment on the Project site for the purpose of landform reclamation, creation, and habitat restoration.

The initial phase of the Project includes regrading, implementing erosion control measures, and revegetating the oversteepened slope west of the quarry floor to a stabilized condition. These first-phase activities are intended to satisfy previous Reclamation Plan requirements and release the site from regulatory oversight under the Surface Mining and Reclamation Act (SMARA) of 1975. The Project also includes phased restoration of natural coastal sage scrub vegetation. Interim phases would include application of erosion control vegetation hydroseed mix and implementation of appropriate erosion control best management practices (BMPs) on slopes. Final revegetation of finished graded slopes would include coastal sage scrub container plants and enhancement and application of restoration seed mix analogous to naturally occurring coastal sage scrub found on adjacent slopes.

Proposed landform reclamation (and creation) and habitat restoration would occur on an approximately 20-acre site (i.e., Project site) and proposed activities are estimated to occur over an up to 15-year timeframe.

2.2 Project Background

2.2.1 Nelson Sloan Quarry

In 1982, the City issued a 20-year CUP (Document No. 497-PC in the office of the City Clerk in the City of San Diego) to Nelson and Sloan, a California corporation, for the extraction of sand and gravel from the Border Highlands Pit (also known as the Nelson Sloan Quarry; Mine ID 91-37-0037). A Reclamation Plan, detailing the slopes and reclamation and revegetation requirements for the Quarry once operations ceased, was submitted with the CUP. The 20-year CUP permitted the extraction of approximately 7.5 million cubic yards of sand and gravel from the site. Approximately 1/3 of the permitted volume of sand and gravel was actively mined from the site over the 20-year operational life of the quarry. In 2002, the CUP expired, and the quarry site was not formally reclaimed in accordance with the approved CUP Reclamation Plan. Historical aerial photographs depicting pre-quarry operation conditions, the gradual alteration of terrain and vegetation associated with phased sand and gravel quarry operations, and conditions as of 2016 are included on Figures 2-3a through 2-3c, Aerial Photographs of the Project Site. As shown on the photographs, the natural, pre-quarry operation terrain on the Project site was gradually altered such that topography receded due to extractive mining that was initiated in the eastern extent of the site and moved north and westward towards the central ridge that remains on site. The ridge and eroded east-facing slope created by prior extractive operations are evident in photographs from 2009 onward (see Figure 2-3a).

In 2003, the property was purchased by the County through a grant provided by the State Coastal Conservancy to add to the Tijuana River Valley Regional Park. The grant required that the property be used for the purpose of habitat protection and open space. In addition, the grant required the development of the Tijuana River Valley Regional Park Habitat Management Plan, which was completed by the County in 2006. The Tijuana River Valley Regional Park comprises nearly 1,800 acres of open space and is a biological core area of the County's Multiple Species Conservation Program (MSCP). The mine site is largely part of the Multi-Habitat Planning Area of the City's Subarea Plan within the MSCP. The City is identified as the lead agency under SMARA for the previous quarry project and reclamation of the site in accordance with the CUP and Reclamation Plan. Though CUP No. 497-PC expired in 2002, the conditions of approval and original Reclamation Plan commitments are still open under SMARA. The City has requested that the California Department of Conservation's Division of Mine Reclamation (DMR) determine whether the current site conditions meet the requirements of the State Coastal Conservancy grant and existing reclamation plan for Mine ID No. 91-37-0037. Currently, disturbed Diegan coastal sage scrub and ruderal lands are mapped on the flatter portions of the site; however, the mined, east-facing slope remains visibly eroded and oversteepened. This steep slope area is mapped as Disturbed Land–Xeric Cliff Face and Escarpment. See Appendix B, Biological Resources Technical Report, for additional information concerning existing on-site vegetation communities.

Correspondence received by the City in 2013 from DMR staff indicated non-concurrence with assertions that the site currently meets Reclamation Plan requirements (City of San Diego 2013). Site observations by DMR staff include significant riling and erosion issues related to runoff on the mined east-facing slope on the property. Due to the instability of the oversteepened slope, DMR stated that the slopes would need to be re-graded, erosion and drainage control measures would need to be installed, and that the area would need to be revegetated. The most recent DMR correspondence in 2019 indicated the initial phase of the Project to restore the west highwall (i.e., the oversteepened slope) to a 2:1 slope (horizontal to vertical) and natural recruitment of coastal sage scrub vegetation would be sufficient to meet reclamation requirements, close the Mine ID, and release the City from financial assurance obligations under SMARA (Meehan, pers. comm. 2019).

2.2.2 Tijuana River Valley Sediment Management

As discussed in the Tijuana River Valley Historical Ecology Investigation, “estuarine habitats have undergone both loss (approximately 40% decrease in total area) and large-scale conversion . . . the most significant loss of salt marsh has occurred in the southern part of the estuary (i.e., south of Tijuana River Slough), [and is] related to elevation increases due to excess sedimentation from hillside erosion in Tijuana canyons and decreases in tidal prism since the mid-19th century” (SFEI 2017). These findings point toward the need for continued efforts to restore intertidal habitats, particularly in the heavily impacted southern arm of the estuary, to maintain desired functions. Restoration efforts may be aided by sediment management approaches (e.g., sediment catch basins and source control in the communities of Tijuana) and managing the tidal regime to increase tidal prism, which is estimated to have decreased by 55%–85% over time (SFEI 2017).

Excessive sedimentation in the Tijuana River Valley resulting from land management conditions in Mexico has been apparent to land managers since the 1980s. The cost associated with capture, management, transportation, and disposal of excavated sediment and other materials extracted from basins, channels, and other flood control/stormwater facilities is considerable for each of the government entities with sediment maintenance responsibilities in the Tijuana River Valley.

CDPR manages two sediment basins receiving cross-border flow from the terminus of Cañón de los Laureles in Mexico (referred to as Goat Canyon on the U.S. side) on CDPR property at the southwest end of the Tijuana River Valley; these basins were constructed in 2005 when it became apparent that sedimentation from Mexico was destroying the valued saltmarsh habitat of the Tijuana Estuary. The Goat Canyon Sediment Basin Complex consists of a concrete bottom, in-canyon diversion structure that transitions to a flow-through sediment basin system. Combined, the basins hold about 60,000 cubic yards of sediment. Between fall 2005 and 2020, CDPR and their contractors extracted over 550,000 cubic yards of sediment from the basins. Average annual volume of sediment extracted is 40,000 cubic yards and the current annual maintenance budget is \$1.8 million. Maintenance of the Goat Canyon Sediment Basins is critical for the health of the Tijuana Estuary.

The City is responsible for evaluating and conducting maintenance and repair of the public municipal stormwater conveyance system within their jurisdiction. Within the Tijuana River Valley, the City periodically excavates sediment and trash from an approximately 5,500-foot earthen bottom and bank channel (i.e., Pilot Chanel) within the middle reach of the Tijuana River starting near the Hollister Street bridge. An additional site located to the north near the Pilot Channel (i.e., Brown’s Fill site) is periodically managed by the City. An earthen bottom and bank channel that receives flow from Cañón del Matadero, between Monument Road and the confluence with the main river channel (Smuggler’s Gulch), is also maintained by the City. Since approximately 1999, the Pilot Channel and Smuggler’s Gulch (north of Monument Road) are generally maintained on an annual basis and the City (and its contractors) have extracted over 200,000 cubic yards of sediment combined from the two facilities. Annual volume of excavated

sediment from the facilities varies. For example, in 2000, the City indicated that 193 cubic yards of sediment combined were excavated, and in 2015, 25,000 cubic yard were extracted at a cost of \$2 million dollars. In 2018, approximately 17,850 cubic yards were excavated from the two facilities (associated costs to extract and manage the sediment in 2018 was not provided by the City). Maintenance of the Pilot Channel provides habitat protection and flood control protection for properties in the Tijuana River Valley.

The U.S. International Boundary and Water Commission (IBWC) performs periodic maintenance and sediment, trash, and debris removal within its property on the flood control project in the main Tijuana River Channel. Based on information provided by IBWC, since 2012–2013 IBWC has excavated approximately 75,000 cubic yards from the main Tijuana River Channel. In 2012–2013, approximately 60,000 cubic yards were excavated at an approximate cost of \$2.25 million dollars (County of San Diego 2016). Under ideal budget conditions, the IBWC estimates that on an annual basis, excavation of up to 15,000 cubic yards of sediment is needed (Peña, pers. comm. 2019). Maintenance of this flood control project provides habitat protection and flood control protection for properties in the Tijuana River Valley.

Lastly, the County periodically excavates sediment, trash, and debris for a portion of the earthen-bottom and bank Smuggler's Gulch channel from the federal property adjacent to the international border north to Monument Road. The channel is maintained on an approximately annual basis and since 2002, approximately 93,550 cubic yards have been excavated by the County and its contractors. In 2015–2016, approximately 8,000 cubic yards were excavated (approximate total costs were \$170,000) and in 2017–2018, 10,000 cubic yards were excavated (costs are unknown). Maintenance of Smuggler's Gulch channel provides habitat protection and flood control protection for properties in the Tijuana River Valley.

In addition to ongoing maintenance activities, several habitat restoration and enhancement projects are proposed in the Tijuana River Valley. For example, Tijuana Estuary Tidal Restoration Program II (TETRP II, Phase I; approximately 2.4 miles to the west of the Project site) may also be a source of Project site sediment. The TETRP II Project site has been degraded by historic land uses and excess sedimentation in the southern arm of the Tijuana Estuary. The TETRP II Phase I Project site is primarily located on CDPR managed lands but a small portion encompasses the U.S. Fish and Wildlife Service (USFWS) managed Tijuana Slough National Wildlife Refuge. As proposed, the 80–85-acre salt marsh and wetland restoration project would require site excavation to establish elevations with appropriate inundation frequencies to support specific coastal wetland habitat (USFWS 2021). While the amount of excavated sediment produced by the TETRP II Phase I Project is unknown at this time, additional phases of the TETRP II Project totaling up to 250 acres of wetlands restoration could require excavation of up to 1.4 million cy of sediment (County of San Diego 2016). While excavated sediment associated with the TETRP II Project could be used as a sediment source for the Project, a separate environmental document (EIR/Environmental Impact Statement) is being prepared by the Southwest Wetlands Interpretative Association, CDPR, and USFWS for construction-related activities. The locations of the facilities described above and their proximity to the Project site are depicted on Figure 2-2.

Under existing conditions, land managers are tasked with and permitted to perform channel and basin maintenance including regular sediment/debris removal. Sediment removal is typically allowed up to the as-built original design or established maintenance baseline of the facility and does not include expansion of the facility capacity beyond the original design. Methods used for sediment removal typically consist of excavation (both with equipment in the channel and equipment staged outside the channel). In addition, support activities including temporary access/loading, temporary staging, stockpiling, temporary diversions, and installation of BMPs may be required. For excavation with equipment in the facility, equipment enters/exits the maintenance area via an access point selected to minimize direct and indirect short-term (e.g., removal of native vegetation) and long-term (e.g.,

destabilization of channel banks) impacts. Most concrete channels have existing paved access ramps that allow equipment to enter/exit directly in/out of the channel. When a ramp is not available, smaller equipment can be attached to a crane or excavator to be lowered into the channel or facility from an adjacent bank or staging area. Where feasible, equipment is staged outside of the channel and vegetation, sediment, trash, or debris is removed without placing equipment within the channel.

The main feasibility factors include the existence of a disturbed or developed access area along the entire length of the facility that is sufficiently wide enough to allow equipment to reach the full facility, the condition of the material within the channel (e.g., excessively deep and saturated soils may not be suitable for equipment to operate within the channel), and the time needed to complete the work. Where it is feasible, excavators are stationed above the channel bank and directly reach into the channel or facility to remove accumulated material. Each bucket of material is then typically loaded into a dump truck to be transported to an approved off-site sorting or disposal area. As annual channel and basin maintenance activities that are currently performed by land managers in the Tijuana River Valley are conducted under existing permits and environmental documents (and approvals), or in the case of the TETRP II Phase I Project is subject to approval of the in progress EIR/Environmental Impact Statement, these activities are not assessed for environmental impacts in this EIR.

2.2.3 Multijurisdictional Cooperation

Local, state, and federal governments have been actively collaborating to resolve cross-border pollution in the Tijuana River Valley since the 1980s. More recently, a significant focus of this work has specifically included the management of sediment, with the Project consistently highlighted as an important component.

Efforts of the Tijuana River Valley Recovery Team (Recovery Team) represent some of the most directed work on cross-border sedimentation. Formed in 2008, the Recovery Team includes over 30 stakeholders from both sides of the international border that come together to address the issues of sediment and trash in the watershed. The San Diego Regional Water Quality Control Board (RWQCB) serves as the lead agency of the Recovery Team. From 2011 to 2012, the Recovery Team prepared a Recovery Strategy identifying the first phase of actions needed to address sediment and trash issues in the Tijuana River Valley. The RWQCB endorsed the Recovery Strategy in 2012. In 2015, the Recovery Team developed a Five-Year Action Plan endorsed by the RWQCB. A key Tier 1 project (i.e., highest priority project) described in the Five-Year Action Plan was reclamation of the Quarry through the placement of excess sediment excavated from the Tijuana River Valley over a 5- to 20-year timeframe by government entities (TRNERR et al. 2015).

The Tijuana River National Estuarine Research Reserve (Reserve) Advisory Council represents another long-term collaboration that has consistently elevated the issue of cross-border sedimentation throughout the course of its interagency and public meetings. The Reserve Advisory Council brings together the operating, landowning, regulatory, municipal, and law enforcement agencies in the Tijuana River Valley, a research institution, and a nonprofit organization in a structure that creates opportunities to advance the mission of the Reserve concurrent with the missions of the respective agencies and organizations. While the Advisory Council cannot set binding policies for the landowning and operating agencies, it does provide guidance for the Reserve as a whole and facilitates coordination and cooperation between agencies and a forum for public comment and involvement. It is through this alliance that the complex network of interests at the Reserve can develop lasting, stable agreements on how to best protect the Reserve's resources. The Project has been a continued topic of presentation and discussion for several years.

Additional multijurisdictional cooperation has been advanced through Minute 320 of the IBWC's 1944 U.S.-Mexico Water Treaty. Minute 320 was signed in October 2015 and addresses sediment, solid waste, and water quality pollution in the Tijuana River. It also highlights the need for further binational collaboration, programs, and projects to resolve this pollution issue. Minute 320 established a Bi-National Core Group to serve as the steering committee and three working groups on the subjects of water quality, solid waste, and sediment. The sediment working group has recognized and highlighted the role of the restoration of the Quarry in sediment management in the Tijuana River Valley.

The California-Mexico Border Relations Council (Council) is another multijurisdictional effort that addresses cross-border pollution in the Tijuana River Valley. California Assembly Bill 3021 created the Council. The Council has the authority to identify potential new border priorities and fundable projects in the areas of infrastructure, trade, environment, health, and security while supporting current and ongoing activities such as the Border Governors Conference, trade missions, border workgroups, and specific future projects with Mexico. Councilmembers include the secretaries of the California Environmental Protection Agency, California Natural Resources Agency, California Health and Human Services Agency, and California State Transportation Agency and the director of the Governors' Office of Emergency Services. The Project has been highlighted by California Natural Resources Agency representatives as an important strategy for sediment management in the Tijuana River Valley.

Multijurisdictional collaboration on the Project was taken from concept to planning in 2010 by the City through URS with completion of the Land Use Options for the Nelson Sloan Property. The purpose of the document was to evaluate the potential to deposit sediment removed from the Tijuana River on the Nelson Sloan Property. The document determined that the most cost-effective option of the three evaluated (i.e., mine reclamation, permit the property as a non-hazardous landfill for sediment disposal, and no project/do not use property) was mine reclamation (City of San Diego 2010). In 2012, the City and URS (acquired by AECOM in 2014) prepared a Substantial Conformance Review document and supporting technical reports (including a Biological Technical Report and Conceptual Mitigation and Mine Reclamation Plan) that consisted of a plan to implement the Reclamation Plan for the Nelson Sloan site using sediment removed from the Tijuana River (City of San Diego 2012a). A grading plan was developed to accommodate approximately 1,000,000 cy of fill material over five grading phases on the Nelson Sloan quarry site. This active planning was facilitated by the Recovery Team and City and County, with funding provided by State Coastal Conservancy grants. The grants also helped to fund preparation of the Nelson Sloan Management and Operations Plan and Cost Analysis, completed in 2016. The Management and Operations Plan presented stakeholders with sediment management responsibilities in the Tijuana River Valley a description of how the Quarry might be managed and operated as a location for the placement of sediment and meet the requirements of the CUP and Restoration Plan. Four alternatives were considered in the plan: (1) placement of 100,000 cy of sediment with a passive restoration plan or (2) placement of 100,000 cy, (3) 1 million cy, or (4) 2.3 million cy of sediment with a robust mitigation and monitoring plan (County of San Diego 2016). The 2010, 2012, and 2016 planning efforts represent significant contributions toward the implementation of this Project and involved collaboration and support of partnering government stakeholders.

The Project is also included in the County's 2017 Senate Bill 507-funded Tijuana River Valley Needs and Opportunities Assessment. Specifically, Nelson Sloan Quarry Restoration is identified as Project 20 (out of 27 projects) in the Needs and Opportunities Assessment Report (County of San Diego 2020). The report provides a comprehensive review and assessment of current and potential management strategies that could be implemented on the U.S. side of the border to address transboundary flows of sewage, trash, and sediment into the Tijuana River Valley.

2.3 Project Objectives

Section 15124(b) of the CEQA Guidelines requires that an EIR include a statement of the project objectives. The purpose of the Project is to beneficially reuse excess sediment deposited in the Tijuana River Valley towards the restoration of the Quarry. As proposed, it is anticipated that this Project would improve Tijuana River Valley land managers' ability to conserve and restore high-quality habitat impacted by sedimentation and to better protect valleywide infrastructure from sedimentation and flooding. The purpose of the Project is guided by the following Project objectives:

- Consistent with Objective 3, Strategy 1 of the Tijuana River Valley Recovery Team Five-Year Action Plan, restore the landform, ecological functions, and values of the impacted habitats on the Project site that were significantly altered by past mining activity. As proposed, the Nelson Sloan Quarry would be restored and stabilized consistent with DMR reclamation standards.
- Divert sediment from landfills and reduce emissions associated with regional haul truck trips.
- Improve water quality within the watershed and reduce public health and safety hazards associated with cross-border flows.
- Reduce potential for downstream erosion, runoff, and water quality impairment through stabilization of the Project site. Implement interim and permanent design features to reduce erosion and stormwater runoff.
- Facilitate cost-effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley.
- Advance efforts to meet the intent of the recorded grant deed for the transfer of the property from the California Coastal Conservancy to the County; the deed states that the property must be used for habitat protection, restoration, and open space in perpetuity.
- Release the existing Mine ID No. 91-37-0037 associated with Border Highlands, also known as the Border Area Borrow Pit or Nelson Sloan Quarry; City Project No. 308715 and CUP No. 497-PC.

2.4 Project Description

The Project site is located within the southeastern corner of Tijuana River Valley Regional Park. The northeastern corner of the site is situated approximately 400 feet south of the Monument Road/Old Dairy Mart Road intersection (see Figure 2-1). Monument Road and the City's South Bay International Wastewater Treatment Plant are located approximately 0.25 miles to the east. Federal lands managed by U.S. Customs and Border Protection (CBP) are located to the south (the international border fence is located 450 feet south of the Project boundary) and County jurisdictional lands are located to the west and north. Border Field State Park, Tijuana Slough National Wildlife Refuge, and the Reserve are located to the west and northwest, respectively. Interstate 5 and Interstate 805 provide regional access to the Project site and are 1.15 miles and 1.9 miles east of the Project site, respectively.

The Project site (approximately 40 acres) involves only part of a larger 70-acre previous CUP boundary that constitutes the original Quarry holding. The original quarry holding encompassed Assessor's Parcel Numbers (APNs) 664-011-05-00, 664-011-04-00, 664-011-03-00, and 664-020-04-00; however, active mining only took place on APNs 664-011-05-00 and 664-011-04-00. All associated Project activities would be limited to the previously disturbed easternmost parcels (i.e., 664-011-05-00 and 664-011-04-00) within the previous CUP boundary. The Project Impact Area would comprise approximately 20 acres. See Figures 2-1 and 2-4, Project Site and Limits of Disturbance.

The Project site is vacant and disturbed and is crossed by several dirt roads and paths. An irrigation system and disturbance associated with previous staging and soil/sediment stockpile areas are visible in the eastern portion of the site (i.e., APN 664-011-05-00). In addition, CBP has installed several floodlights supported by wood poles on the ridge landform of APN 664-011-04-00 (the ridge is within the Project Impact Area). The elevated vantage point provided by the on-site ridge is regularly used by CBP for visual surveillance of the border fence and surrounding area. Except for CBP floodlights, there are no structures located on the Project site.

2.4.1 Site Preparation

Site preparation includes installation of fencing, removal of vegetation where required, establishment of electrical and water utilities, placement of temporary structures, construction of a temporary sediment trap, installation of erosion control BMPs, establishment of material stockpile and processing locations, establishment of equipment staging locations, and improvement of access roads. Chain-link fencing would be installed along the Project perimeter to secure the area from public access.

Site preparation (and phased grading) would result in direct impacts to coastal sage scrub and disturbed coastal sage scrub that is currently supported on site. Impacts are related to landform restoration and revegetation and would result in temporary loss of habitat within the Multi-Habitat Planning Area. Final restoration would be implemented as final elevations for landform reclamation are achieved. To address the temporal loss of habitat and delayed final restoration, Project mitigation includes the re-establishment of coastal sage scrub habitat at a minimum 1.5:1 ratio (re-establishment at a 1:1 ratio is required by City guidelines). The ultimate restoration of the Project site would result in a net gain of habitat area. Pursuant to the City's Land Development Manual–Biology Guidelines, “temporary disruptions of habitat and temporary staging areas that do not alter landform and that will be revegetated are generally not considered to be permanent habitat loss” (City of San Diego 2012b). Temporary impacts to upland vegetation communities associated with Project activities would be consistent with the statement from the Biology Guidelines as the landform is being restored to pre-quarry conditions and a habitat restoration plan would be implemented as part of the development process.

Sediment traps are common water quality BMPs on construction sites. The temporary features function as settling ponds that intercept and temporarily retain sediment-laden runoff from a construction site to allow the majority of sediment to settle out prior to the runoff being released. The construction of a sediment trap would occur during initial site preparation and, like construction fencing, the sediment trap would be subject to relocation during later phases of the Project. The initial location of the sediment trap is indicated on Figure 2-5a, Sediment Placement: Phase 1. As shown on the figure, the sediment trap would be fenced and feature a 6-foot-wide spillway. In later sediment placement phases, the sediment trap would be relocated to accommodate new terrain. See Figures 2-5b through 2-5f. The sediment trap would be approximately 60 feet wide by 135 feet long by approximately 5 feet deep. The sediment trap, which would be constructed with an impervious earth fill bottom overlain by temporary riprap to allow for runoff and sediment to settle out of stormwater prior to being released from the site, would be constructed on APN 664-011-050 near the site driveway and proposed stockpile area. Lastly, the sediment trap would be maintained to ensure sediment flows are intercepted from off-site trespass.

During preparation of the site, sediment stockpile locations would be established west and southwest of the sediment trap (see Figure 2-5a). The stockpiles would function as temporary holding areas for in-valley sediments brought to the Project site and diverted from disposal at regional landfills. The proposed stockpile areas would be rectangular and approximately 150 feet wide by 300 feet long. The areas are sized to accommodate approximately 50,000 cy of sediment. Stockpiles may include contouring, but the contractor would determine appropriate forms for operational efficiency. The rectangular stockpile pad areas would be cleared of vegetation. A graveled staging

area (approximately 90 feet wide by 300 feet long) would be installed immediately north of the stockpile pad. The feeder/conveyor system, dry screen, storage containers, and temporary office trailer would be located in the staging area. Figure 2-6, Materials Screening Equipment, includes images of typical screening equipment and stockpiles. These photographs depict sediment management operations at CDPR's Goat Canyon staging area and are provided as example imagery.

A processing/mobile screening station is proposed and would be in the rectangular staging area adjacent to the northern portion of the Project site. See Section 2.4.3.1, Mobile Processing Station, for additional detail. Once brought to the site, sediments would be sorted and stockpiled for on-site use or, if necessary, off-site transport. At the end of Phase 3, the processing/mobile screening station and staging area would be relocated to the eastern portion of the Project site to accommodate Phases 4 and 5 sediment placement and restoration. Once all sediment placement activities have been completed, the processing/mobile screening station would be removed from the site and staging area would be restored.

Site preparation would include improvements to the existing dirt road from Monument Road that would function as the site driveway. The road would be regraded and widened to approximately 28 feet to accommodate haul trucks and other vehicles. A gate would be installed at the ingress point to the proposed driveway off Monument Road and would control access to the site.

2.4.2 Phased Restoration and Revegetation

Prior to the initiation of Phase 1, revegetation activities would occur on the Project site in areas that would not be subject to future disturbance. These activities would be limited and focused in two distinct areas: in the southeast corner of APN 664-011-0500 and atop/near the ridge on APN 664-011-0400 (see Figure 2-7a, Restoration Plan: Phase 1). As proposed, revegetation would occur outside of grading/disturbance limits associated with sediment placement phasing and within restoration/enhancement area limits (i.e., within currently disturbed areas). For example, on APN 664-011-0400, revegetation and enhancement of existing areas would occur on lands subject to previous disturbance associated with erosion and access road development/use. As a component of the Project, a 12-foot-wide access road would be maintained atop the on-site ridge. Consistent with later phases of restoration and revegetation, coastal sage scrub seed mixes would be used in the initial revegetation areas (see Figures 2-7b through 2-7h).

Each phase would include placement of processed sediment excavated as part of ongoing annual permitted channel and basin maintenance activities in the Tijuana River Valley. Historic data suggests an assumed annual volume of approximately 75,000 cubic yards of sediment would be available for restoration. Further, the source sediment would be a sandy loam material that is suitable for restoration of coastal sage scrub vegetation.

The Project includes interim and final restoration and revegetation associated with the phased placement of sediment materials and application of an erosion control (or habitat forming) seed mix. Interim restoration would occur as interim grading is completed. Earlier Project phases consist of grading and sediment placement that is intended to either achieve closure of the existing Mine ID (i.e., Phase 1) or progressive landform creation from the existing ridge eastward across the site. T-post and rope fencing, temporary habitat protection construction fence, or chain-link fence would be installed along the perimeter of each phase area in sequence to protect adjacent environmentally sensitive areas from subsequent phased grading activity. Actual fence locations would be approved by the Project biologist prior to installation. Fences would be installed approximately 15 feet from the edge of each phase's grading limits to permit equipment access. Fence locations are subject to relocation during transition of

select restoration phases. All fencing would be removed following acceptance of Phase 6 mitigation/restoration by the resource agencies and the City as lead agency for MSCP compliance.

Regarding revegetation, an erosion control seed mix would be applied to interim regraded slopes and new landforms (i.e., slopes/terrain that is subject to future disturbance by phases). The seed mix would consist of a mix of low growing herbs, grasses, and wildflowers that germinate quickly and provide vegetative cover (erosion control) relatively quickly while avoiding creating a native vegetation community that is likely to attract nesting birds or other wildlife. The seeds would be mixed with a bonded fiber matrix and applied with standard hydroseeding equipment. The bonded fiber matrix would hold the seeds in place and provide erosion control until the seeds germinate and provide adequate vegetative cover.

In addition to the bonded fiber matrix/native seed mix, other BMPs would be installed on the graded slopes during interim restoration phases. Potential BMPs include burlap-encased fiber rolls spaced at appropriate intervals, gravel bags, and silt fence as needed. Silt fencing may be used along the downslope perimeter for sediment control. Fiber rolls would be left in place to decompose naturally. Silt fencing would be realigned as phased placement is complete and removed once there is 70% vegetative cover on the slopes.

Final restoration would be completed when final elevation contours are established in each phase. Final restoration would establish native upland plant species found on site and naturally occurring on adjacent slopes (e.g., coastal sage scrub vegetation). Plant composition would be patterned after naturally occurring plant species associations found on the southern terrain of the Border Highlands area. The proposed phases and anticipated volume of required sediment are shown in Table 2-1.

Table 2-1. Restoration Phasing and Estimated Sediment Volumes

| Phase | Sediment Volume Required (cy) | Years to Complete ¹ |
|--------------|-------------------------------|--------------------------------|
| 1 | 6,500 | 0.08 |
| 2 | 108,500 | 1.45 |
| 3 | 165,000 | 2.2 |
| 4 | 240,000 | 3.2 |
| 5 | 230,000 | 3.1 |
| 6 | 290,000 | 3.8 |
| Total | 1,040,000 | 14 |

¹ Years to complete is based on an average available sediment volume of 75,000 cy per year. The estimates assume annual availability of sediment based on past management practices in the Tijuana River Valley. The actual duration of activities (i.e., years to complete) could be greater or reduced based on future availability of larger or smaller volumes of sediment by agency.

As depicted in Table 2-1, the total volume of sediment deposited on the site would be approximately 1,040,000 cy. In addition to design drawings that identify the applicable grading contour design by phase, habitat restoration plans by phase have been prepared. Figures 2-5a through 2-5f and 2-7a through 2-7h of this EIR show the 80% design drawings (i.e., grading plans and restoration plans) for the Project. Restoration activities; staging, stockpile, and sediment trap areas; and Project access routes would impact a total of approximately 20 acres on the Project site.

2.4.2.1 Phase 1

Phase 1 is intended to fulfill the requirements of the previous CUP Reclamation Plan and release the site Mine ID (CA MINE ID No. 91-37-0037) from designation. This phase would reduce the grade of the oversteepened slope to approximately 2:1 (see Figure 2-5a). The slope would be graded and sediment would be placed on the slope to

achieve the desired grade. Approximately 6,500 cubic yards of sediment would be placed on the slope during Phase 1. Once the regraded slope is compacted, the area would be revegetated with species like those in adjacent undisturbed areas and at similar densities. For reference, the Project Biologist would visit the site and review adjacent/nearby slope areas and estimate the overall percent cover. In addition, the species and dominant/co-dominant species present would be noted. Once the desired growth and density is achieved, site observations would be documented, and the Mine ID closure would be coordinated with the City and DMR. DMR tentatively approved the approach to Mine ID closure via email on June 13, 2019 (Meehan, pers. comm. 2019).

2.4.2.2 Phase 2

Phase 2 would continue a similar process as described for Phase 1 and would overlie and occur to the east of Phase 1 (see Figure 2-5b). Approximately 108,500 cubic yards of sediment would be placed on the Project site during Phase 2 and, as shown on Figure 2-5b, the grading plan intends to gradually extend a portion of the existing ridge and downslope areas to the east and would construct new slopes atop the relatively flat terrain of the valley bottom. Phase 2 is estimated to take approximately 18 months to complete.

Temporary drainage facilities would be installed to direct stormwater off and away from new landforms. For example, a turf reinforced geotextile mat-lined ditch (approximately 3 feet wide with 3:1 slopes) would be installed at and roughly parallel to the southern boundary of newly created terrain. The turf-mat ditch would run downslope and would convey stormwater to a riprap channel constructed at the base of newly created terrain. This 5-foot-wide riprap channel with 4:1 slopes would be approximately 350 linear feet in length and would convey stormwater across the relatively flat terrain towards the southeastern corner of the Project site. In addition, a temporary, 1-foot-deep concrete ditch would be constructed and run parallel to the northern boundary of the Phase 2 limits of newly created terrain. Constructed in accordance with City standards, the concrete channel would convey stormwater to a temporary riprap pad (also constructed per City standards) installed at the northeast corner of newly created terrain and would slow flows prior to their dispersal off site.

2.4.2.3 Phase 3

Phase 3 would continue a similar process as described for Phase 2 and would overlie and occur to the north of Phase 2 (see Figure 2-5c). Approximately 165,000 cubic yards of sediment would be placed on the Project site during Phase 3, which is estimated to take 2.2 years to complete. As shown on Figure 2-5c, the grading plan would create a broad series of benches that would step down from a wide, newly created ridgeline at the 240 feet above mean sea level elevation contour. The new slopes would tie into contours created during Phase 2 and extend terrain to the east and to the north towards the Phases 1 through 4 stockpile area.

The turf-mat ditch and riprap lined channel along the southern boundary of the Project site and following new terrain created during Phase 2 would remain in place. However, the temporary concrete ditch installed during Phase 2 would be removed (the alignment area would be covered by new terrain) and a new concrete ditch and temporary riprap pad would be constructed. These concrete ditches would parallel the northern boundary of newly created Phase 3 terrain (see Figure 2-5c).

2.4.2.4 Phase 4

Phase 4 would continue a similar process as described for Phase 3 and would overlie and occur to the east of Phase 3 (see Figure 2-5d). Approximately 240,000 cubic yards of sediment would be placed on the Project site during Phase 4, which is estimated to take approximately 3.2 years to complete. As compared to the broad slopes

created during Phase 3, Phase 4 terrain would display a noticeable roundness and would continue the extension of the ridgeline 240-foot elevation contour line and downslope terrain to the east. A planting plan in accordance with construction drawings and specifications, which defines the vegetation communities and mitigation areas to be established on the Project site, has been prepared for revegetation. One planting palette would be used for the coastal sage scrub mitigation. Mitigation with the coastal sage scrub plant palette would be implemented in areas of temporary impact.

In addition to the Phase 3 concrete ditch and riprap, the turf mat ditch and riprap channel along the southern boundary of the Project site installed during Phase 2 would remain in place and address Phase 4 stormwater flows. These facilities are intended to capture and redirect stormwater flows falling on graded and compacted sediment towards the proposed sediment trap (see Figure 2-5d).

2.4.2.5 Phase 5

Prior to Phase 5 restoration activities, the habitat protection fence would be relocated to protect terrain revegetated at the conclusion of Phase 4. The habitat protection fence would also be relocated to accommodate Phases 5 and 6 activities including the relocated sediment trap, stockpile area, and mobile processing screen (see Figure 2-5e).

During Phase 5 approximately 230,000 cubic yards of sediment would be placed on the Project site over an approximately 3.1-year period. As with Phase 4, Phase 5 activities would round and extend new terrain to create a series of cascading slopes and an overall natural appearing landform. As shown on Figure 2-5e, new Phase 5 terrain would nearly abut the staging area, sediment trap, and stockpile area and would push these components to the northeast corner of the Project site (see Figure 2-5e).

Regarding drainage features, the Phase 2 turf mat ditch and riprap channel along the southern boundary of the Project site would remain in place during Phase 5. However, the Phase 3 temporary concrete ditch and riprap pad would be removed prior to the start of Phase 5 activities (new terrain would be placement on top of these facilities). A new temporary concrete ditch and riprap pad would be constructed and would parallel the location where new terrain would tie into existing terrain along the north-northeast boundary of the Phase 5 limits (see Figure 2-5e).

2.4.2.6 Phase 6

Approximately 290,000 cubic yards of sediment would be placed on the Project site during Phase 6, which would take approximately 3.8 years to complete. As proposed, Phase 6 would extend terrain created in Phase 5 to the north across the relatively flat portion of the Project site and would broaden and tie into contours located on the east-facing slope (see Figure 2-5f). The result would be a wide, gradually sloping landform that would extend from the current ridgeline of the east-facing hillside towards the eastern extent of the Phase 6 limits of work.

Prior to the initiation of Phase 6 activities, the temporary concrete ditch and riprap pad installed prior to Phase 5 would be removed due to proposed plans to fill the previously created slope. Once final elevations are achieved, a permanent turf mat lined ditch would be installed primarily along the new 230 feet above mean sea level contour that would transition to a 210-foot contour and convey flow from the newly created terrain. In addition, an 18-inch RCP storm drainpipe would be installed along the face of the new, northeast-facing slope. The storm drainpipe would be buried and would tie into the turf-mat lined ditch via an F-type catch basin. The catch basin would be accessible to City of San Diego Stormwater Department personnel and/or County DPR staff for periodic maintenance via a 15-foot-wide graveled access road that would be constructed off the existing road atop the ridge landform (i.e., APN 664-011-0400; within the Project site; see Figure 2-5f). A standard concrete headwall would be

installed at the downslope end of the storm drainpipe and would be connected to a relatively short riprap ditch that would slow and convey stormwater off site towards an existing narrow drainage. Riprap is proposed to prevent scouring of the existing off-site drainage feature.

Also, to maintain desired access for CBP, a new 15-foot-wide graveled access road would be provided atop the ridge landform and would extend to the F-type catch basin. The access road is depicted on the Project design plans (see Figure 2-5f).

In the final phase in the northeastern portion of the Project site, the mobile processing screen and soil stockpile equipment (and all temporary erosion control devices including the sediment traps) would be removed and the areas would be restored and revegetated.

2.4.3 Project Facilities

The Project would utilize conventional earth moving and processing equipment. Batch plants or rock crushing are not proposed as part of this Project. Table 2-2 lists the anticipated mobile construction equipment for Project operations.

Table 2-2. Anticipated Equipment Required for Sediment Processing, Earthmoving and Restoration

| Equipment Type | Quantity | Purpose |
|--------------------------------|----------|---|
| Processing Equipment | | |
| Skid Steer | 1 | Move sediments and fill |
| Wheeled Loader | 2 | Load hopper and trucks |
| Hoppers/Feed Stations | 2 | Load sediments and fill; convey to screen and radial stackers |
| Screen (Dry) | 1 | Remove coarse material to produce piping sand (typically fines with limited coarse materials; for the backfill of pipes and other sensitive materials), fill (may include silts and sands, clays, rocks, larger gravel), and wastes |
| Radial Stackers | 2 | Used for separating materials |
| Operations Office/Trailer | 1 | — |
| Storage (Shipping) Container | 2 | — |
| Water Pump | 2 | — |
| Earthmoving/Restoration | | |
| Excavator | 1 | — |
| Wheeled Loader | 2 | Load hopper and trucks |
| Haul Truck | 1 | Move fill from processing station to fill area |
| Dozer | 1 | — |
| Blade Grader | 1 | Smooth contours |
| Water Truck | 1 | Dust suppression |
| Employee Trucks/Vehicles | 7 | — |

Table 2-2. Anticipated Equipment Required for Sediment Processing, Earthmoving and Restoration

| Equipment Type | Quantity | Purpose |
|---|----------|---|
| Restoration and Revegetation | | |
| Concrete Truck | 1 | Temporary stormwater ditches |
| Mulching/Seeding Truck | 1 | Revegetation (application of hydroseed mix) |
| Container Plant Trucks | 1 | Revegetation (installation of container plantings) |
| Employee Truck | 1 | Container plant installation |
| Monitoring and Maintenance¹ | | |
| Employee Truck | 1 | Qualitative assessment of revegetation efforts by Project biologist |
| Container Plant Truck | 1 | Remedial plantings per Project biologist (if needed) |

¹ Maintenance activities would be conducted concurrent with the installation of the container plants and seeding, would continue throughout the initial 120-day establishment period and the interim maintenance and monitoring period, and would conclude at the end of the 5-year period for each mitigation phase. The Project biologist and associated personnel would conduct qualitative inspections monthly during the 120-day establishment period, every other month after the establishment period and during Year One, and on a quarterly basis from Years Two through Five.

Initial site development would involve the establishment of the processing station. The processing station would be at grade with the existing access road off Monument Road. Haul trucks would access the processing station via a narrow, at-grade two-lane access road that connects to Monument Road. Loaded haul trucks would access the site from the existing access road off Monument Road located approximately 200 feet to the northeast of the processing station. Once materials are offloaded, the haul trucks would exit the processing station area, proceed to the access road, and then head north towards the driveway off Monument Road.

2.4.3.1 Mobile Processing Station

The mobile processing station is proposed in the flat, northcentral portion of the Project site. The processing station would be located on native dirt that would allow earthmoving and other processing equipment to be safely operated. The processing station would include a storage area, dry screen area, stockpiles areas, sediment trap, equipment storage, and truck area and employee parking. Sediment excavated from in-valley channels and basins by land managers would be transported to the Project site via haul trucks. The processing station would screen rock, cobbles, tires, trash, and other debris before separating sediment into sand (piping or beach quality), fill, or waste stockpiles, or into stockpiles for chemical and physical characterization if in-situ sediment analyses were not conducted. All stockpiles would maintain slopes equal to or lesser than a 2:1 ratio. The stockpiles requiring chemical and physical characterization would be separated based on source locations within the valley. Further subdivision of these stockpiles may be implemented to limit the extent of an area the stockpile covers (e.g., segregate stockpiles based on specified reaches to differentiate between upstream and downstream channel sediment for Smuggler's Gulch). Once fill materials have been fully processed and characterized, they would then be placed in appropriate stockpiles for on-site placement or off-site export for possible reuse or disposal.

The processing station would remain in the initial location for the duration of Phases 1 through 4. The processing station would be relocated as restoration and grading activities progress to the north and east in Phases 5 and 6. During active operations, the processing station could operate to 10 hours a day, 5 days a week. Operations are anticipated to be seasonal and coincide with annual sediment management activities of in-valley land managers.

2.4.3.2 Office and Equipment Maintenance

A temporary building would be located on site in the general staging area and would serve as the operations office. Required on-site documents, including the future update to the Project O&M Plan and regulatory permits, would also be housed in this unit.

Equipment maintenance would be conducted in the western portion of the plant area and would comply with all applicable environmental regulations. Tools or small equipment would be stored in metal cargo containers also located at the processing station site.

2.4.3.3 On-Site Personnel

Approximately seven full time positions would be necessary to operate the processing screen and mobile equipment on site. Operations would occur seasonally (over an approximate 3- to 4-month period) and generally coincide with annual sediment management conducted by in-valley land managers. These personnel would be responsible for tasks associated with sediment processing and placement activities, environmental compliance, safety, management, and administrative tasks.

2.4.4 Sediment Sampling and Characterization

The Project's O&M Plan would include a sampling and analysis program that would be implemented by all participating agencies to characterize the sediment prior to (in situ) or after (from stockpile) excavation. In either instance, the number of samples needed to be analyzed to characterize the materials would be coordinated with regulatory entities, for example, Conditional Waivers Nos. 9 and 10 (Discharges of Slurries to Land and Discharge/Disposal of Solid Wastes to Land)¹ and/or a Project-specific Waste Discharge Requirement issued by the RWQCB specifying the number of samples per unit volume. Sampling locations would be in accordance with U.S. Environmental Protection Agency (EPA) SW-846 protocol, and additional sampling may be required based on field observations (e.g., distinct petroleum hydrocarbon staining or odors in one horizon may require additional sampling to characterize the extent of the contamination). Cores would be collected at each sampling location from surface to total depth (base of dredging or stockpile) using decontaminated equipment (e.g., auger, direct push probe), and would be composited to produce samples that characterize the cross-sectional physical and chemical properties at each sampling location.²

A list of contaminants of potential concern (COPCs) developed for the sediment basin cleanout activity at Goat Canyon (CDPR 2020) would serve as the baseline for the analyses to be conducted to determine suitability of soils for reuse. COPCs identified in the Draft Goat Canon Deposition Material Sampling and Analysis Program (CDPR 2020) and less recent sediment characterization assessments prepared for sediment basins and stockpiles in Border Field State Park (and the Tijuana River Valley) (Ecology and Environmental Inc. 2014; Nautilus Environmental

¹ Section 8.II.F. of Appendix A to Resolution No. R9-2007-0104 establishes sampling requirements to determine suitability of soils from contaminated sites for reuse. This protocol require 4 samples per 100 cubic-yards for the first 500 cubic-yards of excavated material (from the same hydrologic feature). If the total load exceeds 500 cubic-yards but is less than 5,000 cubic-yards, 1 sample will be included for every additional 500 cubic-yards up to 5,000 cubic-yards, If the total load exceeds 5,000 cubic-yards but is less than 10,000 cubic-yards, 1 sample will be included for every additional 1,000 cubic-yards up to 10,000 cubic-yards, Loads exceeding 10,000 cubic yards may be permitted to reduce number of samples as long as protocol established in the EPA SW-846 Compendium are followed.

² Volatile organic compounds and semi-volatile organic compounds would be collected separately as discrete samples. Two samples will be collected from each station: one from approximately 6 inches below ground surface and one near the base of the augured hole.

LLC 2008) include, but are not limited to, metals (as identified in Title 22 of the California Code of Regulations; see Section 66261.24, total petroleum hydrocarbons, organochlorine pesticides, herbicides, polychlorinated biphenyls, volatile and semi-volatile organic compounds, and polycyclic aromatic hydrocarbons. Additional analytes may be included based on field observations and/or modifications to Beneficial Uses or Water Quality Objectives in the San Diego Region Basin Plan. Physical analyses would include grain-size distribution, expansion index, and plasticity index. Sampling, handling, and laboratory analyses methodology would be provided in the Project O&M Plan. Section 3.6, Hazards and Hazardous Materials, provides more detail regarding the contents of the sediment characterization reports, including sampling design and analytical testing and assessment sampling and identification.

For the purposes of this Project, sediment analytical results would be compared to Environmental Screening Levels (ESLs), which, as further discussed in Section 3.6, are guideline screening levels for multiple chemicals designed to be conservatively protective of human health and the environment. ESLs are not enforced by regulation, but are used statewide as conservative screening values based on the exposure scenario and regulator decision. Additionally, the ESLs evaluate multiple exposure factors, including potential leaching to groundwater (both drinking and non-drinking water), odor nuisance, and terrestrial habitats, where other screening levels (EPA or Department of Toxic Substances Control screening levels) generally only evaluate risk to human exposure in a residential or commercial/industrial environment. Therefore, the ESLs can be considered more scientifically pertinent to the Project. Where ESLs are not available for specific COPCs, DTSC screening levels and EPA regional screening levels would be used as secondary screening levels. If human or environmental health thresholds are exceeded, additional analyses of stockpile leachate would be required to demonstrate suitability for disposal per a respective landfill's waste acceptance guidelines and any subsequent CEQA compliance.

Each soil sample (or a composite sample) would be analyzed for COPCs and compared to appropriate criteria, such as that appearing in Conditional Waivers Nos. 9 and 10 and/or the waste discharge requirements as determined by the RWQCB. Anticipated COPC analyses include the following:

- Title 22 Metals by EPA Method 6020/5030B
- total petroleum hydrocarbons, Extended Range C6 to C44 by Modified EPA 8015B
- semi-volatile organic compounds, including polycyclic aromatic hydrocarbons by EPA 8270C SIM PAHs
- organochlorine pesticides and polychlorinated biphenyls by EPA 8081A and 8082, respectively
- dioxins and furans by EPA Method 8290 D/F
- moisture content by ASTM Method D-2216 (M)

Depending on the detected analytes, additional leachability testing may be needed to demonstrate the waste to be discharged does not create or threaten to create a condition of pollution or nuisance, as stated under the California Water Code Section 13260. Physical analyses may also include the following:

- grain-size distribution (ASTM D422 and 4221)
- expansion index (ASTM D4829)
- plasticity index (ASTM D4318)

In addition, bacteria are known to be present in the sediment in the Tijuana River Valley. As such, analyses for total and fecal coliform and *enterococci* bacteria by Standard Methods 9221 B/E and Enterolert may be conducted; need would be determined by regulatory oversight.

If the results of testing indicate that sediments cannot be used on site and are unsuitable for reuse at construction sites or other options, then sediments would be disposed of at an appropriate permitted landfill/facility, including but not limited to the City's Miramar Landfill. Alternatively, in coordination with regulatory agencies, the sediment may be used for deep fill, as the Project does not propose the construction of habitable structures and would not entail future use of the property for recreational purposes.

Some sediments in the Tijuana River Valley are known to co-occur with accumulations of solid waste from cross-border flows. Solid waste quantification and analysis would be conducted during the sampling and characterization process. Solid waste separation would occur during the sediment processing activities. COPCs may include polychlorinated biphenyls, organochlorine pesticides, polybrominated diphenyl ethers, bisphenol A, and alkylphenols; these COPCs would be reviewed in the regulatory process and included in the sampling and analysis program as appropriate. Additional information concerning plastics in previous sediment characterization assessments/investigations (which informs the likelihood for encountering plastics during Project operations) is included in Section 3.6.

2.4.5 Sediment Placement and Grading

Sediment excavated from in-valley sources would be placed on site to form slopes between 4:1 and 2:1, but no steeper than 2:1. Fill slopes would be keyed and benched into competent material to the maximum extent practicable. Tests would be conducted to determine the in-place moisture and relative compaction of the sediment soils as engineered fill. Compaction testing, as well as keying and benching, would be observed by a geotechnical professional supervised by a California-registered Geotechnical Engineer.

Sediment soil fill would be placed in horizontal layers at depths compatible with material being placed and the type of equipment being used. Each compacted layer would not exceed 8 inches of compacted thickness. Each layer of fill would cover the length and width of the area to be filled before the next higher layer is placed. The top surface would have a slope of not less than 50:1 and not more than 2:1. Each layer would be compacted to a relative compaction of 90% unless otherwise specified by a registered Geotech Engineer. Fill soils in the top 2 feet of the slope surface can be compacted to 85% relative compaction to enable vegetation growth. Compaction would be performed by utilizing sheepsfoot rollers, pneumatic-tired rollers, vibratory rollers, or mechanical means approved by the resident engineer supervising fill operations (does not have to be a Geotech Engineer). Where access is an issue for large earthwork equipment, fill would be compacted by hand-directed equipment. Completed slopes would not vary from the planes shown on the plans by more than 6 inches measured at right angles to the slope.

Preparation of areas to receive fill would be performed in accordance with applicable standards in the 2018 editions (or current at time of bid for construction) of the City of San Diego Whitebook and the Greenbook (i.e., standard specifications for public works construction) (City of San Diego 2018). As the Whitebook addresses the unique conditions in the City that are not addressed in the Greenbook, the Whitebook would have precedence if there is a conflict. Vegetation would be retained on site prior to the initiation of the active phase of grading. Soil would be scarified to a minimum depth of 6 inches, moisture conditioned, and compacted to a relative compaction of at least 85% unless otherwise specified by a Geotech Engineer.

Over areas where the slope is 5:1 or greater, benching is required to key the sediment/fill into the slope face, in accordance with recommendations from the Geotech Engineer. Benching would be into soils free of loose or disturbed soils, such that a minimum of 3 feet of vertical face height is exposed into firm soil, unless otherwise specified by a Geotech Engineer. The horizontal surface of each bench would be scarified to a depth of at least 6 inches prior to the first placement of fill. Fill slopes would be constructed at inclinations no steeper than 2:1 and

would be keyed and benched into competent material to the maximum extent practicable. Keying and benching would be observed by a geotechnical professional supervised by a California-registered Geotech Engineer. The bench width should be at least 1.5 times the width of the compaction equipment and not less than 2 feet; benching activities would remove all loose or porous soils. The minimum recommended height of benches is 4 feet, or as recommended by the Geotech Engineer per on-site conditions observed during construction.

Prior to ripping and track walking the slopes, the fill/soil would be tested to determine if soil amendment would be necessary for revegetation efforts. If determined to be necessary, soil amendments would be coordinated with the Geotech Engineer in consultation with the Project biologist.

Sediment placed on quarry slopes would be ripped (i.e., deep tilled) to a minimum of 12 inches deep to break up compacted soil layers. Slopes would be floated out (dragged with a section of chain link fence fabric) to remove ridges and depressions in the ripped soil surface. Areas to be seeded and/or planted would be ripped to a minimum of 8 inches deep and lightly track walked up and down slope. Any non-native and invasive plants that have germinated during the grading process would be removed from the site prior to planting or seeding and the installation of erosion control devices/BMPs. Perennial weeds or exotic species such as fennel (*Foeniculum vulgare*) and artichoke thistle (*Cynara cardunculus*) would be treated with a systemic herbicide and removed once the root system is dead.

2.4.6 Stockpile Management

Excavated sediment would arrive on site and be placed on native soil. If sediment is being screened, each of the screened stockpiles would be placed on native soil. If required by regulatory agencies, imported sediments would be temporarily placed on a protective barrier. When stockpiles are not being actively generated, the screened sediment would be covered with 8-millimeter plastic sheeting that is appropriately restrained by either gravel filled bags roped together and spaced not more than 6 feet apart, or wooden (fir or pine) lath with dimensions of 2 inches by 4 inches by 8 feet with anchor restrainers made of steel reinforcing bars spaced not more than 3 feet apart along the wooden lath. Coverings are required for dust suppression and compliance with the Stormwater Pollution Prevention Plan. BMPs consisting of a linear sediment barrier around the base of each stockpile would also be placed and appropriately anchored. Examples of linear sediment barriers include a silt fence, fiber rolls, gravel bag berms and straw bale barriers. This sediment barrier would prevent run-on and concentrated stormwater flows from contacting the stockpile. The plastic sheeting cover(s) would be maintained and replaced as necessary. Linear sediment barrier(s) would be repaired or replaced as needed to keep them functioning properly.

During work and whenever stockpiles are uncovered, they would be treated using water or other dust suppressant, though no runoff would be allowed. Stockpiles would be placed on site such that they do not meet surface run-on or runoff, and they would be located no less than 50 feet away from concentrated flows of stormwater, drainage courses, and inlets. Each stockpile would have adequate spacing between one another to allow access for vehicles and materials handling. Areas between stockpiles would be kept free from obstruction and allow easy movement of emergency vehicles. To minimize the spreading of dust and when no stockpiles are being generated, stockpiles would be covered with 8-milimeter plastic sheeting (or similar) that is appropriately restrained. When not covered, stockpiles would be regularly watered to limit dust generation. Stockpiles would be managed in accordance with applicable standards of regulatory agencies, including the RWQCB.

2.4.7 Stormwater and Erosion Control

BMPs would be installed as necessary throughout the different phases (at the beginning, during, and at the end of each year's construction season) of the Project, as well as during the 5-year monitoring period following the completion of each phase. The intermediate graded slopes between phases and final slopes are designed to mitigate possible stormwater runoff impacts in accordance with City and County regulations and the National Pollutant Discharge Elimination System permit. Construction BMPs (straw wattles, silt socks/fiber rolls, etc.) would be utilized on and around the grading operations as specified in the Project-specific Stormwater Pollution Prevention Plan to stabilize graded slopes. BMPs would include installation of non-invasive, non-habitat forming erosion control seed mix (to be defined in the grading plans and specifications), silt fencing, fiber rolls, and gravel bags where soil erosion and runoff is expected. As previously stated, a sediment trap would be maintained throughout each phase. Unless otherwise noted in grading plans, runoff would be directed to the sediment trap by sheet flow and temporary drainage features that would be removed prior to subsequent phases.

2.4.8 Solid Waste and Debris Management

Given the binational nature of the watershed, much of the surface water flow in the valley during storm events originates across the international border with Mexico. In addition to sediment, these flows transport a considerable volume of solid waste and waste tires. According to the 2009 report *The Flow of Used and Waste Tires in The California-Mexico Border Region* (IWMB 2009), the informal disposal of waste tires, including in ravines, canyons, and hillsides in the rugged topography of Baja California, is a widespread practice. In addition, waste tires in the Tijuana River Valley are likely generated as a result of rain events during which soils can become saturated and tires (informally used as housing/residential property construction materials) may collapse/run downhill, especially where located in canyons or other areas with steep topography (IWMB 2009). Solid and tire waste materials need to be removed from the excavated sediment prior to placement on the Project site for landform reclamation and restoration. While most of the solid waste and waste tires would be encountered by land managers at their respective processing stations, waste may be intermixed with sediment and transported to the site. As such, the processing screen operator may need to file an Enforcement Agency Notification application with the City Local Enforcement Agency depending on the anticipated solid waste load from the sediment screening. This would apply to solid wastes exclusive of waste tires.

Solid waste, intermingled with the excavated sediment, would be removed when the sediment is processed (likely using shakers and screens) either at the stakeholder staging area or the processing station. While the materials could be used on site, the processing of sediments at stakeholder staging areas or processing stations is not a component of the proposed Project. Such activities are permitted under existing permits and approvals and are conducted on an annual (or more frequent) basis by area land managers. However, this analysis conservatively assumes most sediment processing would occur on site. While redundant, this assumption ensures that processing is accounted for in the assessment of potential environmental impacts.

In addition to screened sediments, non-soil materials that collect on the screens would also be stockpiled. This may include construction debris, rock, concrete, metals, and vegetation. These materials would be separated and recycled. The trash would be stockpiled and inspected for the presence of hazardous materials. Suspected hazardous materials would be segregated, tested, and disposed of at an appropriate handling facility. The collected trash and other non-soil and non-recyclable materials would be disposed of at a Class III landfill with available remaining capacity. In addition, and based on standard operating procedures of area landfills, haul contractors may take a subset of screened sediment to receiving landfills to function as daily cover. Daily cover is cover material

placed on the surface of the active “face” or disposal area of a landfill at the end of each operating day to control vectors, fires, odors, and blowing litter. The weight of the trash and other removed materials would be recorded and the cost of solid waste disposal would be borne by the respective stakeholder/participating agency.

Waste tires encountered during sediment processing would be temporarily stored on site, requiring the acquisition of a Tire Program Identification Number from the California Department of Resources Recycling and Recovery. If more than 500 and up to 5,000 tires are stored at any time at the facility, a minor waste tire permit would be required. No permit is required for the storage of fewer than 500 waste tires on site. The waste tires must be removed from the site by a registered waste tire hauler. The registered hauler would be able to determine if a waste tire can be recycled or would need to be disposed at a landfill. When disposed of at a landfill, the waste tires are shredded or cut to reduce their volume. Alternatively, there are several tire recycling vendors in the County that may be able to perform this task at their facilities, where they would in turn process and deliver to the landfill or sell for reuse. It has been assumed that, due to the presence of sediment in the tires, extensive wear, or degradation, most waste tires removed from the sediment in the valley would be shredded and placed in a landfill. The registered hauler would provide comprehensive trip logs (i.e., manifests) for each load of tires removed from the site and the processing screen operator would need to retain these documents for at least 3 years. For purposes of this analysis, no more than 500 tires would be stored on site at any given time.

Byproducts of material processing determined not suitable for placement on site would be managed and hauled off site to an approved off-site disposal or reuse location. Stockpiles would be managed in accordance with applicable standards of regulatory agencies. Refuse generated by site personnel would be collected in trash bins and removed by a local refuse disposal company. Equipment would be maintained on site and all used oils, fuels, and solvents would be collected in accordance with all applicable regulations and transported off site by an approved hauler for materials recycling.

Sediment processing has the potential to generate particles of solid waste (e.g., polystyrene, plastic) that may become airborne and blow from the processing equipment or sorted material piles. Measures including the installation of perimeter fencing, application of water for dust suppression, and regular sweeping and raking would be implemented to control movement of this material off site. The sorted fill material is expected to contain a small fraction of solid waste (e.g., polystyrene, high-density polyethylene, low-density polyethylene) that cannot be removed. The standards of concentration of this solid waste in sediment placed on site would meet regulatory thresholds set by the RWQCB.

2.4.9 Operational Water Use

The Project would require water for general dust suppression, surface watering of loads placed on site, processing screen deck dust suppression, and temporary irrigation for permanent restoration vegetation. Water would be provided to the Project site either through a new connection to an existing City 8-inch water main located along Monument Road or a City reclaimed water line aligned adjacent to the Project site. If potable water is identified as appropriate water source, the proposed point of connection would be to the immediate south of the existing water main. A new 2-inch water meter and reduced pressure backflow preventer would be installed. Approximately 700 feet of new 2.5-inch PVC irrigation mainline would be installed and would extend from the master valve, turning right to parallel the access road onto the Project site. The new irrigation mainline would terminate near the Phase 1 sediment trap area. A ball valve/stub would be installed at the mainline terminus for installation of future restoration/irrigation valves and lateral lines. Irrigation valves and lateral lines would be installed when final grading is completed for each phase of restoration. Existing water infrastructure and proposed irrigation features are shown on the restoration plan graphics (see Figures 2-7a through 2-7h). Water usage would be directly related to

processing volume and volume of sediment placed on site. As such, water usage would vary by restoration phase (see Table 2-3).

Table 2-3. Estimated Water Usage

| Need | Estimated Annual Water Use (in acre-feet) |
|-----------------------------------|---|
| Dust Control – Fill Site | 23.2 |
| Dust Control – Processing Station | 12 (3.0 per season) |

A water trailer or drop tank(s) would be installed on site and a single water truck would be used for dust suppression. Water required to suppress dust from the processing and grading operations is estimated to be approximately 35 acre-feet of water per year. Irrigation of revegetated areas is estimated to utilize approximately 26 acre-feet per year. As the area of revegetation would vary by phase, water use for revegetation would vary by phase. See Section 2.4.15, Revegetation Component, for additional detail.

2.4.10 Operating Hours

The hours of operation for processing and filling would be between 7:00 a.m. and 5:00 p.m., Monday through Friday. Off-site transport of sediment for reuse or disposal would be conducted from 7:00 a.m. to 5:00 p.m., Monday through Friday. The site would be closed on Saturdays, Sundays, and holidays. Pursuant to City MSCP approval and concurrence from USFWS and the California Department of Fish and Wildlife (Wildlife Agencies), the installation of shielded night lighting may be considered near the processing screen for security purposes and would be designed to minimize glare and reflection onto off-site properties and habitat. Light would be installed and designed to avoid intrusion onto adjacent areas of the Multi-Habitat Planning Area and effects on wildlife. Once restoration activities are completed, Project-related lighting (if approved for installation) would be removed from the Project site.

2.4.11 Site Access

Public roads that would be utilized for site access include Dairy Mart Road, Monument Road, Hollister Street, Tocayo Avenue, and Interstate 5. Access for the site would consist of designated ingress and egress points (i.e., the Project driveway off Monument Road) that would reduce conflicts and the need to construct a widened driveway (and impact sensitive vegetation). Ingress to the site from Monument Road would use an existing entrance located on the eastern edge of the Project site. Egress would utilize the same access road; however, from the processing station, haul trucks would proceed to the south and east, following the existing access road to the southeastern corner of the Project site. Ultimately, haul trucks would exit the site and proceed towards an existing north-south driveway that connects to Monument Road. Site preparation activities would include grading of the access road between the ingress point and processing station to create a more stable driving surface and smooth the existing slope, and installation of a culvert to convey existing surface flows.

Monument Road has a designated speed limit of 45 miles per hour and at the intersection with Dairy Mart Road, stopping sight distance exceeds the minimum standard of 200 feet established in the 2020 California Department of Transportation Highway Design Manual for roadway design speed of 30 miles per hour (assumed for Monument Road) in either direction for access (Caltrans 2020). Exclusionary signage would be placed along the dirt access road located approximately 365 feet north of the existing site access driveway to keep Project traffic from using this point of access to the Project site. Project signage would also be installed on Monument

Road to direct Project traffic to the site access driveway. Dairy Mart Road/Monument Road would continue to be used as it is currently being used.

2.4.12 Transportation Routes and Truck Traffic

Two categories of traffic would be generated by the Project: heavy vehicle traffic and light vehicle traffic. On-site heavy vehicle traffic would include front-end loaders, bobcats/skid steers, dozers, water trucks, other earth moving equipment, and on-highway haul trucks carrying loads of sediment (incoming) and construction sediment or materials for disposal (outgoing). Occasional supply and service trucks (parts and fuel, water, etc.) would also be included in the on-site heavy vehicle traffic category. Light vehicle traffic includes light vehicles used by employees and visitors such as cars, trucks, and small service vehicles.

Access for all vehicle traffic to the site would be provided by an improved access road off Monument Road. The existing dirt access road is approximately 20 feet wide, climbs over 30 feet in elevation from Monument Road to a semi-circular parking area, and is in the northeast corner of the Project site. As proposed, the road would be improved to safely accommodate haul truck traffic.

Annual activities on the Project site are anticipated to occur within an approximately 3- to 4-month period that roughly coincides with seasonal sediment management activities occurring in the Tijuana River Valley. The weight capacity of a standard heavy duty vehicle for incoming loads of sediment is approximately 20 tons (16 cubic yards) per truck. The estimated number of haul truck trips from sediment excavation sources to the Project site, by restoration phase, is listed in Table 2-4.

Table 2-4. Estimated Haul Truck Trips by Phase

| Phase | Sediment Volume Required (cy) | Years to Complete ¹ | Estimated Haul Truck Trips ² (total) |
|-------|-------------------------------|--------------------------------|---|
| 1 | 6,500 | 0.08 | 812.5 |
| 2 | 108,500 | 1.45 | 14,375 |
| 3 | 165,000 | 2.2 | 20,625 |
| 4 | 240,000 | 3.2 | 30,000 |
| 5 | 230,000 | 3.1 | 30,000 |
| 6 | 290,000 | 3.8 | 36,250 |
| | 1,040,000 | 14 | 132,062 |

¹ Years to complete are based on an annual average available sediment volume of 75,000 cy.

² Assumes a standard haul truck with a capacity of 16 cy.

In addition to the heavy vehicle trips, up to seven workers are expected to access the Project site on a typical active day of Project activities.

2.4.13 Safety and Security

During periods of active Project operations, the Project site would be patrolled on a regular basis to discourage trespassers. A locked gate would be installed on the dirt road off Monument Road to control access to the site. Access to the site would be restricted 24 hours per day through a controlled entrance. Gates would be closed and locked during non-operational hours. Temporary and permanent fencing, including exclusionary signage, would be installed along the exterior edge of the Project boundary.

Workers would be trained in workplace safety. Refresher courses would be conducted periodically in accordance with applicable regulations. Site operators would carry mobile phones for off-site communication. All trucks would be required to check in and check out with the operations office. Conditions affecting safety would be continually monitored by a dedicated safety coordinator.

Regarding worker safety, health and safety plans prepared for the Project would incorporate procedures to protect workers from contaminated soils. Health and safety plans would be prepared prior to construction and review would be a component of worker training.

2.4.14 Power Source and Distribution

Temporary power would be provided to the Project site during activities for the operations office. Temporary power would be provided by San Diego Gas and Electric from nearby power poles through an overhead transmission line located along Monument Road. New poles and infrastructure would be installed to run power to the Project site. Once the final phase of sediment placement, grading, and revegetation is complete, poles and infrastructure that are located within the limits of the Project site would be abandoned, per San Diego Gas and Electric requirements.

2.4.15 Revegetation Component

Revegetation of disturbed areas of the site would be completed in phases; it is assumed no overlap of phases would occur after final graded surfaces are achieved. The Restoration Plan is intended to successfully restore/create self-sustaining native habitats, which would serve as mitigation for impacts to sensitive vegetation communities, pursuant to City and Wildlife Agencies requirements. Mitigation would be required to address Project impacts associated with fill placement and terrain creation atop mapped areas of Diegan coastal sage scrub and disturbed Diegan coastal sage scrub located on the east-facing slope and flat portion of the Project site. The goal of the Restoration Plan is to restore the ecological functions and values of the impacted habitats, while the goal of reclamation is to provide landform stability. The goals and methods of reclamation and the Restoration Plan would be implemented concurrently.

Restoration plans (80%) have been prepared that define the vegetation communities and restoration areas to be established on the Project site. Graphics from the restoration plan are included as Figures 2-7a through 2-7h. In addition, a revegetation monitoring and management plan has been prepared for the Project and details the revegetation implementation plan, the 5-year interim maintenance plan, monitoring plan, and contingency measures (see Appendix E-2). Both the restoration plan and the monitoring and management plan would be prepared and submitted to the City and Wildlife Agencies for comment.

Planting palettes to be used for the coastal sage scrub restoration and would consist of (1) container plants, (2) Type A coastal sage scrub restoration and enhancement seed mix, and (3) Type B coastal sage scrub restoration and enhancement seed mix for the top of the ridge. Three seed mixes have been developed for the Project; container plants would be used generally to supplement seed mixes for permanent restoration. Restoration with the coastal sage scrub plant palette would be implemented where final Project elevations are achieved and where terrain would not be subject to future disturbance/sediment placement. Container plants would be limited to species that are difficult to establish from seed. All plant material shall originate within 25 miles of the site to the greatest extent practicable. Temporary slopes that would be subject to future sediment placement and landform creation would receive a non-habitat forming erosion control hydroseed mix. Tables 2-5 through 2-8 list the various plant species and seed mixes that would be used on the Project site.

Table 2-5. Interim Erosion Control Seed Mix

| Botanical Name | Common Name | %Pure Live Seed | Pounds/Acre |
|----------------------------------|-------------------|-----------------|-------------|
| <i>Ambrosia psilostachya</i> | Western ragweed | 20 | 5 |
| <i>Bromus carinatus</i> | California brome | 85 | 5 |
| <i>Festuca microstachys</i> | Small fescue | 72 | 3 |
| <i>Juncus bufonius</i> | Toad rush | 57 | 0.25 |
| <i>Melica imperfect</i> | Coast range melic | 60 | 3 |
| <i>Muhlenbergia microspermia</i> | Little-seed muhly | 48 | 1 |

Table 2-6. Coastal Sage Scrub Restoration and Enhancement Seed Mix - Type A

| Botanical Name | Common Name | %Pure Live Seed | Pounds/Acre |
|--|-----------------------|-----------------|-------------|
| <i>Artemisia californica</i> | California sagebrush | 10 | 5.0 |
| <i>Baccharis sarrothroides</i> | Desert broom | 1 | 2.0 |
| <i>Encelia Californica</i> | California encelia | 25 | 3.0 |
| <i>Eriogonum fasciculatum</i> | Flat-topped buckwheat | 10 | 10.0 |
| <i>Eriophyllum confertiflorum</i> | San Diego sunflower | 25 | 1.0 |
| <i>Eschscholzia californicum</i> | California cudweed | 2 | 1.0 |
| <i>Isocoma menziesii</i> ssp. <i>menzeisii</i> | Coastal goldenbush | 2 | 1.0 |
| <i>Peritoma arborea</i> var. <i>arborea</i> | Desert bladderpod | 60 | 8.0 |
| <i>Lasthenia coronaria</i> | Southern goldenfields | NA | 0.5 |
| <i>Acmispon glaber</i> | Deerweed | 85 | 2.0 |
| <i>Muhlenbergia microsperma</i> | Small-seed muhly | 48 | 1.0 |
| <i>Nassella lepida</i> | Foothill needlegrass | 65 | 2.0 |
| <i>Nassella pulchra</i> | Purple needlegrass | 68 | 2.0 |
| <i>Phacelia ramosissima</i> | Branching phacelia | 80 | 0.5 |
| <i>Phacelia distans</i> | Common phacelia | 80 | 0.5 |
| <i>Salvia apiana</i> | White sage | 25 | 2.0 |
| <i>Salvia mellifera</i> | Black sage | 40 | 3.0 |
| <i>Bahiopsis laciniata</i> | San Diego sunflower | 20 | 5.0 |

Note: The Coastal Sage Scrub Restoration Type A and Coastal Sage Scrub Enhancement Type A seed mix is the same. The only difference is that the enhancement areas would only require the seeding areas between existing native plants whereas restoration areas would be seeded in their entirety.

Table 2-7. Coastal Sage Scrub Restoration and Enhancement Seed Mix - Type B

| Botanical Name | Common Name | %Pure Live Seed | Pounds/Acre |
|---------------------------------|-----------------------|-----------------|-------------|
| <i>Artemisia californica</i> | California sagebrush | 10 | 3.0 |
| <i>Amsinckia intermedia</i> | Rancher's fiddleneck | 29 | 3.0 |
| <i>Amsinckia menziesii</i> | Rigid fiddleneck | NA | 1.0 |
| <i>Asterella palmeri</i> | Liverwort | NA | 1.0 |
| <i>Chamissoniopsis bistorta</i> | California suncup | 72 | 1.0 |
| <i>Encelia californica</i> | California encelia | 25 | 2.0 |
| <i>Eriogonum fasciculatum</i> | Flat-topped buckwheat | 10 | 5.0 |

Table 2-7. Coastal Sage Scrub Restoration and Enhancement Seed Mix - Type B

| Botanical Name | Common Name | %Pure Live Seed | Pounds/Acre |
|---|---------------------------|-----------------|-------------|
| <i>Eriophyllum confertiflorum</i> | San Diego sunflower | 25 | 3.0 |
| <i>Eschscholzia californica</i> | California poppy | 85 | 1.0 |
| <i>Gnaphalium californicum</i> | California cudweed | 2 | 1.0 |
| <i>Isocomia menziesii</i> ssp. <i>Menzeisii</i> | Coastal goldenbush | 2 | 1.0 |
| <i>Peritoma arborea</i> var. <i>arborea</i> | Desert bladderpod | 60 | 3.0 |
| <i>Lasthenia gracilis</i> | Common goldenfields | NA | 0.5 |
| <i>Acmispon glaber</i> | Deerweed | 85 | 1.0 |
| <i>Muhlenbergia microsperma</i> | Small-seed muhclly | 48 | 0.5 |
| <i>Nassella pulchra</i> | Purple needlegrass | 68 | 2.0 |
| <i>Nassella lepida</i> | Foothill needlegrass | 65 | 2.0 |
| <i>Phacelia ramosissima</i> | Branching phacelia | 82 | 1.0 |
| <i>Phacelia distans</i> | Common phacelia | 76 | 1.0 |
| <i>Plagiobothrys collinus</i> var. <i>californicus</i> | California popcorn flower | NA | 2.0 |
| <i>Plantago erecta</i> | Dot-seed plantain | 86 | 5.0 |
| <i>Salvia apiana</i> | White sage | 25 | 1.0 |
| <i>Salvia mellifera</i> | Black sage | 40 | 2.0 |
| <i>Bahiopsis laciniata</i> | San Diego sunflower | 20 | 3.0 |

Note: The Coastal Sage Scrub Restoration Type B and Coastal Sage Scrub Enhancement Type B seed mix is the same. The only difference is that the enhancement areas would only require the seeding areas between existing native plants whereas restoration areas would be seeded in their entirety.

Table 2-8. Restoration and Enhancement Container Plants

| Scientific Name | Common Name | Container Size | Spacing |
|---|--------------------|----------------|---------|
| <i>Heteromeles arbutifolia</i> | Toyon | 1 gal | 10' |
| <i>Peritima arborea</i> v. <i>arborea</i> | Desert bladderpod | 1 gal | 5' |
| <i>Malosma laurina</i> | Laurel sumac | 1 gal | 15' |
| <i>Opuntia littoralis</i> | Prickly pear | 1 gal | 5' |
| <i>Rhus integrifolia</i> | Lemonadeberry | 1 gal | 12' |
| <i>Sambucus nigra</i> ssp. <i>canadensis</i> | Mexican elderberry | 1 gal | 8' |

All revegetation work would be performed by a qualified mitigation contractor and monitored by the Project biologist. Hydroseeding application and container plant installation would be performed only at times when winds are relatively calm between November and February. These months are also selected to take advantage of the natural wet season of Southern California.

Temporary irrigation for revegetation and mitigation areas would primarily be provided by lateral lines installed off a ball valve/stub at the terminus of the irrigation mainline. Irrigation use would be temporary, as needed, to help establish the native plant habitats. Infrequent deep watering would be performed to promote deeper root development.

The goal of the Restoration Plan is to create native, self-sustaining plant communities. Ideally, irrigation use would be discontinued at least 2 years before the end of each phased 5-year maintenance and monitoring period to demonstrate the vegetation communities' ability to survive without supplemental water.

2.4.15.1 Restoration Plan Implementation Timing

Restoration/revegetation would be implemented in a phased approach moving from west to east-northeast across the Project Impact Area as sediment placement is completed and final topographical elevations are achieved. An overall restoration plan would be approved by the County prior to the initiation of Phase 1 operations, including invasive species removal outside of the Project limits. Individual restoration plans would be prepared for each phase and approved prior to the initiation of operations for the phase.

As part of Phase 1 work and concurrent with the beginning of Phase 1 grading, the identified areas outside of the non-graded restoration/enhancement areas limits (see Figure 2-5a) would be restored and/or enhanced. The non-graded restoration areas shall be surveyed, fenced, weeded, soil tested, and, if deemed necessary by the Project biologist, soil amended and/or ripped/rototilled to alleviate compaction. The non-graded enhancement areas shall receive the same treatment as the restoration areas except that the soil would not be tested, amended, or ripped/rototilled, nor would BMPs or irrigation be installed. Once Phase 1 sediment placement activities have been completed and graded areas have been compacted, and prior to the initiation of Phase 2, the interim erosion control seed mix would be applied. Since the interim erosion control seed mix would be applied as opposed to the restoration and/or enhancement seed mix (and because container plantings would not be installed), a similar implementation process as for the Phase 1 graded areas would occur at the end of Phase 2 sediment placement and compaction activities.

Once the restoration installation has been completed for a phase, it would be reviewed by the City for conformance with the approved restoration plan and would trigger the beginning of the 5-year monitoring period. Restoration/revegetation activities may be further broken down into subphases at the discretion of the Project operator. Ongoing maintenance is required to manage invasive species and trespass and is not part of the restoration/revegetation activities. A restoration/revegetation security bond is required prior to each phase of mining and would be released upon the successful completion of the restoration/revegetation.

2.4.15.2 Plant Material Installation

Plant material installation must be coordinated with the restoration/revegetation contractor, City and Wildlife Agencies, and the Project biologist. Plant material and seed is ideally installed in winter and spring when low ambient daytime temperatures, short daylight periods, and low evaporation encourage seed germination and establishment of seedling and container plants. Plant materials for the restoration plan would include restoration, enhancement, and interim erosion control hydroseed mixes and container stock. All container plants would be checked for viability and general health upon arrival at the mitigation site. Plant species and quantities would be confirmed by the Project biologist.

Standard planting procedures would be employed for installing container plants. Holes approximately twice the size of the root-ball of the plant would be dug using a posthole digger or power auger. Holes would be filled with water and allowed to drain immediately prior to planting. Backfill soil containing amendments (such as a fertilizer tab or equivalent), as directed by the Project biologist, would be placed in every planting hole following soaking, and container plants installed so that the top of the root-ball is at grade.

After container plants have been installed, hydroseed mixtures would be applied to all planting areas. Labels for each hydroseed mixture would be inspected and approved by the Project biologist prior to mixing and application. All hydroseed mixes are to include the specified seed mix at the prescribed rate per acre: virgin wood cellulose fiber mulch at 2,500 pounds per acre, commercial fertilizer at the specified rate as directed by the Project biologist during finish grading, and a commercial binder (Az-Tac, Guar Gum, or equivalent) at 100 pounds per acre.

2.4.15.3 Monitoring

Because the goal of the O&M plan is to establish a mosaic of native vegetation consistent with that surrounding the impacted areas that can support itself with little or no maintenance, the primary effort of the maintenance program is concentrated in the first few seasons of plant growth following Project installation, when weeds can easily out-compete native plants. The intensity of the maintenance activity is expected to subside each year as the native plant materials become more established and local competition from non-native plants for resources in the mitigation areas is minimized through ongoing control of non-native plants.

Maintenance activities would be conducted concurrent with the installation of the container plants and seeding, would continue throughout the initial 120-day establishment period, through the interim maintenance and monitoring period, and conclude at the end of the 5-year period for each restoration phase that includes permanent vegetation. Contractor maintenance activities would be conducted to maintain the site in conformance with the established performance criteria. The Project biologist and associated personnel would conduct inspections every other month during Year One and on a quarterly basis from Years Two through Five. Quantitative inspections would be prepared on an annual basis and annual reports would be prepared and submitted to City staff for their distribution to applicable regulatory agencies. Recommendations by the Project biologist for maintenance efforts would be based upon site observations and would include assessment of and recommendations to improve or repair emerging native vegetation. Such modifications may also include changes to the maintenance activities including weed control, irrigation regime, soil amending, drainage alterations, and/or reseeding selected underperforming mitigation areas.

Monitoring would occur as needed throughout each year until performance standards are achieved for the restored and/or enhanced areas located on the Project site. The performance standards shown in Tables 2-9a and 2-9b may be re-evaluated later, both in terms of baseline data and in comparison to success criteria. Therefore, it is possible that minor adjustments would be made to the proposed performance standards.

At the end of the 120-day period after installation, container plants shall have a survival rate of 100%. At the end of Year Five, annual weeds will make up no more than 5% of the entire cover on site within native restoration (i.e., non-erosion control seed mix) areas. All restoration areas shall be free of invasive, exotic, perennial plant species such as artichoke thistle, fennel, and tree tobacco (*Nicotiana glauca*).

Table 2-9a. Performance Standards - Coastal Sage Scrub Type A (Slope)

| End of Monitoring Year for Phase | Relative Native Cover (%) | Species Diversity ¹ (%) | Maximum Non-Native Annual Relative Cover (%) | Maximum Non-Native Perennial Relative Cover (%) |
|----------------------------------|---------------------------|------------------------------------|--|---|
| 1 | 20 | 100 | 15 | 5 |
| 2 | 35 | 90 | 12 | 3 |
| 3 | 55 | 80 | 10 | 2 |
| 4 | 70 | 80 | 7 | 1 |

Table 2-9a. Performance Standards - Coastal Sage Scrub Type A (Slope)

| End of Monitoring Year for Phase | Relative Native Cover (%) | Species Diversity ¹ (%) | Maximum Non-Native Annual Relative Cover (%) | Maximum Non-Native Perennial Relative Cover (%) |
|----------------------------------|---------------------------|------------------------------------|--|---|
| 5 | 85 | 80 | 5 | 0 |

Note:

¹ The species diversity percentage shall be based on the number of species planted and seeded.

Table 2-9b. Performance Standards - Coastal Sage Scrub Type B (Ridge)

| End of Monitoring Year for Phase | Relative Native Cover (%) | Species Diversity ¹ (%) | Maximum Non-Native Annual Relative Cover (%) | Maximum Non-Native Perennial Relative Cover (%) |
|----------------------------------|---------------------------|------------------------------------|--|---|
| 1 | 20 | 100 | 15 | 5 |
| 2 | 30 | 90 | 12 | 3 |
| 3 | 45 | 80 | 10 | 2 |
| 4 | 65 | 80 | 7 | 1 |
| 5 | 70 | 80 | 5 | 0 |

Note:

¹ The species diversity percentage shall be based on the number of species planted and seeded.

The Revegetation Monitoring and Management Plan for the Project is included as Appendix E-2 to this EIR. Graphics from the 80% Restoration Plan for the Project are included as Figures 2-7a through 2-7h.

2.4.15.4 Non-Native Plant Species Control

Ongoing weed control activities would occur throughout the 5-year maintenance period. Weed control would consist of the complete removal of selected non-native vegetation (i.e., seed heads, stems, roots); all debris and slash generated from weed removal activities would be disposed of off site in a legally acceptable manner. Herbicide application may allow treated stems and belowground roots to be left on site if approved by the Project biologist.

Weed control measures may include direct physical or mechanical removal (e.g., cutting with weed whip machines or mowing) and herbicide application. Weeding would be performed as recommended by the Project biologist to keep any weeds from establishing on the mitigation site at manageable levels. Weed species including but not limited to mustard (*Brassica* spp.), non-native annual grasses, thistles (*Cirsium* spp.), filaree (*Erodium cicutarium*), Italian ryegrasses (*Lolium multiflorum*), clover (*Trifolium* spp.), pampas grass (*Cortaderia selloana*), tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and cheeseweed (*Malva parviflora*) would be controlled before seed-set (other species that appear may be added to this list if deemed necessary by the Project biologist).

2.4.16 Operations and Management Plan Component

An O&M Plan would be prepared with input from the stakeholders. The O&M Plan would provide the stakeholders with sediment management responsibilities in the Tijuana River Valley a description of how the Project site is to be managed and operated as a location for the placement of sediment.

2.4.16.1 Multijurisdictional Agreement

Negotiation of the multijurisdictional agreement could require the time and effort of potential stakeholders including but not limited to CDPR, the City and County, State Coastal Conservancy, IBWC, CBP, RWQCB, the California Department of Resources Recycling and Recovery, and, potentially, quarry operators. For purposes of this EIR effort, CDPR is the lead agency facilitating the negotiation process. Among other components, the multijurisdictional agreement would commit potential signatories to use of the Project site for handling of appropriate sediment and establish maximum annual disposal volumes by agency. In addition, the multijurisdictional agreement would maximize economies of scale by sharing costs (i.e., use of the Project site may require a negotiated per truck load tipping fee) and would avoid need for cross-county hauling of excess sediments from the Tijuana River Valley to the Miramar Landfill.

2.5 Project Approvals/Permits

Responsible and trustee agencies would use this EIR and supporting documentation in their decision-making process to issue permits and process additional entitlements for the proposed Project. These additional approvals may include, but are not limited to, the permits and approvals described in Table 2-10.

Table 2-10. Required Actions and Approvals (Anticipated)

| Agency | Required Action/Approval |
|--|---|
| U.S. Fish and Wildlife Service | Endangered Species Act (ESA) Section 7 Consultation (assumes potential adverse effect to listed species or modification of critical habitat and federal nexus through TETRP II Project (USFWS is federal lead) that would include sediments from the Tijuana Slough National Wildlife Refuge used on the Project site or federal funding source for Project implementation)* ESA Section 10 Permit (assumes take of listed species, no impact to jurisdictional resources, and insufficient coverage through MSCP)* Low-Effect HCP* |
| Regional Water Quality Control Board | Notice of Intent to Obtain Coverage under the Construction Activities Storm Water General Permit (General Permit) Conditional Waivers Nos. 9 and/or 10 (Discharges of Slurries to Land and Discharge/Disposal of Solid Wastes to Land) |
| San Diego County Air Pollution Control District | Authority to construct and permits to operate |
| City of San Diego | Grading Permit Site Development Permit (extension of MSCP third-party beneficiary status to CDPR for coastal California gnatcatcher impacts) Coastal Development Permit |
| State Geologist and Division of Mine Reclamation | Release of existing Mine ID 91-37-0037 associated Border Area Borrow Pit; DMR concurrence that practical interim reclamation plan conditions have been implemented |

Note:

* Potential required action/approval. Specific action/approval to be identified through consultation with USFWS.

2.6 List of Past, Present, and Reasonably Anticipated Future Projects

A list of past, present, and reasonably anticipated future projects in the Tijuana River Valley and surrounding area was prepared in consultation with City and County staff for use in analyzing cumulative impacts in this EIR. The list is presented in Table 2-11 and depicted in Figure 2-8, Cumulative Projects.

Table 2-11. Past, Present, and Reasonably Anticipated Future Projects

| Cumulative Project Map Key | Project Name | Project Type | Location(s) | Status | Potential Resources Affected |
|----------------------------|--|-----------------------------|---|------------------|---|
| 1 | IBWC Tijuana River Sediment Management (Recurring) | Sediment Management | | Ongoing | Potential air quality, noise, and traffic impacts |
| 2 | County of SD Smuggler's Gulch Sediment Management (Recurring) | Sediment Management | Smuggler's Gulch (Monument Road west of Hollister Street, south of Monument Road) | Ongoing | Potential air quality, noise, and traffic impacts |
| 3 | City of SD Smuggler's Gulch and Pilot Channel Sediment Management (Recurring) – component of the Municipal Waterways Maintenance Program | Sediment Management | Smuggler's Gulch (Monument Road west of Hollister Street; north of Monument Road) Pilot Channel (Tijuana River west of Hollister Street) | Ongoing | Potential air quality, noise, and traffic impacts |
| 4 | CDPR Goat Canyon Enhancement Project | Sediment basin construction | Monument Road (nearest western terminus) | Completed (2000) | Potential aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, noise, traffic, and tribal cultural resources |
| 5 | CDPR Goat Canyon Sediment Management | Sediment Management | Monument Road (nearest western terminus) | Ongoing | Potential air quality, greenhouse gas emissions, noise, and traffic |

Table 2-11. Past, Present, and Reasonably Anticipated Future Projects

| Cumulative Project Map Key | Project Name | Project Type | Location(s) | Status | Potential Resources Affected |
|----------------------------|--|---|--|---|---|
| 6 | Southwest Wetlands Interpretative Association, C DPR, and USFWS Tijuana Estuary Tidal Restoration Program II (Phase I) | 75 to 80-acre multiphase habitat restoration (wetland, transition, and upland habitats) | West of Goat Canyon sedimentation basins | Notice of Preparation/ Notice of Intent in development; estimated completion is summer 2021 | Potential aesthetics, air quality, biological resources, hydrology and water quality, and traffic impacts |
| 7 | Model Marsh and Fenton Quarry Restoration | Restore 20 acres of salt marsh habitat (i.e., Model Marsh) and use excavated sediment to restore landform and coastal sage scrub habitat at the Fenton Quarry | Model Marsh is northwest of Goat Canyon in Border Field State Park; Fenton Quarry is adjacent to Goat Canyon in Tijuana River Valley Regional Park | Complete 2001 | Aesthetics, biological resources, cultural resources, greenhouse gases, hydrology and water quality, noise, traffic, and tribal cultural resources |
| 8 | Tijuana River Vegetation Control (CBP) | Vegetation Control (thinning) | Tijuana River channel from U.S./Mexico border to approximately Dairy Mart Road | Draft Environmental Assessment and Finding of No Significant Impact prepared in July 2017 | Potential aesthetics, biological resources (including vegetation communities and waters of the United States), cultural resources, hydrology and water quality, and hazards and hazardous materials |
| 9 | Border Wall Construction and Maintenance (CBP) | International border barrier (pedestrian barrier, linear ground detection system, installation of gates, access road construction and refurbishment, installation of lighting, drainage | Tijuana River channel from U.S./Mexico border to approximately Pacific Ocean | Ongoing | Potential aesthetics, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, and tribal cultural resources |

Table 2-11. Past, Present, and Reasonably Anticipated Future Projects

| Cumulative Project Map Key | Project Name | Project Type | Location(s) | Status | Potential Resources Affected |
|----------------------------|--|---|--|--|--|
| | | improvements, and revegetation) | | | |
| 10 | San Diego Secondary Wall (CBP) | Replacement and construction of secondary bollard wall in the U.S. Border Patrol (USBP) San Diego Sector. Includes removal of secondary fence and construction of approximately 1.6 miles of new 30-foot steel bollard wall | Parallel to international boundary adjacent to City of Tijuana | Constructed (2018-2020) | Potential aesthetics, biological resources, and cultural resources, |
| 11 | Tijuana River Border Wall System Project (CBP) | Construction of approximately 0.2 miles of border wall system across the Tijuana River. Includes a bridge with 30-foot tall steel bollards, a vertical lift gate, lighting, a 20-foot-wide roadway, and a maintenance walkway | Tijuana River at U.S./Mexico international border | Awaiting construction (anticipated spring 2021). This project is covered by a waiver of environmental laws by the Secretary of the Department of Homeland Security that was issued on February 8, 2019. | Potential aesthetics, biological resources, cultural resources, hydrology, and water quality |
| 12 | Smuggler's Gulch Trash and Sediment Basin | Trash and sediment management | Smuggler's Gulch in Tijuana River Valley Regional Park | In environmental review. Partnership between EPA, County, City and RWQCB. Would be designed/built | Potential air quality, noise, biological resources, hydrology and water quality, traffic (temporary/construction) |

Table 2-11. Past, Present, and Reasonably Anticipated Future Projects

| Cumulative Project Map Key | Project Name | Project Type | Location(s) | Status | Potential Resources Affected |
|----------------------------|--|--|---|---|---|
| | | | | in late 2021/2022 | |
| 13 | Temporary River Diversions to International Boundary Water Treatment Plant (divert up to 10 mgd of dry weather river flows; discharge through ocean outfall) | Sewage treatment | Tijuana River (main channel) | Under consideration by EPA (San Diego County tentatively agreed to construct) | Potential biological resources (aquatic), hydrology and water quality |
| 14 | U.S., Mexico, and Canada Agreement Section 821 Border Water Infrastructure Projects | Cross-border pollution treatment (10 options under consideration including construction of 82 MG storage basin ("Project 1"), new primary treatment plant ("Project 2"), increased diversion of canyon and main channel flows to ITP, enhancement of Mexico wastewater collection system, source control projects in Mexico, | Multiple (alterations to existing system of flows from Tijuana to U.S. in Tijuana River Valley) | Feasibility analyses. Date of construction unknown. | Potential aesthetics, biological resources, cultural resources, hydrology and water quality, hazards and hazardous materials, noise, and traffic |
| 15 | City SD South Bay Water Reclamation Plant | Sewage treatment (15 mgd capacity) | Dairy Mart Road at Monument Road in Tijuana River Valley | Completed/operational (2002) | Aesthetics, biological resources, cultural resources, greenhouse gases, hydrology and water quality, hazardous and hazardous materials, noise, traffic, |

Table 2-11. Past, Present, and Reasonably Anticipated Future Projects

| Cumulative Project Map Key | Project Name | Project Type | Location(s) | Status | Potential Resources Affected |
|----------------------------|---|---|--|---|---|
| | | | | | and tribal cultural resources |
| 16 | IBWC South Bay International Water Treatment Plant | 75-acre, 25 MGD secondary water treatment plant (treated sewage discharged to Pacific Ocean via South Bay Ocean Outfall - completed 1999) | Off Clearwater Way (adjacent to City's water reclamation plant) | Completed/operational | Aesthetics, biological resources, cultural resources, greenhouse gases, hydrology and water quality, hazardous and hazardous materials, noise, traffic, and tribal cultural resources |
| 17 | Border Field SP Interpretation, Resilience and Access Improvements Project | Develop interpretive facilities, restore wetland habitat, and repair Monument Road | Monument Road, Monument Mesa, and adjacent areas in Border Field State Park. | Preliminary Planning Phase. CEQA compliance tentatively scheduled for late 2021 | Potential aesthetics, biological resources, cultural resources, greenhouse gases, hydrology and water quality, noise, traffic, and tribal cultural resources |
| 18 | County SD Tijuana River Valley Regional Park Campground and Nature Education Center | 79-acre campground and outdoor nature education center. Campground will include up to 75 primitive campsites. | Directly west of Saturn Boulevard and north of Monument Road, 1.3 miles east of the Pacific Ocean | MND approved in 2018, campground construction completed in March 2020 | Impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, transportation and traffic, and tribal cultural resources |
| 19 | City SD CIP: AC Water and Sewer Group 1040 | Replacement of water mains with new PVC water mains | Monument Road: Dairy Mart Road west for approx. 6,000 feet. Hollister Street: Monument Road north to Tijuana River crossing (approx.) | In engineering; final design anticipated in 2021 | Potential air quality, public services, and traffic impacts |
| 20 | Project 5666657 - Saturn Boulevard | Subdivision and SFR construction (18 units) | 1695 Saturn Boulevard | Permit issued | Potential aesthetic, air quality, and traffic impacts |

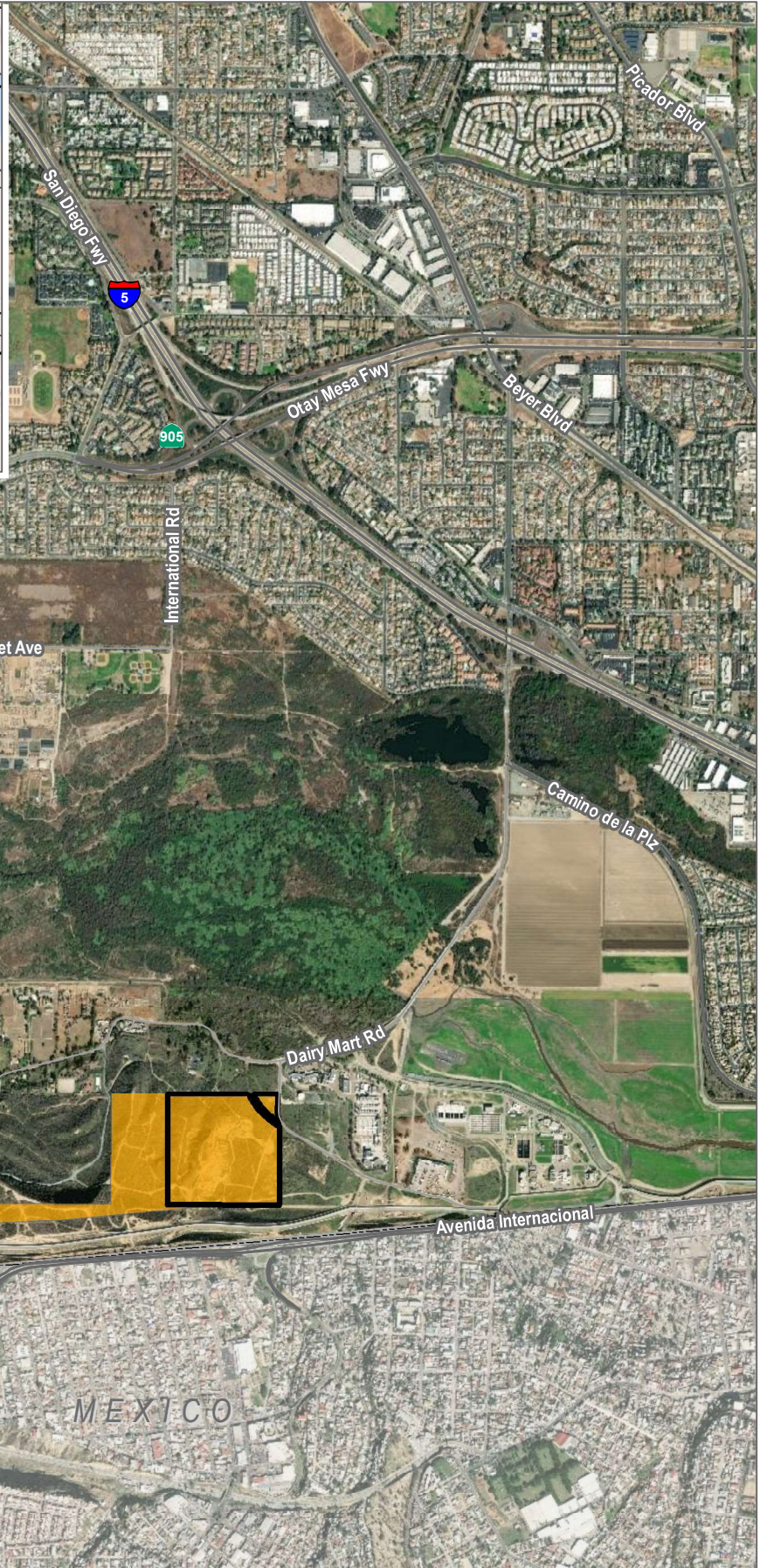
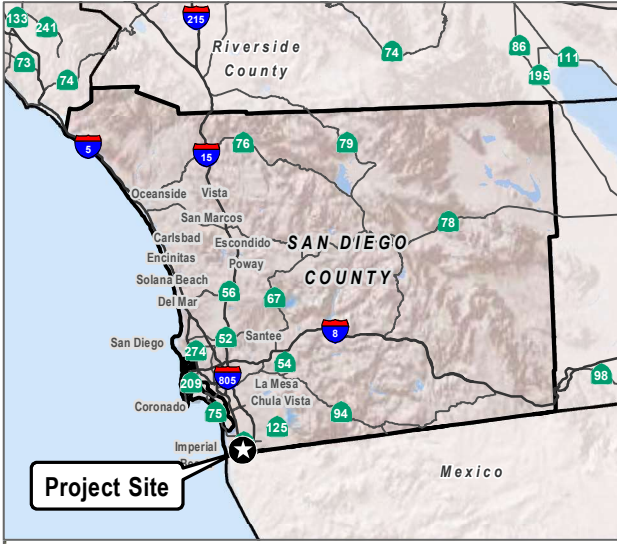
Table 2-11. Past, Present, and Reasonably Anticipated Future Projects

| Cumulative Project Map Key | Project Name | Project Type | Location(s) | Status | Potential Resources Affected |
|----------------------------|--|--|-------------------------------|----------------|--|
| 21 | Project 458862 – Vista Lane Villas EOT | CPA, SDP, TM, RZ, and construction of 38 units | 3481 Vista Lane | Permit Created | Potential aesthetics, air quality, and traffic impacts |
| 22 | Project 458919 – Mission Villas EOT | CPA, SDP, TM, RZ, and construction of 14 condos | 3515 Vista Lane | Permit Created | Potential aesthetics, air quality, and traffic impacts |
| 23 | Project 458934 – Blackshaw Lane EOT | CPA, SDP, TM, RZ, and construction of 11 condos | 549 Blackshaw Lane | Permit Created | Potential aesthetics, air quality, and traffic impacts |
| 24 | Project 569507 – San Ysidro Senior Village | Development Permit for 51 senior residential units | 515 West San Ysidro Boulevard | Permit Created | Potential aesthetics, air quality, and traffic impacts |

2.7 References

- Caltrans (California Department of Transportation). 2020. Highway Design Manual Seventh Edition. July 2020.
- CDPR (California Department of Parks and Recreation). 2020. “Soil Analysis Draft, Exhibit A, Attachment III: Goat Canyon Sediment Basin Cleanout and Deposition Material Removal.” Draft. March 2020.
- City of San Diego. 2010. *Land Use Options for the Nelson Sloan Quarry Property*. Final Report. June 30, 2010.
- City of San Diego. 2012a. *Nelson & Sloan Substantial Conformance Review*. Final Report. October 25, 2012.
- City of San Diego. 2012b. San Diego Municipal Code Land Development Code Biology Guidelines. Adopted September 28, 1999. Last Amended April 23, 2012 by Resolution No. R-307376.
- City of San Diego. 2013. “Response to February 25, 2013 Letter for California Min ID# 91-37-0037, Border Highlands (County of San Diego) City Project NO. 308712, Internal Order NO. 24002601.” June 13, 2013.
- City of San Diego. 2018. *The “Whitebook” – Standard Specifications for Public Works Construction*.
- County of San Diego. 2016. *Nelson Sloan Management and Operations Plan and Cost Analysis*. Prepared for County of San Diego Department of Parks and Recreation. April 2016.
- County of San Diego. 2020. *Tijuana River Valley Needs and Opportunities Assessment*. March 2020.
- Ecology and Environmental Inc. 2014. *Letter Report, Border Field Site Removal Assessment, Imperial Beach, San Diego County, California*.

- IWMB (California Integrated Water Management Board). 2009. *The Flow of Used and Waste Tires in the California-Mexico Border Region*. August 2009.
- Meehan, C. 2019. "Border Highlands Pit (91-37-0037) – options for closure." Email between C. Meehan (California Department of Conservation Division of Mine Reclamation) and L. Warner-Lara (California Department of Parks and Recreation).
- Nautilus Environmental LLC. 2008. *Goat Canyon Retention Basins Phase II and III Source Material Soil Characterization Report. Tijuana Estuary Sediment Fate and Transport Study*. Draft. September 2008.
- Peña, C. 2019. IBWCs sediment maintenance for the Nelson Sloan Project. Personal communication between L. Warner-Lara (CDPR) and C. Pena (IBWC). April 2, 2019.
- SFEI (San Francisco Estuary Institute). 2017. *Tijuana River Valley Historical Ecology Investigation*. January 2017.
- TRNERR et al. (Tijuana River National Estuarine Research Reserve et al.) 2015. *Tijuana River Valley Recovery Team Five-Year Action Plan*. March 2015.
- USFWS (U.S. Fish and Wildlife Service). 2021. "Notice of Intent to Prepare a joint EIS/EIR for the Tijuana Estuary Tidal Restoration Program II, Phase I (TETRP II Phase I)." Published in the Federal Register on May 27, 2021.

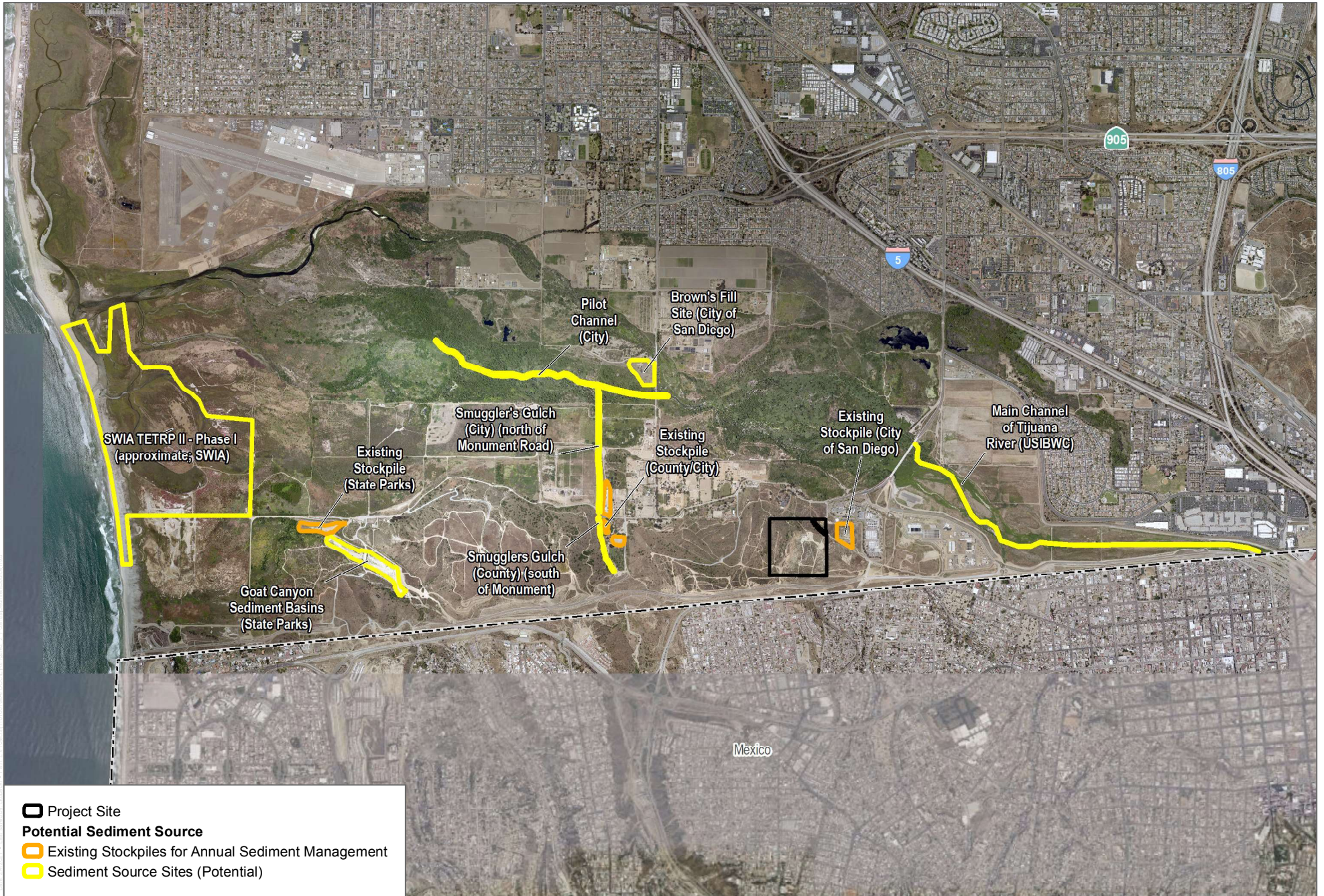


SOURCE: Esri World Imagery 2020; Open Street Map 2019



FIGURE 2-1
Location Map

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017; 2020; Bing Maps 2021



FIGURE 2-2
Potential Sediment Sourcing Sites
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



2016



2012



2009



1994

 Project Site

SOURCE: EDR 2019



FIGURE 2.3a

Aerial Photographs of Project Site
Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



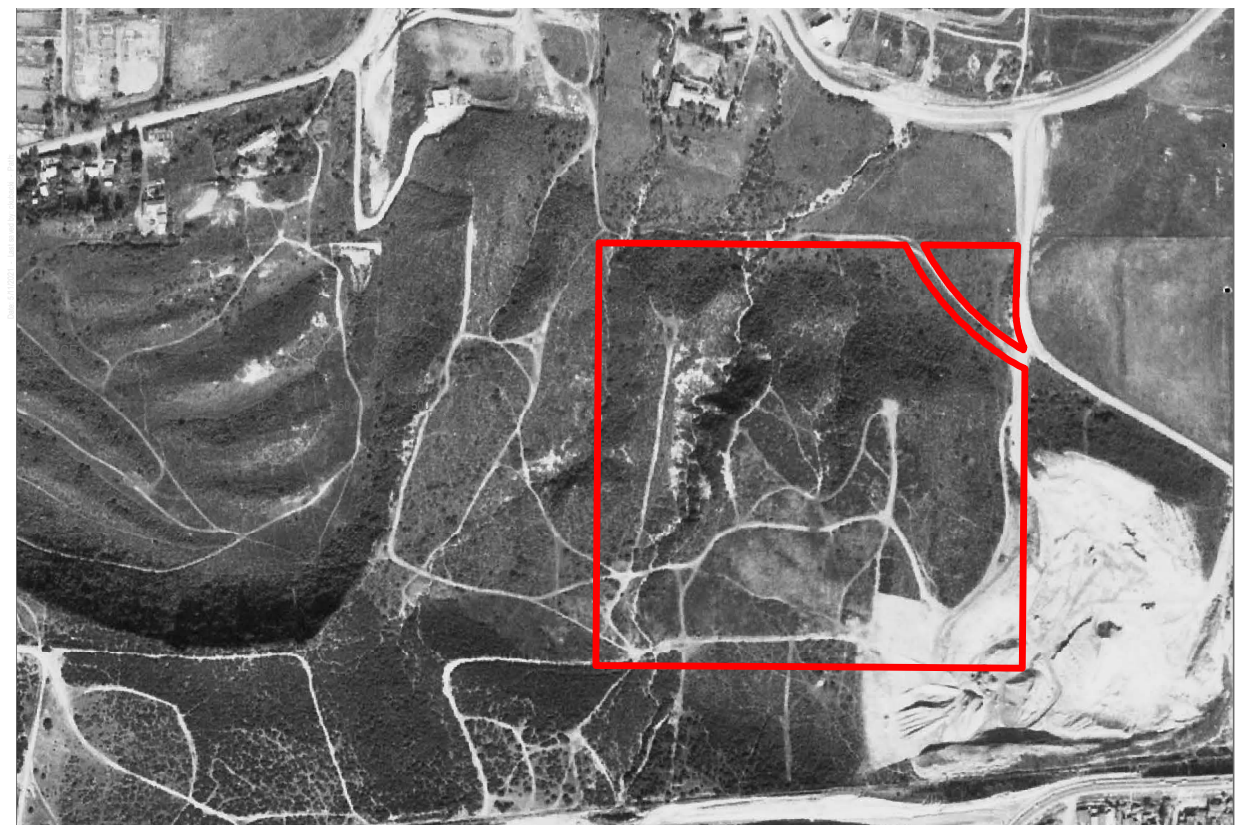
1990



1989



1985



1979

 Project Site

SOURCE: EDR 2019



FIGURE 2.3b

Aerial Photographs of Project Site
Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



1970



1966

DATE: 01/10/2017 - LAST MODIFIED BY: WILSON, J. P. III

SOURCE:

0 250 500 Feet

 Project Site

SOURCE: EDR 2019

DATE: 01/10/2017 - LAST MODIFIED BY: WILSON, J. P. III

SOURCE:

0 250 500 Feet

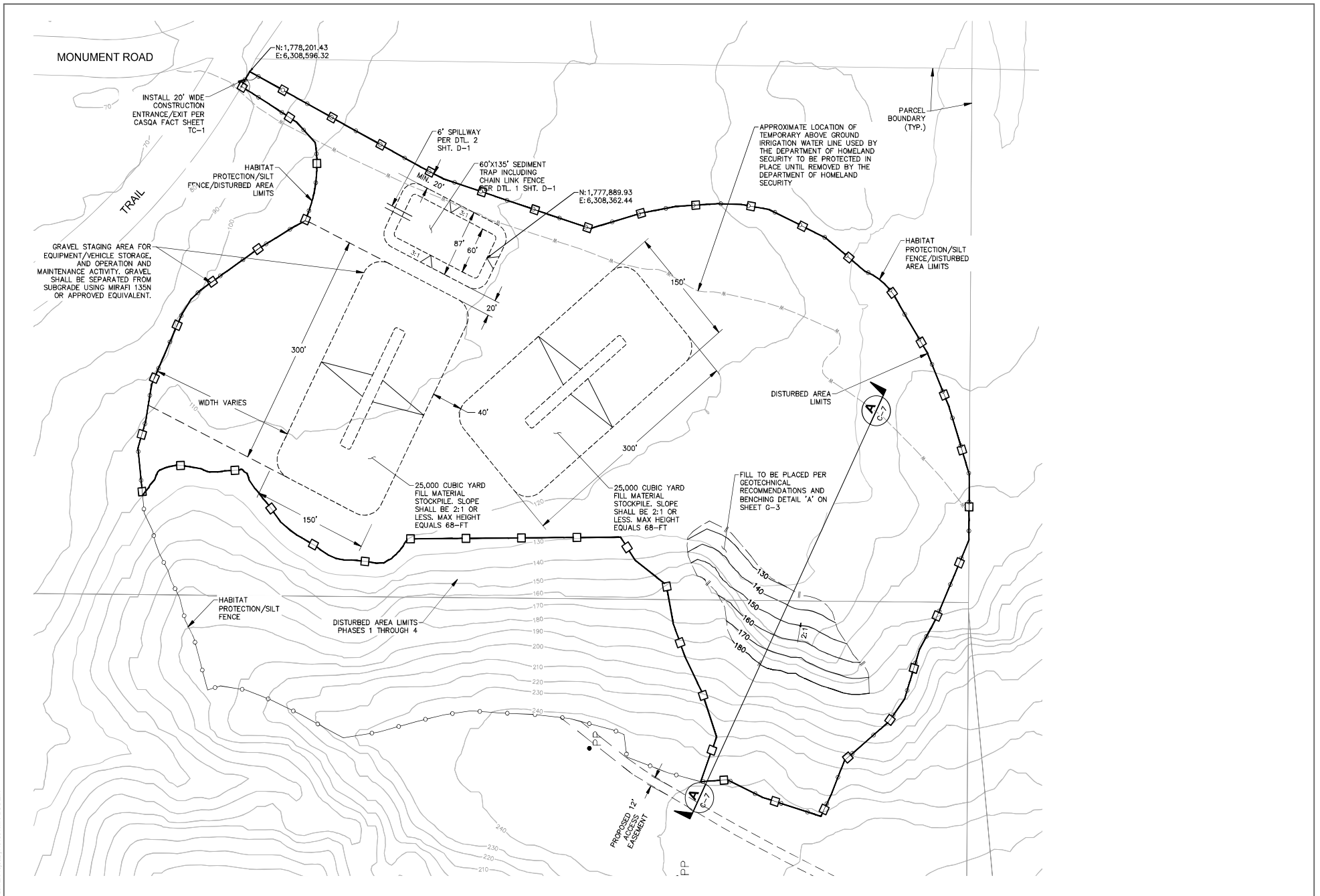
INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017

FIGURE 2-4

INTENTIONALLY LEFT BLANK

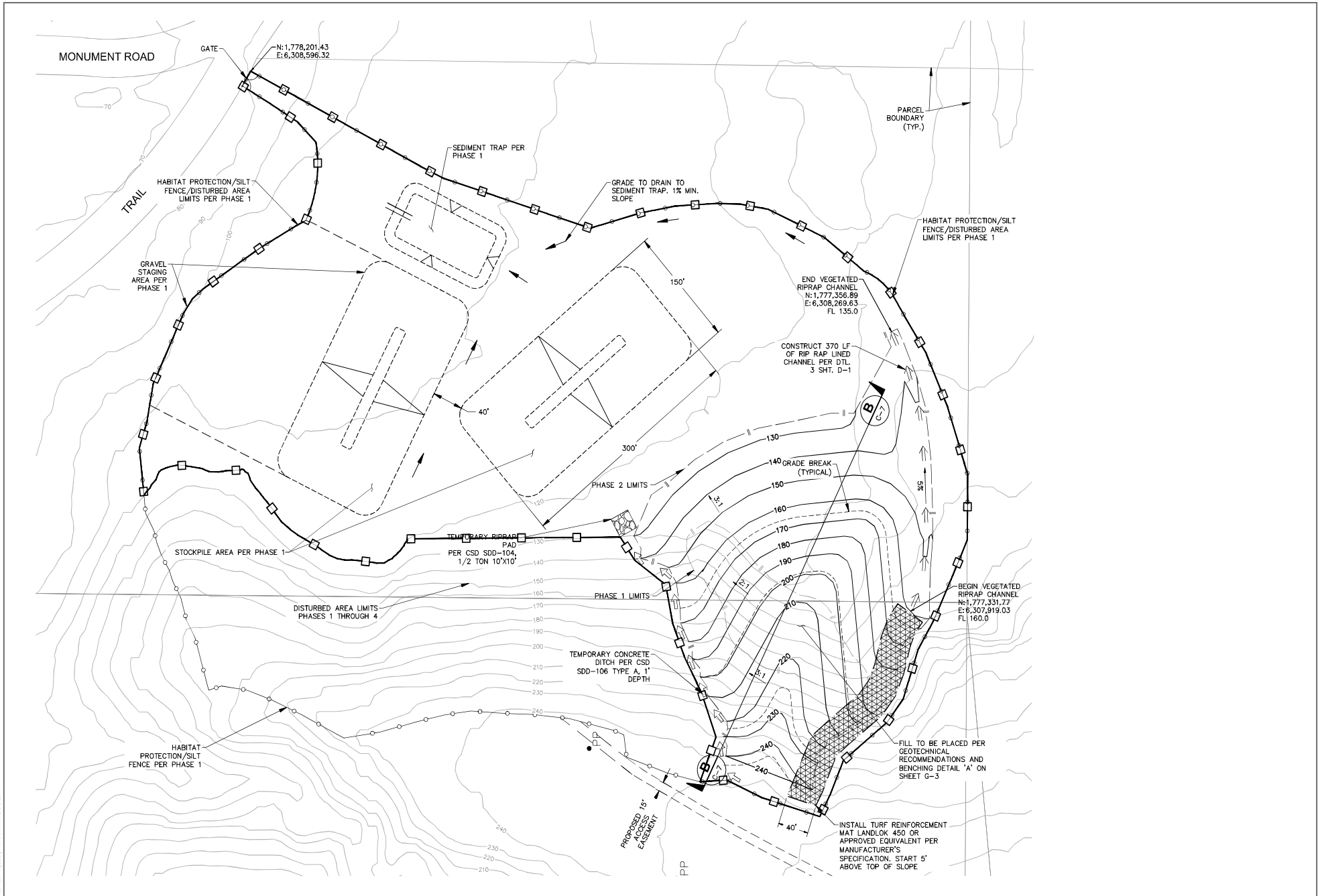


SOURCE: Dudek 2021

FIGURE 2-5a

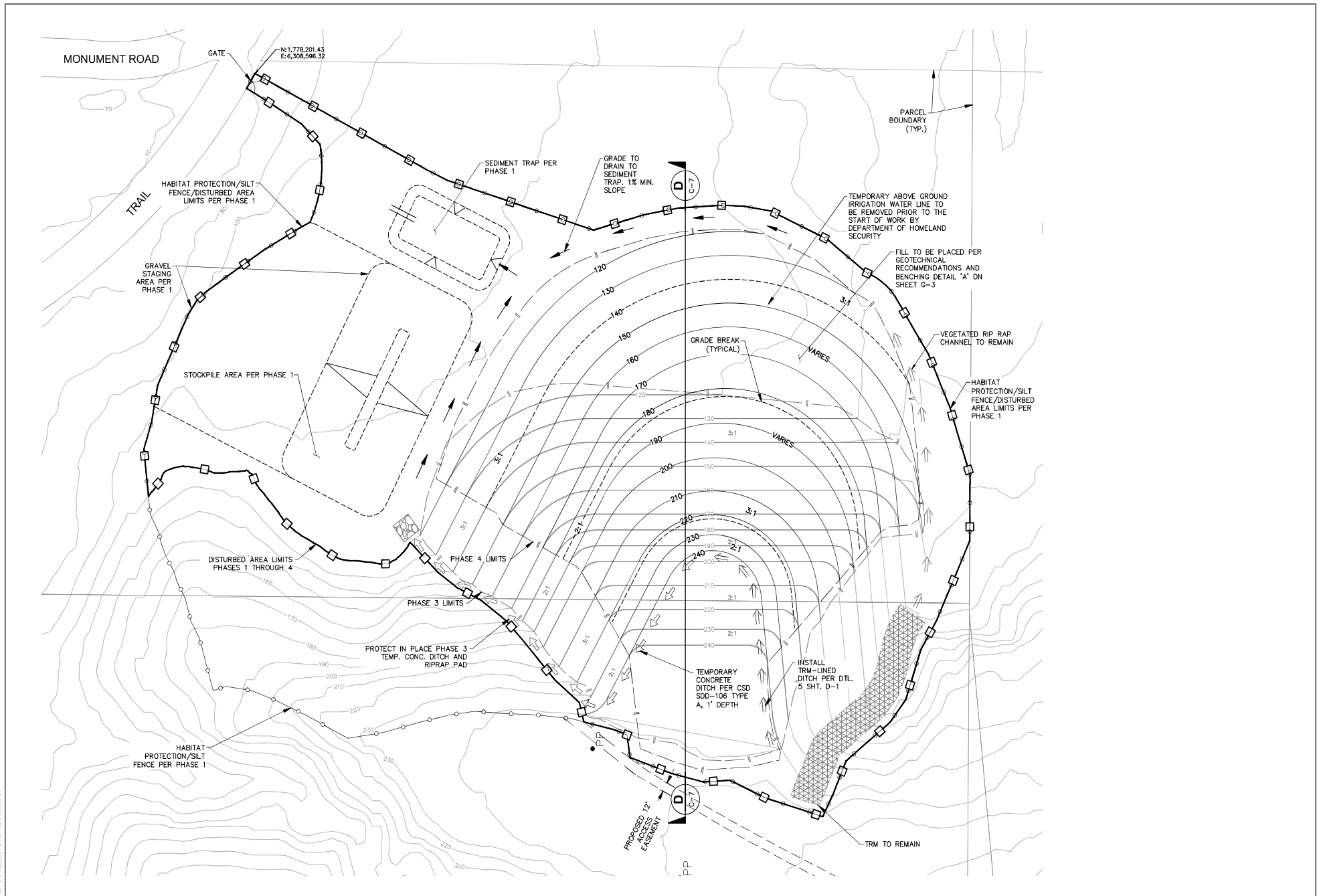
Sediment Placement: Phase 1

INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK

INTENTIONALLY LEFT BLANK

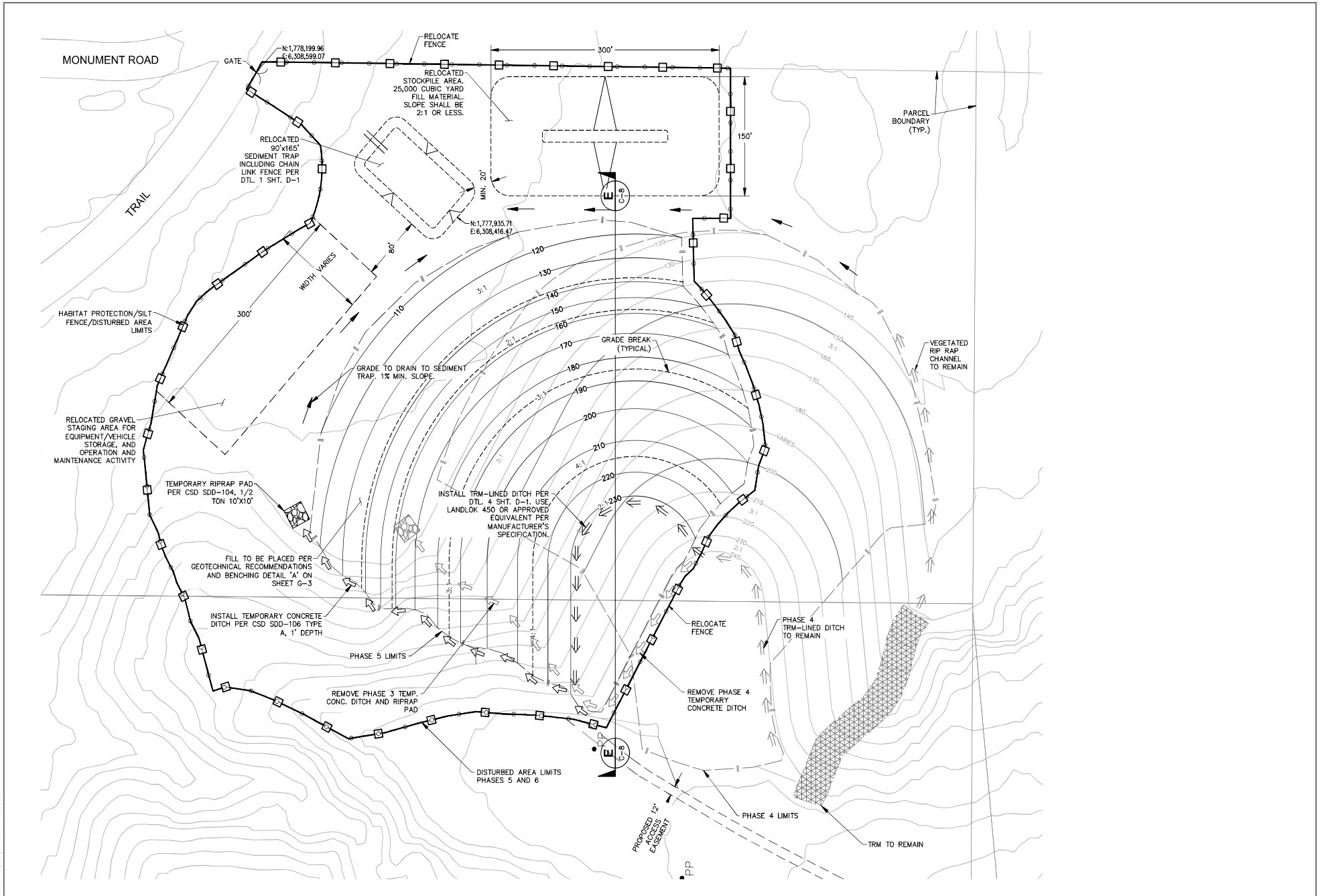


SOURCE: Dudek 2021

FIGURE 2-5d

Sediment Placement: Phase 4

INTENTIONALLY LEFT BLANK

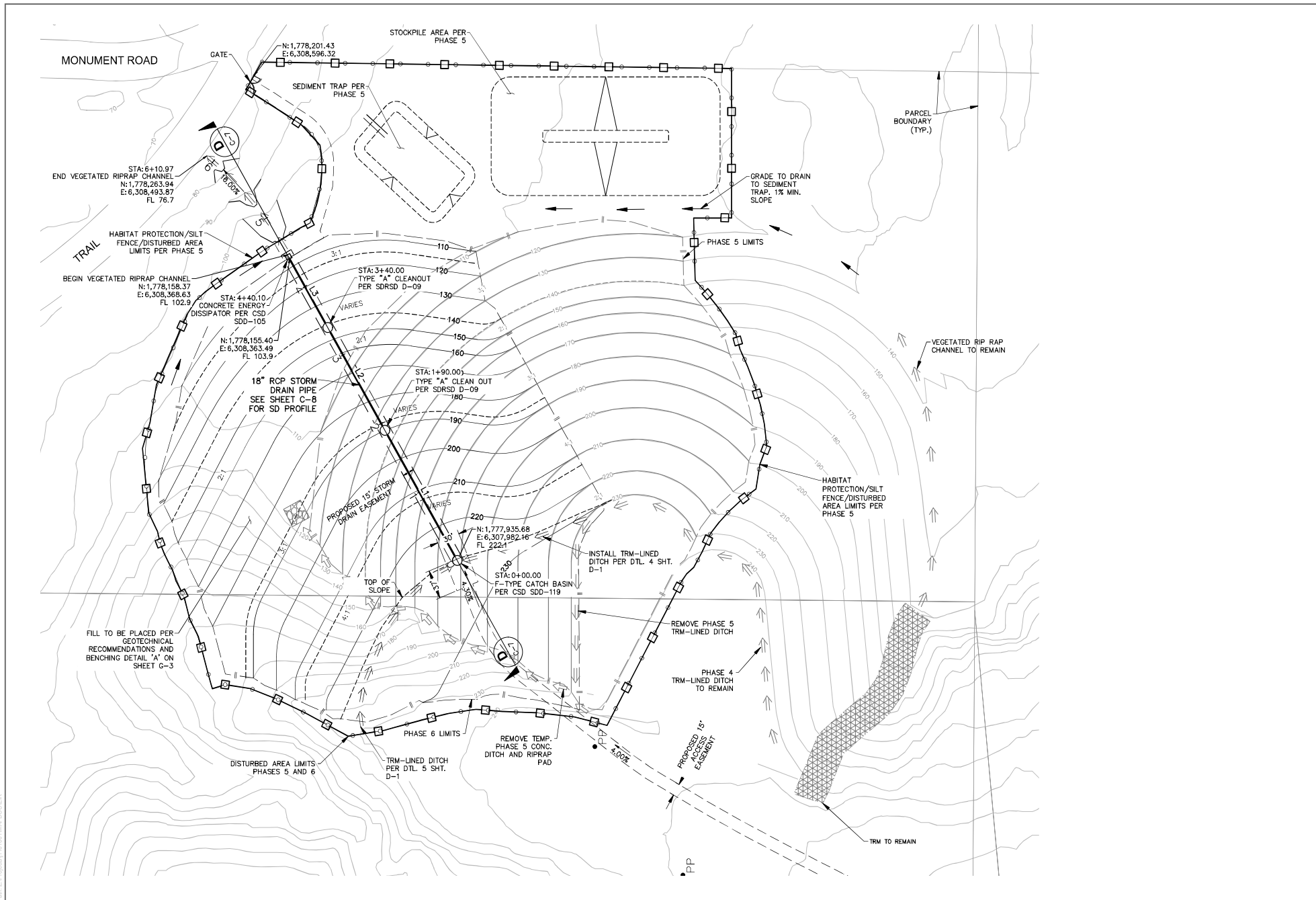


SOURCE: Dudek 2021

FIGURE 2-5e

Sediment Placement: Phase 5

INTENTIONALLY LEFT BLANK



SOURCE: Dudek 2021

FIGURE 2-5f

Sediment Placement: Phase 6

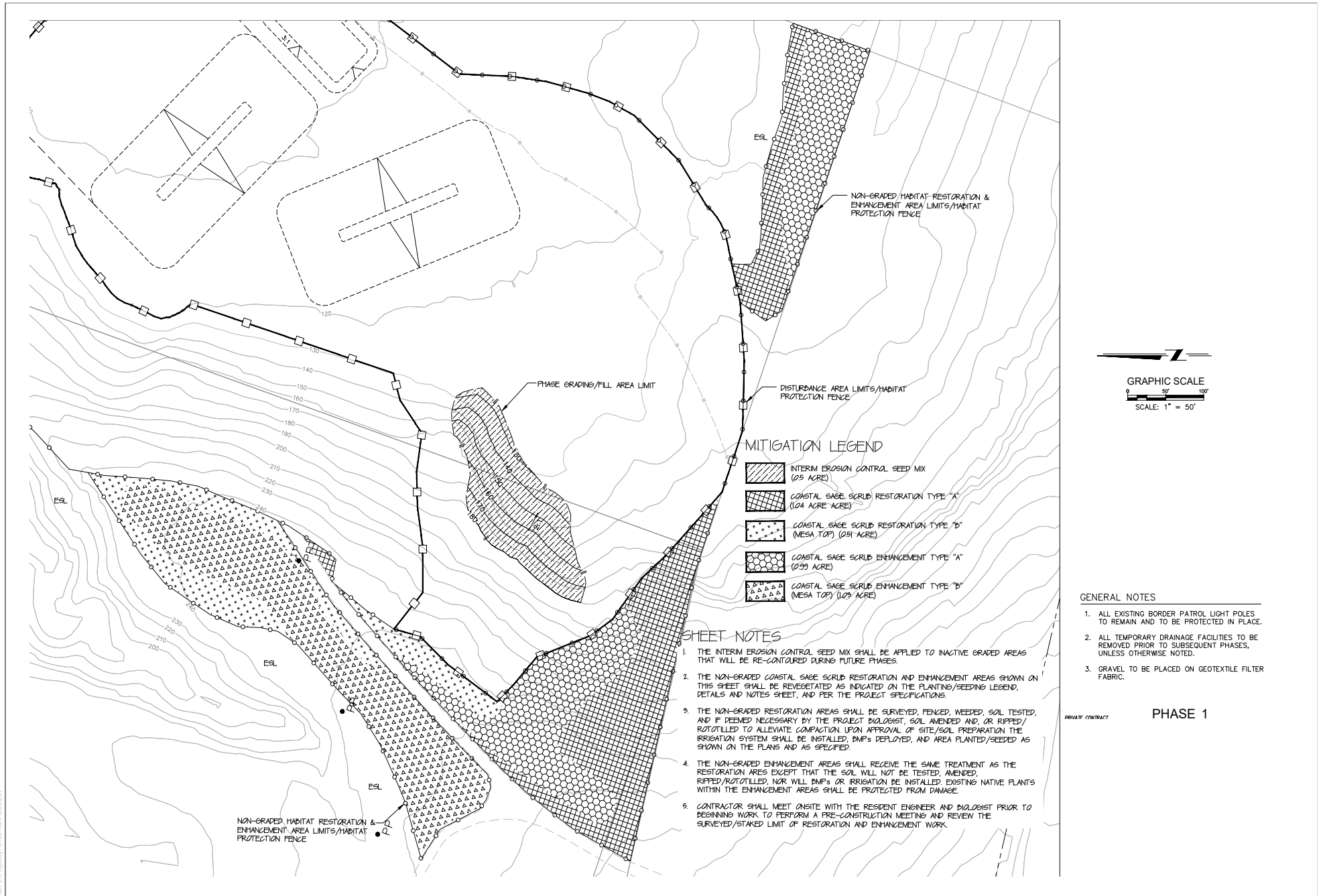
INTENTIONALLY LEFT BLANK



SOURCE: CDPR 2019

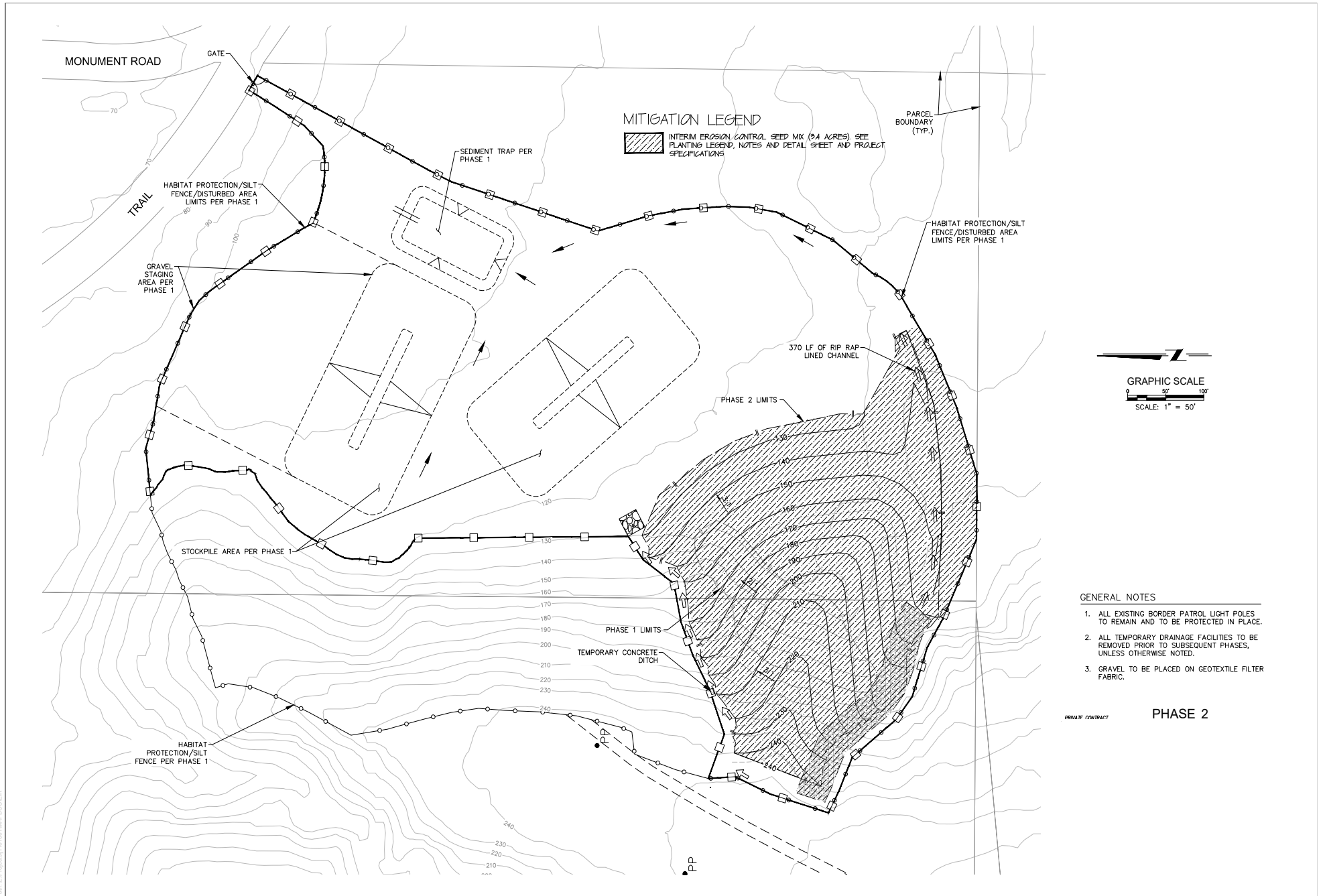
FIGURE 2-6
Materials Screening Equipment
Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: Dudek 2021

INTENTIONALLY LEFT BLANK

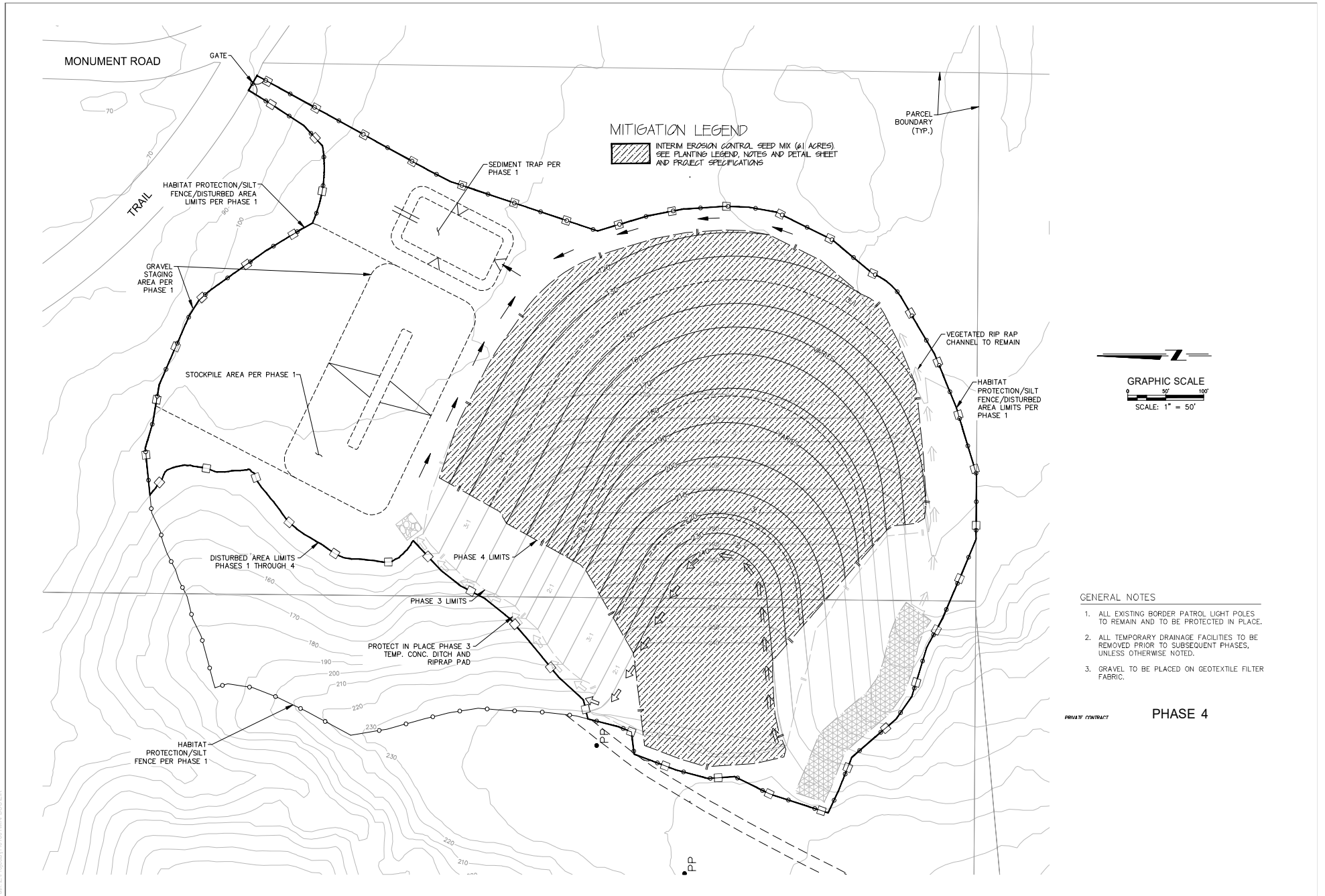


SOURCE: Dudek 2021

FIGURE 2-7b
 Restoration Plan: Phase 2

INTENTIONALLY LEFT BLANK

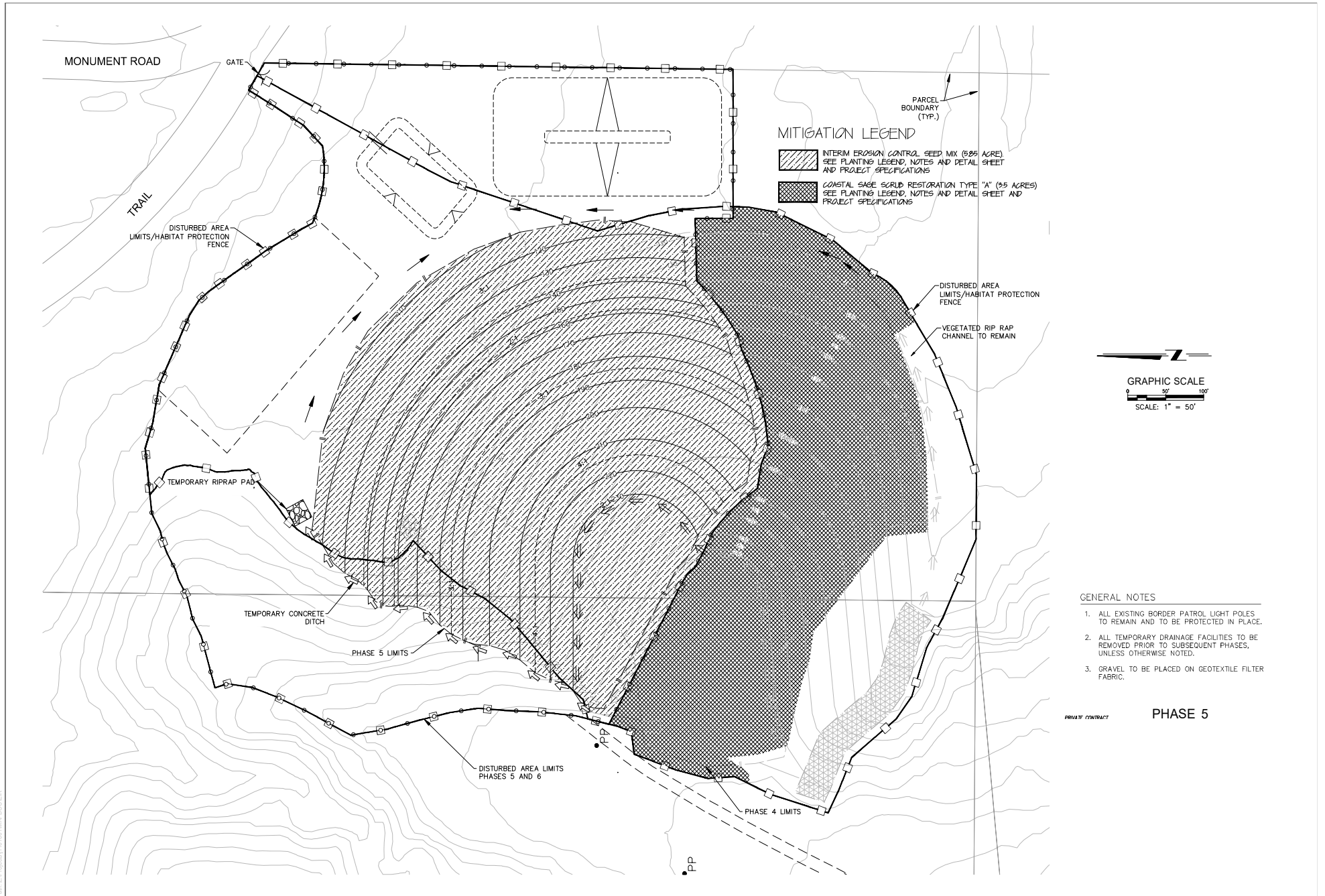
INTENTIONALLY LEFT BLANK



SOURCE: Dudek 2021

FIGURE 2-7d
Restoration Plan: Phase 4

INTENTIONALLY LEFT BLANK

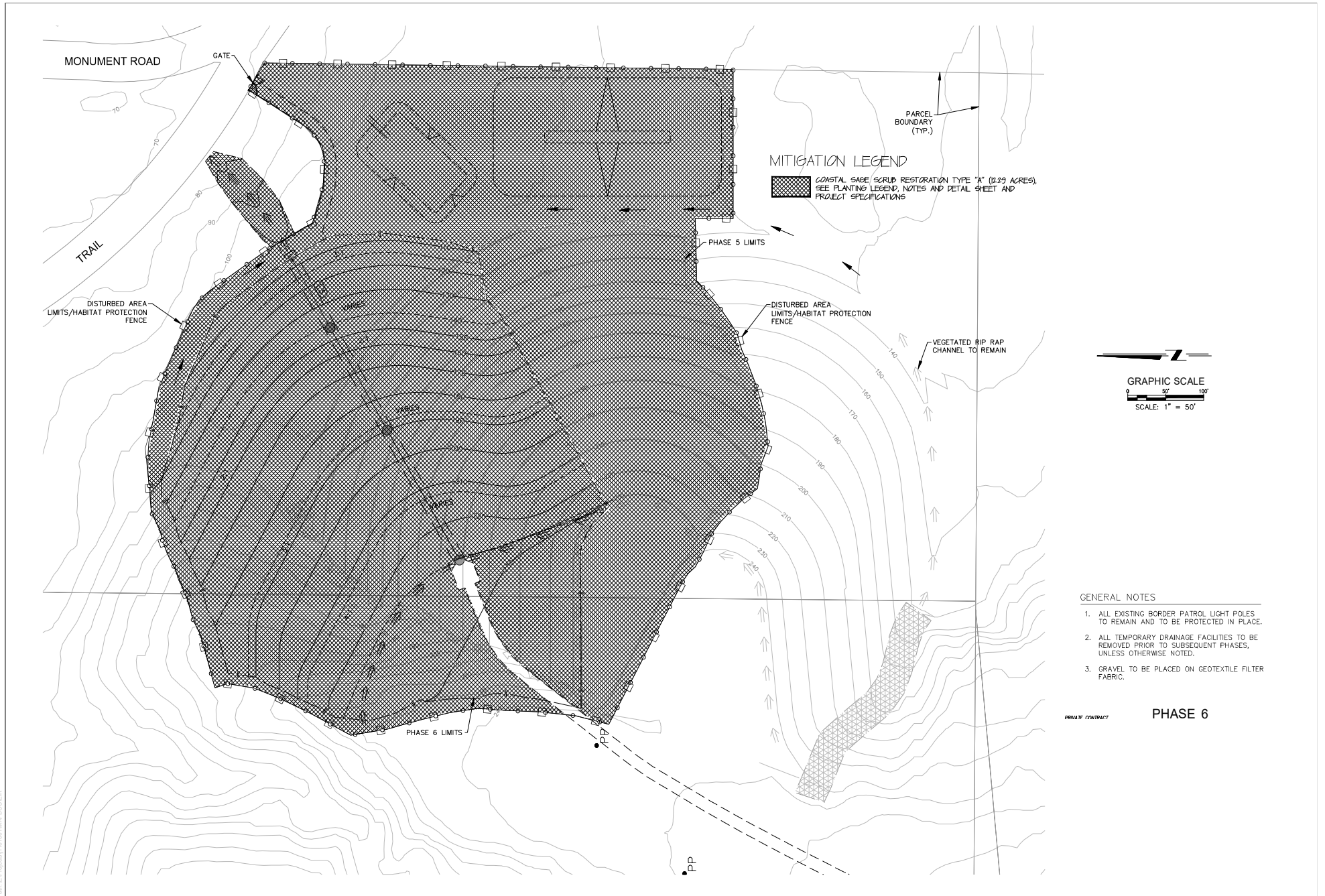


SOURCE: Dudek 2021

FIGURE 2-7e

Restoration Plan: Phase 5

INTENTIONALLY LEFT BLANK



SOURCE: Dudek 2021

INTENTIONALLY LEFT BLANK



SOURCE: Dudek 2021

FIGURE 2-7g

Restoration Plan: Final Restoration Phase

INTENTIONALLY LEFT BLANK

SEEDING NOTES:

- ALL INACTIVE GRADED SLOPES THAT ARE NOT IN THEIR FINAL GRADED STATE SHALL PROMPTLY RECEIVE THE INTERIM EROSION CONTROL SEED MIX. AREAS TO BE SEEDDED SHALL BE PREPARED AS INDICATED IN THESE NOTES AND AS SPECIFIED.
- CONTRACTOR SHALL REVIEW THE PLAN SET AND SPECIFICATIONS IN THEIR ENTIRETY AND PERFORM WORK AS OUTLINED THEREIN.
- SEEDING WORK SHALL NOT COMMENCE UNTIL WRITTEN APPROVAL OF SITE GRADING AND PREPARATION WORK IS PROVIDED IN WRITING FROM THE RESIDENT ENGINEER IN CONSULTATION WITH THE PROJECT BIOLOGIST.
- PRIOR TO SEEDING THE SOIL SHALL BE TESTED AS OUTLINED IN THE SPECIFICATIONS. IF AGRONOMIC SOIL TESTING INDICATES SOIL AMENDING IS NECESSARY AMENDING SHALL BE COORDINATED WITH THE RESIDENT ENGINEER IN CONSULTATION WITH THE PROJECT BIOLOGIST AND IN ACCORDANCE WITH THE SPECIFICATIONS. AMENDING WORK SHALL BE PERFORMED PRIOR TO RIPPING AND TRACK WALKING THE SLOPES.
- AREAS TO BE SEEDDED SHALL BE RIPPED TO 6" DEPTH AND LIGHTLY TRACK WALKED UP AND DOWN SLOPE.
- AREAS TO BE SEEDDED SHALL BE FREE OF WEEDS AND DEBRIS AND HAVE BARE MINERAL SOIL EXPOSED PRIOR TO SEEDING.
- EROSION CONTROL DEVICES/DMPs SHALL BE INSTALLED AND APPROVED PRIOR TO BEGINNING HYDROSEEDING WORK.
- HYDROSEEDING WORK SHALL NOT COMMENCE IF RAIN IS FORECASTED TO OCCUR WITHIN 24 HOURS FOLLOWING SEEDING WORK.
- CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER AND PROJECT BIOLOGIST AT LEAST TWO WORKING DAYS PRIOR TO HYDROSEEDING. PROJECT BIOLOGIST SHALL BE ON-SITE AND MONITOR MIXING OF SEEDS AND SLURRY AND APPLICATION.
- SOIL SHALL BE LIGHTLY WETTED 24 HOURS PRIOR TO THE APPLICATION OF SEED.
- HYDROSEED SLURRY SHALL BE REMOVED FROM ANY NON-TARGETED AREAS IMMEDIATELY FOLLOWING SEEDING WORK.
- CONTRACTOR SHALL AVOID ALL ENVIRONMENTAL SENSITIVE LANDS (ESLs) AND PERFORM WORK IN ACCORDANCE WITH THE PROJECT'S ENVIRONMENTAL PERMITS AND DOCUMENTS.

PLANTING NOTES:

- UPON APPROVAL OF FINAL GRADING WORK THE SLOPES SHALL BE PREPARED, AMENDED (IF NECESSARY, BASED ON SOIL TESTING RESULTS), HAVE THE IRRIGATION SYSTEM INSTALLED, AND BE PLANTED WITH THE PLANTS AND SEED MIX INDICATED IN THE FINAL RESTORATION CONTAINER PLANT AND SEED LEGEND, AND ALL ASSOCIATED PLAN SHEETS AND SPECIFICATION SECTIONS.
- CONTRACTOR SHALL MEET ON-SITE WITH THE RE AND PROJECT BIOLOGIST PRIOR TO BEGINNING PLANTING WORK. CONTRACTOR SHALL STAY OUT OF ALL ENVIRONMENTALLY SENSITIVE AREAS (ESA) AREAS.
- CONTRACTOR SHALL PERFORM SOIL TESTING UPON COMPLETION OF GRADING AND PRIOR TO PLANTING WORK. SOIL TEST SHALL BE PERFORMED AS INDICATED IN THE SEEDING NOTES AND SPECIFICATIONS. IF SOIL AMENDING WORK IS NEEDED, BASED ON THE SOIL TEST RESULTS, IT SHALL BE PERFORMED PRIOR RIPPING, DEPLOYMENT OF DMPs AND PRIOR TO INSTALLING THE IRRIGATION SYSTEM.
- ALL PLANTING AND SEEDING AREAS SHALL BE RIPPED TO 6" DEPTH AS INDICATED IN THE SEEDING NOTES AND SPECIFICATIONS.
- PLANTING WORK MAY ONLY COMMENCE UPON WRITTEN APPROVAL OF THE SOIL PREPARATION/AMENDING AND IRRIGATION SYSTEM INSTALLATION BY THE RE AND BIOLOGIST.
- PRIOR TO PLANTING THE CONTRACTOR SHALL PIN FLAG THE PROPOSED PLANT LAYOUT FOR REVIEW AND APPROVAL BY THE BIOLOGIST.
- PLANTS SHALL BE INSTALLED AS SHOWN ON THE DETAILED DRAWINGS AND AS SPECIFIED.
- CONTAINER PLANTS SHALL BE THOROUGHLY WATERED IN WITH A HOSE TO FULL ROOT DEPTH IMMEDIATELY UPON INSTALLATION.
- UPON APPROVAL OF PLANTING WORK THE RESTORATION COASTAL SAGE SCRUB SEED MIX SHALL BE PROMPTLY APPLIED AS INDICATED ON THE PLANS AND SPECIFICATIONS.
- THE IRRIGATION SYSTEM SHALL BE PROGRAMMED TO ENSURE HEALTHY CONTAINER PLANT ESTABLISHMENT AND SEED GERMINATION.
- THE 90-DAY PLANT ESTABLISHMENT AND WARRANTY PERIOD OUTLINED IN THE SPECIFICATIONS SHALL COMMENCE UPON WRITTEN APPROVAL OF ALL PLANTING AND SEEDING INSTALLATION WORK.

SEED ACQUISITION, AVAILABILITY AND SUBSTITUTIONS:

- MANY OF THE NATIVE SEEDS INCLUDED ON THESE PLANS MAY NOT BE READILY AVAILABLE AND WILL LIKELY REQUIRE SPECIAL COLLECTIONS AND A CONTRACT AGREEMENT WITH A NATIVE SEED SUPPLIER. A LEAD-TIME OF UP TO 12 MONTHS MAY BE NECESSARY TO ENSURE SEEDS ARE AVAILABLE. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER AND SEED SUPPLIER(S) TO ENSURE THE SEEDS ARE AVAILABLE FOR THE RESTORATION OF EACH PLANT. SUBSTITUTIONS REQUIRE PRIOR WRITTEN AUTHORIZATION OF THE PROJECT BIOLOGIST IN CONSULTATION WITH STATE PARKS AND CITY OF SAN DIEGO BIOLOGIST.

INTERIM EROSION CONTROL SEED LEGEND

INTERIM EROSION CONTROL HYDROSEED MIX

| SYMBOL | BOTANICAL NAME | COMMON NAME | SP/LB | POUNDS/ACRE |
|--------|--------------------------|-------------------|----------------|-------------|
| | ANDROPOSA PSEUDOSTACHYA | WESTERN RAGWEED | 20 | 5 |
| | BRAQUIA CARINATUS | CALIFORNIA BROME | 85 | 5 |
| | ESCHSCHOLZIA CALIFORNICA | CALIFORNIA POPPY | 70 | 3 |
| | PESTIGIA MICROSTACHYIS | SMALL PEGUCE | 71 | 3 |
| | JUNGLIS BURENUS | TOAD RUSH | 57 | 025 |
| | MELICA IMPERFECTA | COAST RANGE MELIC | 60 | 3 |
| | MULLENBERGIA MICROSPERMA | LITTLE-SEED MUHLY | 48 | 1 |
| | | | 2025 LBS./ACRE | |

INTERIM EROSION CONTROL HYDROSEED SLURRY MIX

SEED MIX INDICATED ABOVE SHALL BE MIXED WITH THE HYDROSEED SLURRY INDICATED BELOW AND AS SPECIFIED:
 1. SEED MIX AT RATES INDICATED ABOVE
 2. TYPE IS HYDRO-MULCH (H/M) @ 3500 LBS./ACRE, SEE WHITEBOOK SPECIFICATIONS
 3. GREEN MARKER DYE

RESTORATION & ENHANCEMENT CONTAINER PLANT AND SEED LEGEND

COASTAL SAGE SCRUB PLANT PALETTE

| SYMBOL | SCIENTIFIC NAME | COMMON NAME | CONTAINER SIZE | SPACING | QUANTITY | DETAIL |
|--------|--------------------------------|--------------------|----------------|---------|----------|--------|
| | HETEROMELES ARBUTIFOLIA | TOYON | 1 GAL | 10' | XX | (A) |
| | PERITOMA ARBOREA V. ARBOREA | DESERT BLADDERPOD | 1 GAL | 5' | XX | (A) |
| | MALOSMA LAURINA | LAUREL SUMAC | 1 GAL | 15' | XX | (A) |
| | OPUNTIA LITTORALIS | PRICKLY PEAR | 1 GAL | 5' | XX | (A) |
| | RHUS INTEGRIFOLIA | LEMONADEBERRY | 1 GAL | 15' | XX | (A) |
| | SAMBUCUS NIGRA SSP. CANADENSIS | MEXICAN ELDERBERRY | 1 GAL | 5' | XX | (A) |

COASTAL SAGE SCRUB RESTORATION & ENHANCEMENT SEED MIX - TYPE "A"

| SYMBOL | BOTANICAL NAME | COMMON NAME | SP/LB | POUNDS/ACRE |
|--------|--------------------------------|-----------------------|---------------------|-------------|
| | ARTEMISIA CALIFORNICA | CALIFORNIA SAGEBRUSH | 10 | 5.0 |
| | DACOPARIS SEROTINIFLORES | DESERT BROOM | 11 | 2.0 |
| | ENGELIA CALIFORNICA | CALIFORNIA ENGELIA | 25 | 3.0 |
| | ERIGONUM FASCICULATUM | FLAT-TOPPED BUCKWHEAT | 10 | 10.0 |
| | ERIGOPHYLLUM CONFERTIFLORUM | SAN DIEGO SUNFLOWER | 25 | 1.0 |
| | ESCHSCHOLZIA CALIFORNICA | CALIFORNIA POPPY | 85 | 1.0 |
| | GNAPHALIUM CALIFORNICUM | CALIFORNIA GUDWEED | 2 | 1.0 |
| | ISOGONA MENZESII SSP. MENZESII | COASTAL GOLDENRUSH | 2 | 1.0 |
| | PERITOMA ARBOREA VAR. ARBOREA | DESERT BLADDERPOD | 40 | 8.0 |
| | LASTHENIA CORONARIA | SOUTHERN GOLDENFIELDS | NA | 0.5 |
| | ACAMPSON ELABER | DEERWEED | 55 | 2.0 |
| | MULLENBERGIA MICROSPERMA | SMALL-SEED MUHLY | 48 | 1.0 |
| | NASSELLA PULCHRA | PURPLE NEEDLEGRASS | 48 | 2.0 |
| | NASSELLA LEPIDA | FOOTHILL NEEDLEGRASS | 46 | 2.0 |
| | PHACELIA RAMOSISSIMA | BRANCHING PHACELIA | 80 | 0.5 |
| | PHACELIA DISTANS | COMMON PHACELIA | 80 | 0.5 |
| | SALVIA APANA | WHITE SAGE | 25 | 2.0 |
| | SALVIA MELLIFERA | BLACK SAGE | 40 | 3.0 |
| | DANICOPSIS LACINATA | SAN DIEGO SUNFLOWER | 20 | 3.0 |
| | | | TOTAL=405 LBS./ACRE | |

NOTE:
 THE COASTAL SAGE SCRUB RESTORATION TYPE "A" AND COASTAL SAGE SCRUB ENHANCEMENT TYPE "A" SEED MIX IS THE SAME. THE ONLY DIFFERENCE IS THAT THE ENHANCEMENT AREAS WILL ONLY REQUIRE THE SEEDING AREAS BETWEEN EXISTING NATIVE PLANTS WHEREAS RESTORATION AREAS WILL BE SEEDDED IN THEIR ENTIRETY.

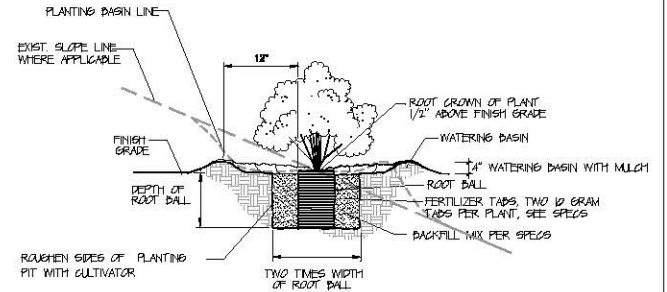
COASTAL SAGE SCRUB RESTORATION & ENHANCEMENT SEED MIX TYPE "B" (MESA TOP)

| SYMBOL | BOTANICAL NAME | COMMON NAME | SP/LB | POUNDS/ACRE |
|--------|--------------------------------|---------------------------|--------------------|-------------|
| | ARTEMISIA CALIFORNICA | CALIFORNIA SAGEBRUSH | 10 | 3.0 |
| | AMBIGUUA INTERMEDIA | RANCHER'S MIDDLENECK | 29 | 3.0 |
| | AMBIGUUA MENZESII | RUID MIDDLENECK | NA | 1.0 |
| | ASTERELLA PALMERI | LIVERWORT | NA | 1.0 |
| | CHAMBERNOPIUS DISTORTA | CALIFORNIA SUNCUP | 72 | 1.0 |
| | ENGELIA CALIFORNICA | CALIFORNIA ENGELIA | 25 | 2.0 |
| | ERIGONUM FASCICULATUM | FLAT-TOPPED BUCKWHEAT | 10 | 5.0 |
| | ERIGOPHYLLUM CONFERTIFLORUM | SAN DIEGO SUNFLOWER | 25 | 3.0 |
| | ESCHSCHOLZIA CALIFORNICA | CALIFORNIA POPPY | 85 | 1.0 |
| | GNAPHALIUM CALIFORNICUM | CALIFORNIA GUDWEED | 2 | 1.0 |
| | ISOGONA MENZESII SSP. MENZESII | COASTAL GOLDENRUSH | 2 | 1.0 |
| | PERITOMA ARBOREA VAR. ARBOREA | DESERT BLADDERPOD | 40 | 3.0 |
| | LASTHENIA ERACLIS | COMMON GOLDENFIELDS | NA | 0.5 |
| | ACAMPSON ELABER | DEERWEED | 55 | 1.0 |
| | MULLENBERGIA MICROSPERMA | SMALL-SEED MUHLY | 48 | 0.5 |
| | NASSELLA PULCHRA | PURPLE NEEDLEGRASS | 48 | 2.0 |
| | NASSELLA LEPIDA | FOOTHILL NEEDLEGRASS | 46 | 2.0 |
| | PHACELIA RAMOSISSIMA | BRANCHING PHACELIA | 80 | 1.0 |
| | PHACELIA DISTANS | COMMON PHACELIA | 76 | 1.0 |
| | PLAGIOTHYRIS COLLINUS VAR. CA | CALIFORNIA POT-CORNFLOWER | NA | 3.0 |
| | PLANTAGO ERRECTA | DOT-SEED PLANTAIN | 56 | 5.0 |
| | SALVIA APANA | WHITE SAGE | 25 | 1.0 |
| | SALVIA MELLIFERA | BLACK SAGE | 40 | 3.0 |
| | DANICOPSIS LACINATA | SAN DIEGO SUNFLOWER | 20 | 3.0 |
| | | | TOTAL=46 LBS./ACRE | |

NOTE:
 THE COASTAL SAGE SCRUB RESTORATION TYPE "B" AND COASTAL SAGE SCRUB ENHANCEMENT TYPE "B" SEED MIX IS THE SAME. THE ONLY DIFFERENCE IS THAT THE ENHANCEMENT AREAS WILL ONLY REQUIRE THE SEEDING AREAS BETWEEN EXISTING NATIVE PLANTS WHEREAS RESTORATION AREAS WILL BE SEEDDED IN THEIR ENTIRETY.

HYDROSEED SLURRY MIX

SEED MIX INDICATED ABOVE SHALL BE MIXED WITH THE HYDROSEED SLURRY INDICATED BELOW AND AS SPECIFIED:
 1. SEED MIX AT RATES INDICATED ABOVE
 2. TYPE IS HYDRO-MULCH (H/M) @ 3500 LBS./ACRE, SEE WHITEBOOK SPECIFICATIONS
 3. GREEN MARKER DYE



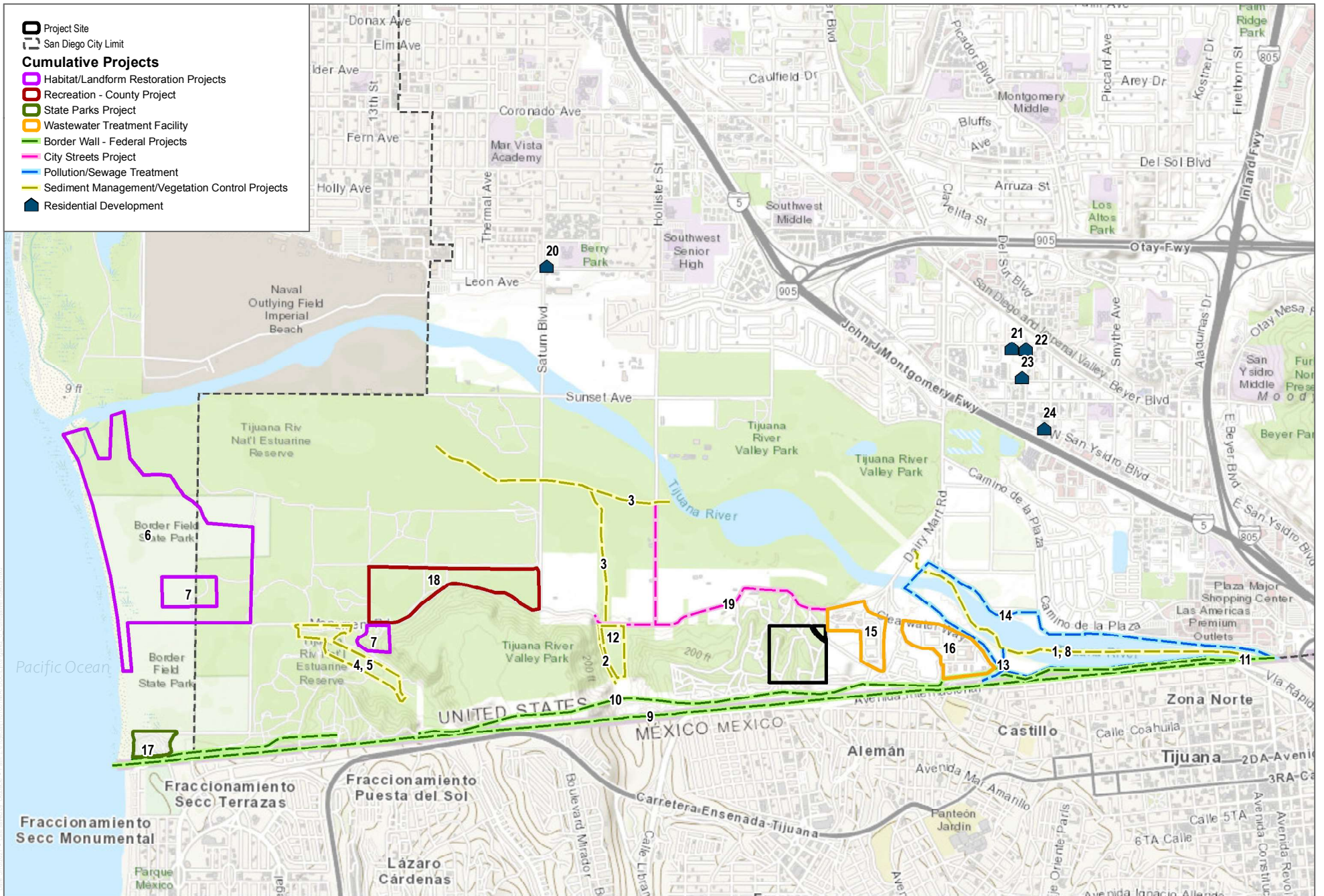
TREE & SHRUB PLANTING DETAIL
 SECTION - NOT TO SCALE



DUDEK
 850 Third Street, Escondido, CA 92025
 760.942.2947 FAX 760.942.0104



INTENTIONALLY LEFT BLANK



SOURCE: ESRI 2021



FIGURE 2-8
Cumulative Projects
Nelson Sloan Quarry

INTENTIONALLY LEFT BLANK

3 Environmental Analysis

Chapter 3 provides discussion and full public disclosure of the environmental impacts of construction and operation of the proposed Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project). The environmental analysis includes the following 10 issue areas:

- 3.1 Aesthetics
- 3.2 Air Quality
- 3.3 Biological Resources
- 3.4 Archaeological, Historical, Tribal Cultural Resources
- 3.5 Geology and Soils
- 3.6 Hazards and Hazardous Materials
- 3.7 Hydrology and Water Quality
- 3.8 Mineral Resources
- 3.9 Noise
- 3.10 Wildfire

Please see Chapter 4 for an overview of those impacts found to be less than significant (or to have no impact).

Section Format

Each technical section in Chapter 3 begins with a general description of the section contents. The introduction is followed by a description of the project's environmental setting and regulatory setting as it pertains to a particular issue. The regulatory setting provides a summary of applicable federal, state, and local regulations, plans, policies, and laws that are relevant to each issue area.

The regulatory setting is followed in most sections by a description of the methodology required to conduct the analysis, and then in all sections by the standards (or thresholds) of significance. Immediately following the standards of significance is an analysis of project-specific impacts and then the cumulative impacts of the project. Each impact statement is numbered for ease of identification. An explanation of each impact and an analysis of its significance follow each impact statement. The cumulative impacts section addresses what the project's incremental contribution to any cumulatively significant impact would be and identifies mitigation measures, if required. All mitigation measures are identified following the impact analysis. The degree to which the identified mitigation measure(s) would reduce the impact is also described. Compliance with applicable laws and state regulations is assumed and will be identified in the impact analysis. In many cases, compliance with applicable laws, policies, or regulations would reduce the significance of a potential impact, and thus will not be identified as a separate mitigation measure.

California Environmental Quality Act (CEQA) Guidelines Section 15370 defines mitigation as the following:

- Avoiding the impact altogether by not taking a certain action or parts of an action
- Minimizing impacts by limiting the degree of magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment

- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- Compensating for the impact by replacing or providing substitute resources or environments

Technical Studies Overview

Several technical studies were prepared as part of this Draft Environmental Impact Report (EIR) and are included in the technical appendices. Technical studies appended to the EIR that support the analysis include the following:

- Air Quality Technical Report (Appendix A)
- Biological Resources Technical Report (Appendix B)
- Cultural Resources Survey Letter Report (Appendix C)
- Built Environment Overview Letter Report (Appendix D)
- Preliminary Geotechnical Evaluation and Geologic Field Reconnaissance Report (Appendix E-1)
- Paleontological Resources Review Memorandum (Appendix E-3)
- Greenhouse Gas Emissions Analysis (Appendix F)
- Noise Technical Report (Appendix G)
- Phase I Environmental Site Assessment (Appendix H)
- Traffic Technical Memorandum (Appendix I)
- Mineral Resources Valuation Memorandum (Appendix J)

In addition to those studies listed above, the NOP and comment letters, a revegetation monitoring and management plan, and a thresholds of significance matrix prepared for the Project are included as appendices to the EIR. Lastly, 80% grading and restoration plans are included as Figures 2-5a through 2-5f and 2-7a through 2-7h to the EIR.

Environmental Setting

According to Section 15125(a) of the CEQA Guidelines, an EIR must include a description of the existing physical environmental condition in the vicinity of the project as they exist at the time when the NOP is published. This environmental setting will normally constitute the baseline condition against which project-related impacts are compared. Therefore, the baseline conditions for this EIR, unless noted otherwise, are based on conditions that existed in April 2019 when the NOP was published. The CEQA Guidelines recognize that the data for establishing an environmental baseline cannot be rigid. Because physical environmental conditions may vary over a range of time, the use of environmental baselines that differ from the date of the NOP is reasonable and appropriate in certain circumstances when doing so results in a more accurate or conservative environmental analysis.

For analytical purposes, impacts associated with implementation of the Project are compared against two different baselines: first, project-specific effects are assessed against existing conditions at the time the NOP was first published and second, cumulative effects are assessed against future, or cumulative, conditions that consider known development projects or, where project-specific information on a known development project was not available, background growth. Existing conditions and the cumulative baseline can differ by issue area. Each technical section defines the existing conditions and cumulative baseline for the impacts being analyzed.

In determining the level of significance of environmental impacts associated with the Project, the analysis in this Draft EIR assumes that the Project would comply with relevant federal and state laws and regulations, unless otherwise noted. Therefore, such mandatory laws and regulations are not identified as mitigation measures, but rather are discussed as part of the regulatory setting governing the Project. As a state agency, the California Department of Parks and Recreation is generally not subject to local land use regulations (*Hall v. City of Taft* [1956] 47 Cal.2d 177, 183; *City of Orange v. Valenti* [1974] 37 Cal.App.3d 240, 244; *Town of Atherton v. Superior Court* [1958] 159 Cal.App.2d 41). Accordingly, any reference to local planning documents (e.g., the general plans of the City and County of San Diego) is for informational purposes only. The above notwithstanding, local plans and policies can often serve as a good reference or benchmark to understand local perspectives on environmental health and safety issues. For this reason, this EIR references the general plans of the City and County of San Diego. In addition, both the City and County are Responsible Agencies under CEQA and may issue permits to the Project applicant (California Department of Parks and Recreation) or future site operator. An overview of the Project's compliance with local plans and policies is included in the technical sections included in Chapter 3, where applicable.

Cumulative Impacts

An analysis of cumulative impacts follows the evaluation of Project impacts under existing conditions in each technical section in Chapter 3. As defined in CEQA Guidelines Section 15355, cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the Project together with other past, present, and reasonably foreseeable projects causing related impacts.

An introductory statement that defines the cumulative analysis methodology and the cumulative context being analyzed for respective sections (e.g., buildout of San Diego County) is included under the cumulative analysis discussion. In some instances, a project-specific impact may be considered less than significant but would be considered potentially cumulatively significant in combination with other development within the surrounding area. Or, an impact could be potentially significant on a project level but not result in a cumulatively considerable impact. The cumulative impacts analysis is presented in the same format as the impacts section.

Terminology Used in this EIR

This Draft EIR uses the following terminology to describe environmental effects of the proposed project:

- **Thresholds of Significance:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Standards of significance used in this Draft EIR include those set forth in CEQA Guidelines Section 15065 (Mandatory Findings of Significance), those derived from questions set forth in Appendix G to the CEQA Guidelines, and criteria based on regulatory standards of regional, state, and federal agencies. In determining the level of significance, the analysis assumes that the Project would comply with relevant federal, state, and regional laws and regulations. Also, due to the overlapping jurisdiction of City and County of San Diego, a hybrid approach to thresholds of significance was undertaken. Essentially, the thresholds of significance of each agency were reviewed and, where overlap occurred, the most stringent threshold was used.

Within the technical sections of this EIR, the following impact categories are applied to denote the level of significance of environmental impacts.

- Significant and Unavoidable/Cumulatively Considerable: These impacts cannot be mitigated to a less-than-significant level. To approve a project resulting in one or more significant and unavoidable impacts, the CEQA Guidelines require decision makers to make findings of overriding consideration that “specific legal, technological, economic, social, or other considerations make infeasible the mitigation measures or alternatives identified in the EIR.”
- Potentially Significant: These impacts can be mitigated to less than significant by measures identified in this EIR and the project description. When approving a project with significant but mitigatable impacts, the decision makers must make findings that changes or alternatives to the project have been incorporated that reduce the impacts to a less-than-significant level.
- Less than Significant: Less-than-significant impacts may be adverse but are not significant because of management actions and best management practices incorporated into the project description that reduce the impact to a less-than-significant level.

3.1 Aesthetics

This section describes the existing visual conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts.

3.1.1 Existing Conditions

Overview

The Project site is in southwest San Diego County, approximately 1.8 miles west of Interstate (I) 5 and I-805, approximately 420 feet north of the U.S./Mexico international border and approximately 350 feet south of Monument Road. The site is located in the Tijuana River Valley, a broad natural floodplain containing a variety of wetland and riparian areas, an extensive salt marsh near the coast, and a mixture of agricultural fields, equestrian facilities, rural residences, riparian woodland and disturbed habitats. On the south, the Tijuana River Valley is bounded by broad mesas, ridges, and drainage terrain areas covered primarily by coastal sage scrub. The mesas, ridges, and drainage terrain areas comprise the Border Highlands portion of the City of San Diego (City) Tijuana River Valley community planning area.

In addition, the Project site is located within the southeastern corner of Tijuana River Valley Regional Park (TRVRP), a 1,800-acre park maintained by the County of San Diego (County) Department of Parks and Recreation. Like the larger Tijuana River Valley area, TRVRP contains a diverse assemblage of habitats, from dense riparian forest along the Tijuana River to coastal sage and maritime succulent scrub at Spooner's Mesa (a broad, elevated landform located approximately 0.88 miles west of the Project site).

Scenic Vistas

Scenic vistas and scenic views are not discussed in the Tijuana River Valley Community Plan. However, as the area includes public trails atop the elevated mesa and ridge terrain of the Border Highlands (i.e., the mesa and ridge areas on the south side of the Tijuana River floodplain), opportunities for long and broad views stretching beyond the river valley are available. The nearest public trail within the TRVRP that offers opportunities for long and broad scenic views is located atop a north-south ridge approximately 200 feet to the west of the Project site. While linear areas of disturbance, including U.S. Customs and Border Protection (CBP) access roads, are located on the elevated western portion of the Project site, the roads and trails have not been designated for public use.

While none are identified in the local Tijuana River Valley Local Coastal Program Land Use Plan (i.e., the applicable community plan for the Project site), designated scenic overlooks offering views towards the Tijuana River and Project site are identified in the neighboring San Ysidro Community Plan and Local Coastal Program Land Use Plan (City of San Diego 2017). Specifically, scenic overlooks are identified at the following intersections in Figure 3.1-1, Scenic Overlooks and Vistas, of the San Ysidro Community Plan and Local Coastal Program Land Use Plan (City of San Diego 2017):

- Camino De La Plaza and Dairy Mart Road (0.85 miles northeast of the Project site)
- Camino De La Plaza and Bibler Drive (located 1 mile northeast of the Project site)

In addition to these specific locations, Camino De La Plaza is identified in the plan as offering intermittent or partial vistas.

Scenic overlooks are also located at the southern end of Via Segundo and Via Tercero; however, the available views from these locations are short in length. In addition, due to the foreground presence of mature trees and one- to two-story warehouse development between the locations and the Project site, available views from designated locations on Via Segundo and Via Tercero do not extend to the Tijuana River or the Project site.

The scenic overlooks and vistas identified in the San Ysidro Community Plan and Local Coastal Program Land Use Plan are depicted on Figure 3.1-1, Scenic Vistas and Overlooks, of this EIR.

Scenic Highways

Neither the Tijuana River Valley nor the San Ysidro Community Plan and Local Coastal Land Use Plan designate or discuss scenic highways.

From the international border with Mexico to State Route 75 south of the San Diego Bay, I-5 is an eligible state scenic highway. At its nearest location, I-5 is located over 1.2 miles from the Project site. The visibility of the Project site from I-5 is discussed in detail in the Viewer Types and Exposure section below.

Visual Character

Photographs of the Project site and surrounding area were taken in winter 2019 during a series of site visits. The site visits were conducted to make observations and inform the discussion of existing aesthetic conditions. Visibility conditions were relatively clear and temperatures were mild. Photographs are referenced below, as needed, to support the characterization of existing landscape features on the Project site and in the surrounding area. The locations of photographs referenced in the sections below are depicted in Figure 3.1-2, Existing Conditions: Key Map.

Project Site

Located within the Border Highlands and containing the area's characteristic shrub-covered mesa, ridge, and drainage terrain, the Project site consists of two parcels: Assessor's Parcel Numbers (APNs) 664-011-05-00 and 664-011-04-00. Located within the Project site, the Project Impact Area (approximately 20 acres) is depicted on Figure 3.3-1, Property Ownership and Project Areas, in Section 3.3, Biological Resources, and comprises the area in which proposed land reclamation and restoration would occur.

The eastern half of the Project site is generally flat, with a steep cut slope bisecting the westernmost portion of the site. Surface conditions along on-site slopes consist of moderately steep to steep inclines. On-site slopes are generally vegetated with chaparral and sage scrub vegetation of moderate height and density. See Photographs A and B in Figure 3.1-3, Existing Conditions: Project Site. Further south toward the U.S./Mexico border where slope inclinations become near vertical, the surface is highly eroded and less vegetated (Figure 3.1-3, Photographs C and D). Evidence of extensive erosion was observed in this area; however, evidence of surface erosion, debris (both natural material and trash), and slopewash was observed throughout the Project site.

Five plant community types including Diegan coastal sage scrub, Diegan coastal sage scrub-Baccharis dominated, maritime succulent scrub, mulefat scrub, and southern riparian scrub generally occur in the Border Highlands area. Diegan coastal sage scrub is the dominant plant community on the Project site and is composed of low to moderately high aromatic shrubs and occasionally tall, woody shrubs. Low and dense shrubs including broom baccharis (a spreading, woody shrub) intermixed with weedy species dominate the easternmost parcel of the Project site. The on-site eroded slope includes isolated portions speckled with low and spreading shrubs surrounded by areas of exposed and eroded soils (see Figure 3.1-3, Photographs A and B). In addition to plant communities, disturbed

habitat and open water are present and generally occur in the eastern, previously disturbed portion of the Project site. Within the Project site, dirt roads utilized by CBP (and electrical providers) and roads/trails atop and between elongated ridges (including on the Project site) (see Photographs E and F in Figure 3.1-4, Existing Conditions: Project Site) result in visible areas of linear disturbance. Many of these areas have vegetation regrowth but mostly with non-native species. Lastly, a seasonal pond occurs in the northeastern corner of the Project site.

Development on the Project site is limited. For example, a partially buried water pipeline is aligned in a north-south direction and borders an existing dirt road on the flatter portion of the Project site. Also, an extensive network of dirt roads provides access to the Project site from Monument Road and stretches north-south to the southern boundary of the site and east-west towards a broader area of disturbance and additional access road that parallels the toe of the existing on-site eroded slope. A narrow dirt access road with a turnaround is also constructed atop the narrow ridge on the Project site (see Figure 3.1-4, Photograph F). Several wood poles supporting small banks of floodlights are installed atop the ridge and alongside the road (see Figure 3.1-4, Photograph G). Simple metal post and wire fencing is installed alongside sections of the road. Accessible via a paved road that parallels the U.S./Mexico border, the dirt road offers an elevated vantage point and uninterrupted view to the east and, as such, is used by CBP agents for regular patrols. Additional dirt roads accessible from the U.S./Mexico border road traverse the western portion of the Project site (see Figure 3.1-4, Photograph H). A short pedestrian loop path (i.e., narrow dirt trail) connecting the TRVRP Ranger Station to the network of ridge top access roads is located on the adjacent parcel to the west. Lastly, an east-west electrical distribution line supported by wood poles traverses the Project site and Border Highlands area and delivers power to the floodlights installed atop elevated terrain on the Project site.

Surrounding Area

Prominent landscape features in the surrounding area are identified on Figure 3.1-5, Surrounding Area. Landscape features surrounding the Project site to the north include primarily undeveloped lands within the TRVRP, the TRVRP Ranger Station and restroom facility (a converted single-story, tan wood paneled residence) along with associated paved access roads and surface parking lots, primarily undeveloped hillsides, commercial businesses including a feed operation and wedding event center, rural residences, Monument Road, and equestrian facilities to the north of Monument Road. Residences are generally modest, single-story structures located at the base of slopes south of Monument Road and equestrian facilities include generally cleared areas featuring riding rings, boarding pens with small metal canopies for shade and/or storage, storage areas for horse trails, and simple wood post and/or low metal railing fencing. Flat, primarily undeveloped lands covered with low shrubs intermixed with pockets of exposed tan soils and linear bands of disturbance are located to the immediate east of the Project site and along with Monument Road, abutting the South Bay Water Reclamation Plant. The fenced and gated facility is located off Monument Road and is comprised of numerous long and rectangular one- to two-story buildings/structures, wide cylindrical tanks, aboveground pipelines, and other indiscernible facilities. In addition to tall fencing, the reclamation plant boundary is lined by overhead security lights and planted with landscape trees. The South Bay International Wastewater Treatment Plant and cleared and fenced storage yards are located to the immediate east of the South Bay Water Reclamation Plant. Lastly, the crossing of the Tijuana River from Mexico into the United States and the developed San Ysidro neighborhood of the City of San Diego lie further to the east.

The dual international border fence comprised of (1) closely installed and tall white metal bollards and (2) rust colored bollards and rectangular panels is located to the south of the Project site. The two fences are separated by patches of undisturbed to heavily modified and generally steep terrain. In addition to paved and dirt roads, concrete drainage conveyances and wood poles supporting floodlights parallel the paved CBP access road located to the south of the Project site. Mexican Federal Highway 1D (a separated highway with two lanes of travel in each

direction) and the densely developed neighborhoods of Colinas del Mediterraneo and Soler in the City of Tijuana, Mexico, are located beyond the second of the two international border fences.

The landscape to the west of the Project site is defined by hilly terrain covered with scrub vegetation and a narrow, steep walled canyon. The canyon, Smuggler's Gulch, has been modified by the construction of berms and filling of sediment to provide improved CBP access and drainage facilities. Drainage facilities (i.e., a small basin) are located at the base of the berms and connect to a narrow, natural channel that is typically inundated with sediment. In addition to pockets of trees, the canyon bottom features two cleared areas used by the City and County for sediment stockpiles during area channel maintenance. The relatively broad and previously developed Spooner's Mesa landform is located to the west of Smuggler's Gulch and provides sweeping views encompassing the river valley and extending to downtown San Diego. Narrow Goat Canyon (including sediment basins maintained by California State Parks), the Tijuana River National Estuarine Research Reserve, and Border Field State Park (located within the reserve) are located to the west of Spooner's Mesa.

Light and Glare

Except for wood pole mounted floodlights installed by the CBP atop the partially disturbed ridge, there are no sources of temporary or permanent lighting on the Project site. While outdoor and indoor lighting operate on private property, at the TRVRP Ranger Station, and at equestrian facilities in the surrounding area, no street lights are installed on the public roads nearest to the Project site (i.e., Dairy Mart Road [with the exception of two lights at the western driveway to the South Bay Water Reclamation Plant located off Dairy Mart Road] and Monument Road). Overhead floodlights are installed at regular intervals along the paved road maintained by the CBP to the immediate south of the first of the two international border fences. Overhead lights are also installed in the parking lots, interior access roads, and throughout the South Bay Water Reclamation Plant and adjacent South Bay International Wastewater Treatment Plant. Lastly, outdoor lighting associated with development along the I-5 and I-805 corridors to the east and residential and commercial development atop elevated terrain to the south in Tijuana is visible to the south of the Project site.

Viewer Types and Exposure

The Project site is publicly accessible; however, the local ridge and drainage terrain generally limits accessibility to existing trails and dirt roads across the property; these are primarily used by CBP and utility providers, with occasional use by TRVRP rangers and trail users visiting the southeastern portion of the regional park. The Project site viewshed is relatively narrow due to the elevated ridges and hillsides to the west, which effectively obscure the site from viewers to the north and west. The site's east-facing slope, flat valley portion, and development buffer provided by the Tijuana River floodplain also limits the Project viewshed by directing potential views to the northeast and east, where sensitive receptors are over 1 mile away. In addition to nearby areas of San Ysidro, including Camino De La Plaza, far eastern portions of the TRVRP, and Otay Mesa Nestor, glimpses of the Border Highlands landforms may be available from more distant locations atop elevated terrain.

The Project site (i.e., where grading and filling operations would occur) is visible from foreground (0 to 0.5 miles) distances, and particularly from westbound Dairy Mart Road (from approximately the northern extension of Old Dairy Mart Road to Monument Road; approximately 0.7 miles) and distant views from Camino De La Plaza, given its east-facing hillside orientation. Middleground views (0.5 to 1 mile) are available only from agricultural fields that occupy the valley. Located 1.15 miles away, the Project site is not readily visible from I-5 due to intervening development and vegetation. Similar features block the Project site from view of motorists on I-805.

Public viewer groups¹ and vantage points assessed in this section include the following:

- **Motorists:** I-5 (state eligible scenic highway), Dairy Mart Road and Monument Road (local roads providing access to TRVRP and adjacent wastewater facilities), Hollister Street and Sunset Avenue (local in-valley roads), Servando Avenue (local road in Otay-Mesa Nestor Community Plan area), and Camino De La Plaza and Bibler Drive (local roads in San Ysidro community plan area)
- **Recreationists:** TRVRP

Motorists

As discussed above, public roads in the study area include I-5, Dairy Mart Road, Monument Road, Hollister Street, Sunset Avenue, Servando Avenue, Camino De La Plaza, and Bibler Drive.

Interstate 5

I-5 is a large regional travel corridor within the local area that provides access throughout coastal San Diego County between Orange County to the north and the international border with Mexico to the south. North of the international border, I-5 has eight-lanes (four in each direction) that run in a north-south direction. In southwestern San Diego County, I-5 from the international boundary at Tijuana to State Route 75 south of San Diego Bay is an eligible state scenic highway. The visual character of I-5 near the Project site is relatively indistinct; however, the presence of the Tijuana River Valley and Border Highlands (and hilly terrain in Tijuana) add some visual interest to the corridor, which is generally bordered by urban uses including residential and commercial development.

The Project site is located approximately 1.2 miles southwest of the closest segment of I-5 and is within the middleground distance of motorists. In the local area, traffic volumes are high, with approximately 88,000 vehicle trips per day in 2017 (Caltrans 2020). Due to intervening development and landscaping, the Project site has limited visibility from northbound I-5 (between I-805 and Dairy Mart Road) and from southbound I-5 (between Dairy Mart Road and I-805). From both north and southbound travel lanes, motorists are provided brief glimpses to the east-facing hillside on the Project site in between gaps in landscaping and development. Given the indistinct visual quality of the area, the high number of viewers, short view duration, and low visibility, visual sensitivity of I-5 motorists to changes on the Project site is considered low.

Dairy Mart Road

Dairy Mart Road is a small, two-lane road that extends south from Beyer Boulevard in San Ysidro to Monument Road approximately 400 feet north of the Project site. South of Servando Avenue, Dairy Mart Road is regularly utilized by rural residences in the river valley, visitors to the TRVRP (and staff), employees of water reclamation facilities, and CBP agents. The road also receives occasional use by State Parks visitors and staff and sediment management crews. South of I-5 towards the Project site, the character of the visible landscape from Dairy Mart is relatively distinct and is informed by the dense, riparian vegetation of the river to the west, cleared and flat agricultural lands to the west, and Border Highlands and densely developed hillsides of Tijuana to the south.

At its closest point, Dairy Mart Road is located approximately 400 feet north of the Project site. South of Camino De La Plaza, traffic volumes are low, with approximately 1,550 vehicles trips per day in 2019 (City of San Diego 2020).

¹ Private views are not evaluated in this document because, under CEQA, the question is whether the Project would affect the environment of persons in general, not whether it would affect particular persons. *Mira Mar Mobile Community v. City of Oceanside*, 119 Cal.App.4th 477, 492 (2004) (“neither state nor local law protects private views from private lands”). Although the Project site may be visible from private residences, such views are not considered public views.

From approximately Camino De La Plaza to the Old Dairy Mart Road (approximately 0.25 miles), the Project site and the eroded east-facing hillside that straddles APNs 664-011-0500 and 664-011-0400 is visible in the middleground above foreground vegetation. In addition, generally from the southern end of the bridge spanning the Tijuana River to Monument Road (a distance of approximately 0.3 miles), the eroded east-facing hillside of the Project site is partially visible to southbound motorists. A representative view towards the east-facing hillside on the Project site from Dairy Mart Road just south of the bridge over the Tijuana River is provided on Figure 3.1-6, Existing Views from Local Roads: Dairy Mart Road and Monument Road. Landscaping planted along the frontage of Dairy Mart Road and within the operations center parking lot of the South Bay Water Reclamation Plant partially to fully screens the eroded hillside from view between Clearwater Way and Monument Road (a distance of approximately 0.17 miles). Despite the availability of views and the distinct character of the eroded, east-facing hillside, view exposure to Dairy Mart Road motorists is brief. As experienced from Dairy Mart Road, the Project area landscape displays a distinct visual quality of partially developed river valley. However, due to the low volume of viewers, short view duration, and occasionally open visibility, visual sensitivity to the changes proposed by the Project is considered low to moderate.

A paved pedestrian path bordered by panels of 8-foot-high chain-link fencing and a low concrete wall topped with metal railing parallels the Dairy Mart Road bridge on the west. Due to the fencing and tall vegetation in the river channel, the Project site is not visible to pedestrians on the bridge. As such, views to pedestrians from the Dairy Mart Road Bridge are not analyzed in this EIR.

Monument Road

Monument Road is a small, two-lane road that extends west from Dairy Mart Road near the Project site through the southern end of the Tijuana River Valley to the coast and International Friendship Park. The road is aligned along the base of the Border Highlands terrain and passes through several narrow canyons and the riparian and coastal habitats of Border Field State Park. This road is used by the same groups using Dairy Mart Road. In addition to its westward segment, a short segment of Monument Road extends south from Dairy Mart Road and briefly fronts the Project site (i.e., APN 664-011-0500) before turning to the southeast and paralleling the southern boundary of local water treatment facilities. Use of this short segment of the southern extension of Monument Road is generally limited to CBP agents, TRVRP staff, and water treatment facility employees. From Monument Road, the Tijuana River Valley landscape is distinct. Rising terrain (undeveloped and developed hillsides) and narrow canyons are present to the south and equestrian facilities bordered by dense riparian vegetation occur to the north of Monument Road.

At the intersection of Monument Road and Dairy Mart Road, Monument Road is located approximately 400 feet from the Project site. Like Dairy Mart Road, traffic volumes on Monument Road near the Project site are low (approximately 2,350 vehicle trips per day in 2016) (City of San Diego 2020). West of Dairy Mart Road, the Project site is screened by intervening foreground terrain (i.e., bermed, vegetated land to the south) and, as such, views to westbound Monument Road motorists to the Project site are not analyzed in this EIR.

The southern extension of Monument Road parallels the Project site (i.e., APN 664-011-0500) for approximately 350 feet. Traffic volumes are not counted by the City for this segment of Monument Road. After turning onto the Monument Road from Dairy Mart Road, the eroded, east-facing hillside on the Project site is visible but partially screened by grass and shrub covered bermed lands to the west. As the road climbs in elevation to the south, visibility of the eroded hillside improves and views are open for approximately 600 feet, after which southbound motorists and passengers would have to turn their heads to the southwest (taking their eyes off Monument Road) to view the Project site. From eastbound/northbound Monument Road (from approximately the gate of the South Bay International Wastewater Treatment Plant), the east-facing slope and relatively flat portion of APN 664-011-

0500 are visible for approximately 0.65 miles. From this segment, the Project site is in the middleground to foreground distance and views are open to partially screened. See Figure 3.1-6 for a representative clear view towards the Project site from westbound Monument Road. At the eastern end of this segment, the landscape displays relatively indistinct visual quality due to the prominence of foreground water treatment facilities and storage yards. Further to the west and beyond the water treatment facilities, the landscape becomes more distinct due to the visual dominance of the Border Highlands (and adjacent valley terrain) and the international border and hilly terrain in Tijuana add visual interest to the scene. Due to the low number of viewers and viewer types (primarily TRVRP staff, CBP agents and water treatment facility staff), short view duration, and irregular use of the southern extension of Monument Road, visual sensitivity of Monument Road motorists to changes on the Project is considered low.

Hollister Street

Hollister Street, located west of the Project site in the Tijuana River Valley community planning area, is a narrow, two-lane, north-south road that traverses the Tijuana River Valley from Monument Road north to the Otay-Mesa Nestor neighborhood. Traffic volumes on Hollister Street near the Project site are low (approximately 1,280 vehicle trips per day in 2013) (City of San Diego 2020) and the road is primarily used by local residents and local and state agencies with jurisdiction in the river valley. However, the Project site, and more specifically, the east-facing eroded hillside and flat valley bottom, are not visible from Hollister Street. As such, views from Hollister Street are not analyzed in this EIR.

Sunset Avenue

Sunset Avenue is a small and short (approximately 0.75 miles long), unpaved (west of Hollister Street) and paved (east of Hollister Street) roadway in the Tijuana River Valley. While the City does not regularly count vehicle trips on Sunset Avenue, traffic volumes are assumed to be very low due to the land uses fronting the roadway. West of Hollister Street, the roadway is bordered by equestrian facilities with outdoor spaces dedicated to storage and the TRVRP community garden that features multiple divided plots lined by fencing. East of Hollister Street, traffic is primarily generated by an equestrian/boarding ranch facility (Rancho De La Palma) and a five-field sports field complex used by Southwest Little League. The sports field complex includes four back-to-back fields, a separate larger field and large grass turf area, two unpaved parking lots, and an unpaved perimeter trail.

East of Hollister Street, the visual landscape is informed by vacant but previously disturbed fields primarily covered with low shrubs against a backdrop of single-family residences to the north, and a large equestrian facility and sports fields bordered by tall riparian trees in the river valley against a backdrop elevated terrain covered with dark shrubs (i.e., Torrey Highlands and Tijuana hillsides located more than 1 mile away) to the south. As such, the visible landscape contains both urban, equestrian, and natural elements that are representative of the Tijuana River Valley.

While the east-facing hillside and flat valley bottom of APN 664-011-0500 are not visible from Sunset Avenue, proposed modifications to the existing on-site landforms may be visible from segments of the road east of Hollister Street. However, due to distance, orientation, more visually prominent background elements (i.e., development in Tijuana), low volume of viewers, and short view duration, the visual sensitivity of Sunset Avenue motorists to changes on the Project site is considered low.

Servando Avenue

Servando Avenue is located off Dairy Mart Road, approximately 275 feet south of the I-5 southbound on-ramp. The paved, east-west road features a sidewalk along the westbound lane of travel and street parking is permitted. Servando Avenue

borders an undeveloped, densely vegetated area of the Tijuana River Valley to the south (the Dairy Mart Pond is nearby) and an apartment development and single-family residences to the south. Access to the TRVRP trail network is provided near the western extent of Servando Avenue, at its confluence with Valentino Street. The City does not maintain regular traffic counts for Servando Road. Also, due to the presence of denser riparian vegetation in the foreground, the Project site is completely screened from view from Servando Road. As such, views from Servando Avenue are not analyzed in this EIR.

Camino De La Plaza

Camino De La Plaza is a paved, four-lane road that borders the western extent of San Ysidro and the easternmost, previously developed agricultural area of the Tijuana River Valley. From I-805, Camino De La Plaza runs west, traversing a heavily modified landscape developed with a regional shopping center, an apartment complex, neighborhood park, and single-family residential neighborhood. Approximately 0.25 miles west of Sipes Lane, views along the palm-tree lined corridor become somewhat open and the east-facing hillside on the Project site is visible. With clear atmospheric conditions, the Project site remains visible to varying degrees from the westbound travel lane from the pronounced curve in Camino De La Plaza to approximately 0.25 miles east of Dairy Mart Road. While views to the north and east are somewhat typical of the urban landscape in the San Diego region, westerly views from Camino De La Plaza across agricultural fields to the Border Highlands and lower regions of the Tijuana River Valley display a distinct visual quality.

At its nearest location, Camino De La Plaza is located approximately 1 mile from the eastern boundary of the Project site. Between Willow Road and Sipes Lane (Sipes Lane is 1.5 miles east of the Project site), traffic volumes on Camino De La Plaza are moderately low (approximately 5,920 vehicle trips per day in 2019) (City of San Diego 2020). From the pronounced curve, views from the westbound travel lanes of Camino De La Plaza are comprised of a low, rust-colored metal fence in the foreground and agricultural fields in varying stages of production and seasonal coloring. The pastoral foreground scene is set against the lightly colored, rectangular, and cylindrical forms at in-valley water treatment facilities and prominent, elevated, and developed hillsides in Tijuana. The Border Highlands are present and visible but are not dominant features in the landscape. See Figure 3.1-7, Existing Views from Local Roads: Camino De La Plaza and Bibler Road, for representative views from Camino De La Plaza near Bibler Drive towards the Project site. Despite the distinct quality of the visible landscape, there are a moderately low number of viewers (motorists and cyclists) and view duration is short. Further, Camino De La Plaza carries no scenic designation. As such, the visual sensitivity of Camino De La Plaza motorists to changes on the Project site is considered low.

Bibler Drive

Bibler Drive is a small, paved two-lane road in the Coral Gate residential neighborhood of San Ysidro. The road is short (approximately 0.20 miles long) and provide access from Camino De La Plaza to unstriped neighborhood roads including Naylor Road, Deaver Lane, and Anella Road. Due to the proximity of residences and fencing, most views from Bibler Drive are typical of a single-family residential neighborhood and are not particularly distinct. However, at the intersection of Bibler Drive and Camino De La Plaza, views to agricultural lands in the Tijuana River Valley and Border Highlands are completely screened by the rust-colored metallic fencing that parallels Camino De La Plaza and is installed at grade at the intersection of Bibler Drive and Camino De La Plaza (see Figure 3.1-7). As a result, the visible landscape is indistinct and is not particularly scenic. Due to existing blockage of views to the Project site, views from Bibler Drive at Camino De La Plaza towards the Project site are not evaluated in this EIR.

Recreationists

Managed by the County Department of Parks and Recreation, TRVRP is an approximately 1,800-acre regional park with 22.5 miles of multi-use trails accessible to pedestrians and equestrians. Specific trails are dedicated for

pedestrian and equestrian use and multi-use. The network located nearest to the Project site (which includes a short segment crossing the northern boundary of the Project site) is available for multi-use. Figure 3.1-8, TRVRP: Trails, identifies the general alignment of public trails within the TRVRP and depicts their proximity to the Project site. Despite the identification of east-west trails to the north of the Project site and south of Monument Road, observations made during site visits confirm that these trails are not established, are impassable, and/or have been closed for public use.

Parking for the trail network nearest to the Project site is available at the TRVRP Ranger Station (2721 Monument Road). Most of this trail system is located atop the ridge on the parcel to the immediate west of the Project site (i.e., APN 664-011-030) and is over 500 feet from where filling and grading activities are proposed on the Project site. In addition, an equestrian and pedestrian trail overlies the Old Dairy Mart Road alignment. While the majority of the northeast-southwest aligned trail is located beneath a dense canopy of trees that restrict distant views, the eroded, east-facing slope on the Project site (located as close as 0.3 miles) is visible from the southern segment of the trail.

While the Project site is within the TRVRP, dedicated park trails do not traverse portions of the Project site that have been disturbed by previous quarry operations. However, the eroded, east-facing slope is visible to trail users west of Monument Road and remains visible for approximately 1,200 feet as the trail passes the elevated ridge centrally located on the Project site and proceeds west towards the narrow, primarily undeveloped ridge in the western portion of the Project site. Due to proximity and the elevated location of the ridge in relation to the trail, the eroded east-facing slope is visually prominent in the views of westbound trail users. With the exception of the flatter portions of APN 664-011-0500 that do not include dedicated public trails, maximum visibility to park goers is available to users of this short 1,200-foot segment of the trail. Upon passing the ridge and approaching the northeast corner of APN 664-011-0400, the east-facing slope is located at an approximate 45-degree angle to the trail and visibility to the slope is reduced.

The visual quality of the multi-use trail segment nearest to the Project site is moderate and typical of other TRVRP trails located south of Monument Road. While the foreground terrain and vegetation are characteristic of the Border Highlands area, the international border fence and developed hillsides in Tijuana are a constant presence in south-oriented views and detract from the visual quality of the primarily undeveloped river valley. Given the relatively indistinct quality of views, an intervening ridgeline, and assumed low volume of viewers, visual sensitivity to the changes on the Project site is considered low.

Views from the segment of elevated trail traversing the north-south trending ridge immediately to the west of the Project site (i.e., the Russian Alley Trail, which originates off Monument Road east of the TRVRP Ranger Station and extends south to the Border Highlands) are panoramic, stretching for miles to the west, north, and east. Further, views from the trail encompass a large portion of the Tijuana River Valley. The general location of the Russian Alley Trail is depicted on Figure 3.1-8. However, due to an intervening ridgeline and dense scrub vegetation, views to the Project site are fully screened and the east-facing slope is fully obscured by intervening terrain. As such, views from this segment of the trail are not analyzed in this EIR.

The segment of the Old Dairy Mart Road trail (i.e., equestrian, and pedestrian trail) from which views to the Project site are available is approximately 0.16 miles long. The trail exits the dense canopy associated with the Tijuana River crossing and extends in a southwesterly alignment before briefly paralleling Dairy Mart Road (this segment transitions to a multi-use trail) and ending near the Dairy Mart Road/Monument Road intersection. The visual quality of the Old Dairy Mart Road trail (south of Tijuana River) is somewhat distinct due to the presence of riparian vegetation in the immediate foreground and Border Highlands terrain in the foreground-middle. However, an electrical distribution line installed along Dairy Mart Road and the South Bay Water Reclamation Plant are also

visible in the foreground landscape and detract from the quality of the river valley setting. Given the quality of views, middle viewing distance, partially screened to open short duration views, and assumed low volume of viewers, visual sensitivity of recreationists to changes on the Project site is considered low.

3.1.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans, policies, or ordinances specific to aesthetics that are particularly relevant to the Project.

State

California Scenic Highway Program

The California Department of Transportation manages the State Scenic Highway Program. Created by the state legislature in 1963, the purpose of the State Scenic Highway Program is to protect and enhance the natural scenic beauty of select California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated.

I-5 from the international boundary at Tijuana to State Route 75 south of San Diego Bay is an eligible state scenic highway. To date, neither the City nor County have developed a corridor protection program for this stretch of I-5 and, as such, there are no special conservation treatments applicable to the interstate and adjacent corridor.

Local

City of San Diego General Plan

Comprised of 10 elements that provide a comprehensive slate of citywide policies, the City of San Diego General Plan (General Plan) is the City's constitution for development. The General Plan has a strong sustainability focus and provides local policies to address global climate change. Also, the General Plan furthers the City of Villages smart growth strategy for growth and development in San Diego. Of relevance to the Project are the Land Use & Community Planning and Conservation Elements. Relevant policies and/or information from these elements is provided below.

Land Use & Community Planning Element

The Project site is designated for Park, Open Space, and Recreation use on Figure LU-2, General Plan Land Use and Street System, in the Land Use & Community Planning Element. According to the General Plan, the Open Space community plan designation provides for the "preservation of land that has distinctive scenic, natural or cultural features; that contributes to community character and form; or that contains environmentally sensitive resources" (City of San Diego 2015). In addition, the Open Space designation applies to land or water areas that are undeveloped, generally free from development, or developed with very low-intensity uses that respect natural environmental characteristics and are compatible with the open space use.

Conservation Element

The following policies from the Conservation Element may apply to the Project (City of San Diego 2008).

- **Policy CE-B.1.** Protect and conserve the landforms canyon lands, and open spaces that: define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetland habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.
- **Policy CE-C.3.** Minimize alterations of cliffs and shorelines to limit downstream erosion and to ensure that sand flow naturally replenishes beaches.

Tijuana River Valley Local Coastal Program Land Use Plan

Community plans work together with the General Plan to provide location-based policies and recommendations in the City's more than 50 community planning areas. Community plans are written to refine the General Plan's citywide policies, designate land uses and housing densities, and provide additional site-specific recommendations as needed.

The Tijuana River Valley Local Coastal Program Land Use Plan is the community plan for City jurisdictional lands in the Tijuana River Valley (City of San Diego 1999). The Tijuana River Valley planning area, including Border Highlands, is located within the California Coastal Zone and, as such, is subject to the regulations of the California Coastal Act of 1976. The following policy and specific recommendation may be relevant to the project (City of San Diego 1999):

- **Policy F: Hillside Development/Visual Resources.** Within the Coastal Zone, development shall be restricted in steep hillsides which have been identified as containing sensitive biological resources or significant scenic amenities or hazards to development (including major undeveloped sites with high erodibility characteristics). Steep hillsides shall be preserved in their natural state, provided a minimal encroachment into the steep hillsides may be permitted as detailed in the Environmentally Sensitive Lands Regulations, upon the discretionary judgment that there is no feasible alternative siting or design which eliminates or substantially reduces the need for such encroachment, and it is found that the bulk and scale of the proposed structure has been minimized to the greatest extent feasible and such encroachment is necessary for minimum site development and that the maximum contiguous area of sensitive slopes is preserved.
- **Specific Recommendations (B) Other Community Open Space.** Respect the natural environment to the maximum extent possible when installing public and private improvements in designated open space areas.

The Tijuana River Valley Local Coastal Program Land Use Plan does not include design guidelines.

San Ysidro Community Plan and Local Coastal Program Land Use Plan

Although not applicable to the Project site due to the site's inclusion within the Tijuana River Valley Local Coastal Program Land Use Plan area, the San Ysidro Community Plan and Local Coastal Program Land Use Plan includes designated scenic overlooks and views that provide views towards the Project site. These views are identified on Figure 3.1-1 and Project impacts to applicable views are considered in Section 3.1.4, below.

County of San Diego General Plan

The County's General Plan is based on a set of guiding principles designed to protect the San Diego County's unique and diverse natural resources and maintain the character of its rural and semi-rural communities. Of relevance to the Project is the Conservation and Open Space Element. While not applicable to the Project due to location of the property within the City's Tijuana River Valley Community Plan Area (the Project site is owned by the County), the

General Plan is discussed herein for informational purposes. Relevant policies and/or information from the Conservation and Open Space Element are provided below (County of San Diego 2011).

- **Policy COS-11.1. Protection of Scenic Resources.** Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.
- **Policy COS-11.3. Development Siting and Design.** Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:
 - Creative site planning;
 - Integration of natural features into the project;
 - Appropriate scale, materials, and design to complement the surrounding natural landscape;
 - Minimal disturbance of topography;
 - Clustering of development so as to preserve a balance of open space vistas, natural features, and community character; and
 - Creation of contiguous open space networks.
- **Policy COS-13.1 Restrict Light and Glare.** Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.

County of San Diego Light Pollution Code

The purpose of the Light Pollution Code is to minimize light pollution to allow citizens of the County to view and enjoy the night environment and to protect the Palomar and Mount Laguna observatories from the detrimental effect that light pollution has on astronomical research (County of San Diego 2009). The code applies to all artificial outdoor lighting installed or reinstalled since January 1, 1985, and defines lighting into one of three classes: Class I – outdoor lighting for an outdoor sales or eating area, or similar application where color rendition is important; Class II – outdoor lighting for outdoor security, walkways, roadways, parking lots, and residential entrances; and Class III – lighting for decorative effects, monument and landscape lighting. Section 51.204 establishes requirements for lamp source and shielding and Section 51.203 delineates the County into one of two Zones: Zone A that encompasses lands within a 15-mile radius of Palomar or Mount Laguna Observatories and Zone B that encompasses all other areas not included in Zone A.

The Project site is located more than 15 miles from County observatories and therefore is in Zone B.

Tijuana River Valley Regional Park Area Specific Management Directives

The Area Specific Management Directives were prepared by the County in 2007 as a guidance document to preserve and manage the biological and cultural resources within TRVRP while balancing the need to provide appropriate passive recreational opportunities (County of San Diego 2007a). Regarding public access, the Area Specific Management Directives recommend that interpretive signage be provided at all official trailheads and scenic overlooks. Multi-use trails in the TRVRP occur over 500 feet west of the Project site on adjacent APN 664-011-030. This trail connects to the TRVRP Ranger Station. Also, there are no official scenic overlooks in the Border Highlands area of TRVRP.

3.1.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City of San Diego, and County of San Diego significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. As further described below, all relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to aesthetics (visual character, visual quality, scenic views, and scenic resources) are based on County Guidelines for Determining Significance: Visual Resources (County of San Diego 2007b) and City significance determination thresholds for visual effects and neighborhood character (City of San Diego 2016). According to the most stringent County and City guidelines, a significant impact related to aesthetics would occur if the Project would:

1. Introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines. (County of San Diego 2007b).
2. Result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), trees, and rock outcroppings. (County of San Diego 2007b).
3. Substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:
 - a public road;
 - a trail within an adopted County or State trail system;
 - a scenic vista or highway; or
 - a recreational area. (County of San Diego 2007b).
4. Result in the loss of any distinctive or landmark tree(s) or stand of mature trees as identified in a community plan. (City of San Diego 2016).
5. Result in a substantial change in the existing landform. (City of San Diego 2016).

The significance criteria used to evaluate the Project impacts to day and nighttime light and glare are based on the County Guidelines for Determining Significance: Dark Skies and Glare. According to the County guidelines, a significant impact related to aesthetics would occur if the Project would (County of San Diego 2007c):

1. Install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code;
2. Operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code;
3. Generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property;
4. Install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties; or

5. Not conform to applicable Federal, State, or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code.

3.1.4 Impacts Analysis

1. ***Would the Project introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines?***

The visual elements of theme, style, size, massing, scale, color, and building materials are not particularly relevant to the Project. Setbacks, density, coverage, and architecture are more applicable to traditional residential and commercial development than to this Project, which consists of the reclamation and creation of naturalistic terrain on a former sand and gravel quarry site. However, these visual elements are assessed below in a general manner.

Reclamation, Landform Creation, and Revegetation

Architecture

A temporary building would be located on site in the general staging area and would serve as the operations office. Once grading phases are completed, the temporary building would be removed from the site. The Project does not include permanent buildings. Because no permanent buildings are proposed and the Project does not include the installation of permanent building structures, implementation of the Project would not conflict with the architecture of existing residential and other development in the surrounding area.

Density

The Project does not include permanent buildings and, more specifically, housing or dwelling units. As such, the Project would not conflict with the typical density of single-family residential land uses in the surrounding area.

Coverage

The Project does not include permanent buildings and therefore coverage (or the maximum lot area that may be covered by buildings) is not applicable to the Project. Accordingly, the Project would not conflict with the typical lot coverage displayed by single-family residential land uses and other developed landscape features in the surrounding area.

Theme and Style

Implementation of the reclamation, landform creation, and revegetation phases of the Project would substantially alter the modified landscape that resulted from mining activity. As proposed, the Project would restore historic (i.e., pre-quarry operations) topography on the Project site. Natural, pre-quarry terrain is illustrated in Figure 2-3c in Chapter 2, Project Description, and demonstrates that prior to quarry operations, on-site hillsides extended from the central ridge to the eastern extent of the Project site. The Project would result in the restoration of a ridgeline and side slope that are naturalistic in appearance when viewed from middleground and background view locations.

During active grading operations, temporarily exposed soils would be noticeable in relation to the existing eroded, geometric visual elements of the quarry slope with scant vegetation. Later phases of the Project entail the restoration of naturalistic (and historic; see Figure 2-3c) hill terrain where the flat portions of the site are currently located. As shown on Figure 2-3c, prior to quarry operations, on-site terrain (hillsides) extended from the central ridge generally to the eastern extents of the Project site. The Project would also introduce active sediment processing and general construction equipment that is consistent with the existing character of the Project site and the surrounding area, which includes a major water treatment facility, an international wastewater treatment facility, and seasonal sediment management activities. While sediment management activities occur episodically on an annual basis, the duration and low intensity of activities on the Project site and gradual visual modifications to on-site terrain would not draw attention from the local neighborhoods that are situated visually distant from the Project site.

Reclamation, landform creation, and revegetation would introduce construction equipment, expose soils, and modify the anthropogenic form of the former quarry over an up to 15-year period. As a result of the seasonal nature and duration of these activities, the Project would result in gradual visual change to the landscape that would not substantially conflict with important visual elements or the quality of the area. As such, development of the Project site would be consistent with the visual character of the Border Highlands area.

Size, Scale, and Massing

Except for stockpiles (up to 70 feet high), Project components would display a relatively low vertical profile. Mobile processing screens would generally be screened from view of foreground viewers, including passing motorists on Monument Road (west of Dairy Mart Road), due to mature trees planted at the City's water treatment facility and higher elevation screening terrain to the south of the road. West of the Dairy Mart Road/Monument Road intersection, the scrub-covered terrain to the south of Monument Road would be located between motorists and the mobile processing screens/equipment. Soil stockpiles and active construction activities on the east-facing slope of the Project site would be visible from locations in the surrounding area including Dairy Mart Road, Monument Road, and more distant roads, including Camino De La Plaza. However, ridge landforms to the west of the Project site would limit the visibility of stockpiles and other prominent features from the larger TRVRP area, including pedestrian and multi-use trails. Instead, Project features and activities would be most visible from foreground viewing locations such as a 0.3-mile stretch of Monument Road (south of Dairy Mart Road), and a 0.2-mile stretch of Dairy Mart Road (south of the Tijuana River bridge span to Clearwater Way). However, Monument Road south of Dairy Mart Road is a dead-end road that only serves temporary construction project-related facilities such as equipment yards. Thus, the visual sensitivity of users of this road is considered low. Park users recreating on public trails near Dairy Mart Road may be provided foreground views to the Project features and activities.

While sediment management activities occur elsewhere in the Tijuana River Valley, the heightened visibility of land reclamation and creation due to the prominent elevation of the Project site's east-facing slope would be dissimilar to that of existing activities and managed terrain in the surrounding area. However, the scale of Project features and the gradual nature of terrain creation and revegetation efforts would be consistent with the established character of existing quarry development in the Tijuana River Valley. Furthermore, the Project would restore historic topography on the Project site and result in the restoration of a ridgeline and side slope that are naturalistic in appearance and consistent in size and scale with terrain in the Border Highlands area.

Color

Earth tone colors are prevalent on the Project site and consist of dark green to grey shrubs and light and reddish tans displayed by exposed soils associated with eroded quarry slopes, access roads, and cleared areas. Colors displayed by existing on-site elements including terrain and vegetation are illustrated in existing photographs presented on Figures 3.1-3 and 3.1-4. Of these areas, only the elevated, previously mined east-facing slope is visible from public viewpoints.

The Project would contribute additional tan colors to the Project site resulting from soil placement for landform creation activities. Tall stockpiles would also contribute tan colors to the site; however, stockpiles would be partially to fully screened from public view by intervening vegetation and terrain. Other visible Project components during the reclamation, landform creation, and revegetation phases include seasonal equipment such as mobile processing screens, haul trucks, and wheeled front-end-loaders. In general, this equipment would be painted metallic grey, yellowish orange, or white and would typically be constructed of steel. A limited volume of TRVRP users would be provided views of construction equipment within the Project staging area.

Although tan colors occur on the Project site (primarily associated with the eroded quarry slope), new areas of phased, newly graded slopes and the resulting limited areas of tan color on the Project site would create minimal (and localized) contrast with the earth tones displayed by existing vegetation. Further, new slopes would minimally contrast with the rough textures displayed by existing terrain intermixed with scant vegetation. Proposed grading, processing, reclamation, and revegetation equipment may introduce bright colors and metallic tones that are not displayed by vegetation and terrain on the Project site or surrounding area. However, there is limited visibility of these Project features from adjacent, available public viewpoints. Also, regarding newly graded slopes, these features would gradually alter the existing character of the previously mined east-facing slope as individual phases of grading progress over seasons. During periods of inactivity (i.e., off-season) and prior to achieving final topographical elevations, newly graded slopes would receive an interim erosion control seed mix. As a result, visible portions of newly graded slopes and interim (or final) vegetation would gradually display similar colors as vegetation on Border Highlands terrain. As such, the gradual creation of new hillside terrain would contribute tan colors to the landscape that are consistent with the tan exposed soils of the previously mined east-facing slope. In addition, interim and final vegetation would over time display similar colors and tones as existing vegetation in the Border Highlands area.

Reclamation, Landform Creation, and Revegetation Summary

The Project site is visibly scarred by previous quarry operations that have created an eroded, oversteepened slope. As a result, the Project site generally displays low intactness and unity (i.e., low visual quality) and a highly disturbed visual character. During active grading and sediment placement, the Project would incrementally reduce the generally low visual quality of the former quarry site through the phased introduction of exposed soil areas that would be placed and graded in accordance with Project grading plans. Active construction equipment and sediment processing activities would also occur on site but would be less visible from public vantage points due to their location on the flatter portions of on-site terrain.

The phased Project would create small to broadening areas of exposed soil and revegetated land. As grading and sediment placement activities would be phased over an approximate 15-year duration, exposed soils and new terrain would be viewed alongside untouched portions of the existing quarry

landscape until Project completion. The interim phases of Project development would display noticeable but moderate contrast with the undeveloped portion of the Project site. Further, proposed reclamation and landform creation activities would temporarily display tan colors that would contrast with the greens and greys of intact vegetation of the adjacent areas. Lastly, during interim phases of construction, Project activities would result in gradual, moderate, and temporary changes to visual resources in the affected portion of the Tijuana River Valley.

Between when vegetation is removed and when sediment placement and compaction activities in grading phases are completed, and until new vegetation is installed and established, tan colored soils would be visible on the Project site. Coupled with the gradually expanding footprint of new, broadening terrain, visual change to the existing character of the Project site would be notable from selected foreground public vantage points. Construction equipment, vehicles, and soil stockpiles would be periodically visible from foreground locations during the proposed reclamation, processing, and grading activities and would contrast with the colors displayed by natural landscape features within the Tijuana River Valley. However, the same elements would be visually consistent with adjacent infrastructure facilities such as the sewage and water treatment plants, construction staging yards, and seasonal sediment management activities occurring in the valley. As such, based on the analysis presented above, the gradual Project impacts to the disturbed visual character and generally low visual quality of the site associated with reclamation, landform creation, and revegetation would be **less than significant**.

Post-Project Visual Analysis

Theme and Style

After reclamation and establishment of vegetation, the Project site would support hilly terrain vegetated with coastal sage scrub vegetation. Reclamation of the oversteepened east-facing slope associated with previous mining operations and the landform creation/grading phases of the Project would restore the existing quarry topography to a visually naturalistic condition and landform that is consistent with adjacent ridges and hillsides adjacent to the Project site. Maturing native vegetation resulting from installation of coastal sage scrub plant species consistent with revegetation plans (and implemented in accordance with the revegetation monitoring and management plan) would gradually obscure and minimize color and textures displayed by the tan soils of underlying slopes. Over time, color and form contrasts between the existing disturbed terrain and new, vegetated hillsides would be reduced. Once vegetation is established, the new terrain would display color and form continuity with existing terrain of the Border Highlands. Therefore, over the long-term, the Project would reflect a similar theme and style on site as existing Border Highlands terrain.

Size, Scale, and Massing

Following the completion of Project activities, established vegetation would soften new landforms created during Phases 1 through 6. Areas of cleared vegetation and exposed slopes on the Project site would be gradually obscured by spreading vegetation. Further, equipment and vehicles associated with sediment processing and grading activities, including stockpiles, mobile processing screens, and trucks, would no longer be present on site and would not contribute elements of movement to the visual landscape. Following the completion of Project activities and establishment of coastal sage scrub plant materials, new terrain and vegetation on the Project site would generally display similar size, scale, and massing as terrain and vegetation of the larger Border Highlands area.

Color

Implementation of the grading and revegetation plans would, in the long term, notably increase the vividness and intactness associated with terrain and vegetation on the Project site. For example, existing pockets of exposed tan soils on the east-facing, oversteepened slope would be replaced with the characteristic dark green and grey of coastal sage scrub vegetation. With implementation of the Project, the former quarry site would display more consistent vegetative and landform patterns. Thus, visual quality and colors would improve once grading activities are complete and vegetation is established.

Post-Project Visual Analysis Summary

During Phase 1, on areas that are outside of the phased grading areas, existing vegetation atop the broad ridgetop landform would be restored and enhanced. Once final elevations are achieved on areas subject to sediment placement, completed portions of the Project site would be revegetated and visually enhanced with native plant species. A weed control and maintenance program would be implemented during the multi-year revegetation process to protect against the spread of invasive species and create an optimal environment for native species. Thus, the Project would result in a net increase in native habitat acreage and improve overall native habitat quality and functions on the site. Revegetation plans include upland coastal sage scrub plant species that are relatively common in the Border Highlands area. Implementation of revegetation plans and management in accordance with the revegetation monitoring and management plan would create a gradually dense hillside habitat within the Border Highlands area that would generally consist of similar vegetation supported on site as that seen on ridge and hillside terrain to the west. Therefore, the general form, color, and texture of new planting materials would be visually consistent with the prevalent vegetation of nearby hill and ridge terrain. As such, the visual character and quality of the site would be enhanced in the post-grading and revegetation phase.

Following the completion of Project activities, the visual features that would be present on the Project site would be compatible with the existing terrain and vegetation of the Border Highlands area. Long-term change would not be adverse and the anticipated alterations to the visual environment of the Project site would be beneficial. With implementation of the grading and revegetation plans, and with the establishment of new vegetation, the visual quality of the Project site would improve. Therefore, following the completion of Project activities, the Project site would not introduce features that would detract from or contrast with the existing visual character and/or quality of a localized area by conflicting with important visual elements or the quality of the area. Impacts would be **less than significant**.

- 2. Would the Project result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), trees, and rock outcroppings?***

Reclamation, Landform Creation, and Revegetation

The visual character and quality of the Project site has been visibly altered and scarred by previous sand and gravel mining activities (see Figures 3.1-3 and 3.1-4). There are no designated landmarks or historic resources present on the Project site. While the Project site is not designated as a scenic corridor and has not been designated as having unique scenic value by the County or City, the steep slopes and landforms present on site contribute to the visual character of the Border Highlands area. In addition to heavily eroded slopes, the Project site generally supports scant upland shrubs across slopes, drainages, and flat terrain.

In addition to ridges, drainages, and steep slopes, coastal sage scrub vegetation is common in the southern portion of the Tijuana River Valley and the Border Highlands area. As previously discussed, implementation of the Project would result in the phased removal of existing low density vegetation within the Project's limits of disturbance. The existing eroded and over-steepened quarry slopes would be reclaimed during the initial phase of the Project and the reclaimed terrain would be gradually widened and expanded from the ridgetop landform towards the northern and eastern extents of the site during subsequent grading phases (see Figures 2-5a and 2-5f in Chapter 2). Over an approximately 15-year period, new terrain would be created and the site would be experienced as a series of gradually changing landforms as the grading plan is built out. During this time, processing plant equipment, ground-moving vehicles, and construction workers would operate on site and alter existing character. The flat portion of the Project site would also be altered to accommodate a sediment trap, staging area, and soil stockpiles; however, this area and these Project features are obscured from view at most public vantage points by terrain and vegetation and would not be visually prominent.

As previously stated, implementation of the Project would result in the gradual removal of scant vegetation across the limits of disturbance on the Project site. Further, the creation of new, progressively constructed and broadened terrain would result in a notable change to the existing visual environment, which is heavily influenced by a prominent eroded oversteepened slope associated with previous mining operations. However, anticipated changes to vegetation and terrain on the Project site would be overall consistent with the visual resources of the larger Border Highlands area, which consists of mesas, relatively narrow ridges, and drainage terrain that is consistently covered with scant to dense scrub vegetation. Thus, the Project would result in **less-than-significant impacts**.

Post-Grading and Revegetation

After grading and revegetation, the Project site would support a large, hilly, and vegetated landform. The slopes within the area of disturbance would be planted with coastal sage scrub that would be visually consistent with existing upland habitat in the area. New terrain associated with the reclamation and landform creation phases of grading would be gradually softened by interim and final vegetation. The resulting terrain on the Project site would be visually naturalistic and would be consistent with ridges and hillsides adjacent to the Project site.

As such, the visual quality associated with active reclamation and landform creation would improve following the completion of Project activities and the establishment of vegetation on newly created slopes. Therefore, long-term management of the site as vegetated open space would not result in a substantial adverse change to the existing visual character of the local area. Impacts would be **less than significant**.

3. *Would the Project substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:*

- a public road;
- a trail within an adopted County or State trail system;
- a scenic vista or highway; or
- a recreational area.

A vista is a view from a location or composite views along a roadway or trail. Scenic vistas often refer to views of natural lands but may also be compositions of natural and developed areas, or even entirely of developed and unnatural areas, such as a scenic vista of a rural town and surrounding agricultural lands.

What is scenic to one person may not be scenic to another, so the assessment of what constitutes a scenic vista must consider the perceptions of a variety of viewer groups.

The items that can be seen within a vista are visual resources. Adverse impacts on individual visual resources or the addition of structures or developed areas may or may not adversely affect the vista. Determining the level of impact on a scenic vista requires analyzing the changes to the vista as a whole and to individual visual resources.

Reclamation, Landform Creation, and Revegetation

Public Roads

Interstate 5

North- and southbound motorists are provided brief and distant glimpses to the eroded, east-facing hillside on the Project site (located 1.2 miles away). Existing vegetation, landscaping, and development paralleling the I-5 corridor between Dairy Mart Road and the U.S./Mexico border generally blocks the Project site from view of motorists. As such, construction activities and proposed landform modifications occurring on the Project site would not be visually prominent in the I-5 viewshed and would generally be imperceptible to interstate motorists. In addition, construction activities on the Project site (located over 1 mile away) would not block or obstruct views from the interstate. As such, impacts to focal or panoramic views from I-5 would be **less than significant**.

Dairy Mart Road

From approximately Camino De La Plaza to Old Dairy Mart (approximately 0.25 miles), the eroded, east-facing slope that straddles APNs 664-011-0500 and 664-011-0400 on the Project site is partially visible above vegetation in the foreground and below the flat to slightly undulating southern horizon line created by prominent terrain in Tijuana. In addition, from the southern end of the bridge spanning the Tijuana River to Monument Road (approximately 0.3 miles), the eroded, east-facing hillside of the Project site is partially and intermittently visible to southbound motorists. Along both segments of Dairy Mart Road, natural vegetation within the Tijuana River floodplain and landscaping installed at the City's water treatment plant occasionally block the higher portions of the east-facing slope from view. Lower elevation portions of the Project site are entirely screened from view of Dairy Mart Road motorists by intervening development, vegetation, and terrain. While visible from Dairy Mart Road, the east-facing slope on the Project site is not a focal feature in the landscape and may be overlooked by casual observers, due to lightly colored eroded soils. Instead, mature vegetation in the Tijuana River floodplain, the prominent ridgeline located south of the U.S./Mexico border, and dense development on Tijuana hillsides attract the attention of motorists.

While Dairy Mart Road motorists would be provided partial views of the Project site, including the seasonal mobilization of construction equipment on site and alterations to the existing east-facing hillside terrain associated with gradual sediment placement and compaction, Project activities would not obstruct, interrupt, or detract from existing focal or panoramic views. The intermittent and partial visibility of the east-facing slopes would not result in substantial view degradation. Further, Dairy Mart Road has not been designated as a scenic roadway by the City and, where the Project site is visible, truly panoramic views (i.e., 360 degrees) are not available. For example, westerly views are somewhat limited in length by mature, riparian vegetation in the Tijuana River corridor and southbound views are occasionally (and briefly) impeded by the various buildings and landscaping at the South Bay Water Reclamation Plant.

Based on the analysis provided above, impacts to existing views from Dairy Mart Road during reclamation, landform creation, and revegetation would be **less than significant**.

Monument Road

As stated in the Visual Character section in Section 3.1.1, the southern extension of Monument Road parallels the Project site (i.e., APN 664-011-0500) for approximately 350 feet. Open views to the Project site and specifically the east-facing slope and relatively flat portion of APN 664-011-0500 are briefly available from eastbound Monument Road and, for a slightly longer duration, from westbound Monument Road. However, the road is not designated scenic by the City, receives a low volume of public motorists on a daily basis, and is primarily used by CBP agents, water and wastewater treatment facility staff, and occasionally by State Parks and County Department of Parks and Recreation staff. Open views to seasonal sediment hauling, processing, and placement activities would be available to a limited volume of Monument Road motorists. The west view from westbound Monument Road is short in length due to the prominent scale of the eroded, east-facing hillside on the Project site and is largely characterized by the eroded slope and densely developed hillsides in Tijuana. Due to the short length of the view and because Project activities would occur on the east-facing slope and flat portions of Project site, the Project activities including grading, landform creation, sediment stockpiling would not obstruct an existing scenic view or vista. Construction activities would occur over a 10- to 15-year period; however, as visual sensitivity to the changes proposed by the Project as experienced by Monument Road motorists (i.e., on the southern extension of Monument Road) is considered low and available views are neither focal nor panoramic, noticeable activities including vegetation removal and landform reclamation and creation would not result in a substantial impact to a valued focal or panoramic vista. Thus, impacts would be **less than significant**.

Sunset Avenue

Sunset Avenue is not designated scenic by the City. Sunset Avenue offers limited and distant views to the ridge on the Project site. The eroded, east-facing hillside on APNs 664-011-0500 and 664-011-04000 and flat valley bottom on APN 664-011-0500 are not visible from Sunset Avenue. However, proposed landform alteration and the extension of the existing eroded ridgeline to the east and northeast through a multi-year sediment placement and compaction operation may be visible from segments of the road located east of Hollister Street. Because visual sensitivity to the changes in the landscape as experienced from Sunset Avenue is considered low and due to distance, orientation, the presence of more visually prominent background elements (i.e., development in Tijuana), low volume of viewers, and short view duration, proposed activities on the Project site including proposed landform alteration and reclamation and creation of terrain would not substantially obstruct, interrupt, or detract from available south-oriented views from Sunset Avenue. Accordingly, impacts would be **less than significant**.

Camino De La Plaza

While Camino De La Plaza is not designated scenic by the City, the road is identified in the local community plan as providing partial or intermittent vistas across the Tijuana River floodplain. See Figures 3.1-1 and 3.1-5, which indicate the location of City-designated vistas and the quality of existing views two viewpoints. On Camino De La Plaza, partially obstructed views to the Project site are available under clear atmospheric conditions from approximately the pronounced curve (located 0.40 miles west of Sipes Lane) to approximately 0.25 miles east of Dairy Mart Road. Due to distance and location of the Project site in the visible landscape (i.e., located over mile southwest across foreground agricultural fields), proposed

seasonal sediment hauling, processing, placement, and compaction and construction equipment on the Project site over an up to 15-year timeframe would not result in the substantial obstruction of a view or vista from Camino De La Plaza.

Proposed vegetation removal would slightly enhance the visibility of the east-facing slopes through a perceptible increase in tan/reddish soils in views; however, these color contrasts would be located over 1 mile away and would occupy a relatively small portion of the available view. Further, the tan colors associated with new terrain would be visually consistent with the color of the existing eroded and oversteepened slope and new tan colors would be obscured by distance, foreground landscaping and/or fencing, and developed terrain in Tijuana. As such, proposed activities would not substantially obstruct, interrupt, or detract from a focal or panoramic vista available from Camino De La Plaza. Therefore, impacts would be **less than significant**.

Trail Within an Adopted County or State Trail System

Impacts to trails within TRVRP are addressed below under the heading Recreation Area. There are no segments of a County or state trail system within the viewshed of the Project site.

Scenic Vista or Highway

Scenic vistas including partial or intermittent vistas identified by City were previously discussed above under Public Roads. Project impacts on views from I-5 were also assessed above in Public Roads. There are no other designated scenic vistas or viewing locations in the viewshed of the Project site.

As previously stated, the Project site is in the southeast corner of the TRVRP and within the Border Highlands area of the Tijuana River Valley (see Figure 3.1-8). The TRVRP park brochure delineates equestrian and pedestrian trails, multi-use trails, and nature observation areas (County of San Diego 2020). While trails are located atop higher elevation terrain in the Border Highlands area, including Spooner's Mesa (located over 0.85 miles west of the Project site) and ridges southwest of the TRVRP Ranger Station (located as close as 0.15 miles to the westerly limits of the Project disturbance area), scenic vistas are not identified in the TRVRP park brochure. Therefore, proposed activities would not substantially obstruct, interrupt, or detract from a designated focal or panoramic vista available within TRVRP.

While scenic vistas are not identified, the TRVRP park brochure identifies nature observation areas. Two designated nature observation areas are identified on a multi-use trail located approximately 0.85 miles north of the Project site near the southern shore of the Dairy Mart Pond (see Figure 3.1-1). Located west of Scenic Overlook A on Figure 3.1-1, the identified view from the observation areas is oriented to the north towards the Dairy Mart Pond. Views to the south from these locations are not identified as scenic vistas or nature observation areas. Further, the two nature observation areas are accessible via a multi-use trail that is bordered by dense and mature riparian vegetation on the south that severely limits the availability of open views towards the Project site and Border Highlands area. As such, views from the nature observation areas towards the Project site are not considered scenic vistas and are not analyzed as such in this assessment.

Views from nearby trails in the TRVRP are discussed below under the heading Recreational Area. Effects to views from public roads in the surrounding area are addressed above under the heading Public Roads.

Recreation Area

The nearest designated multi-use trail in the TRVRP is located approximately 0.15 miles west of the Project site (see Figure 3.1-8). As viewed from this trail, most Project activities (except for those occurring on the ridge centrally located on the Project site) would be screened from the view of trail users by intervening terrain and vegetation. Where visible, seasonal Project activities (including revegetation efforts atop the ridge and grading and compaction of new terrain that would extend outwards from the existing ridge) would not obstruct or substantially interrupt the long and panoramic view to the east towards Otay Mesa and Otay Mountain. For similar reasons, Project activities would not interrupt or obstruct views from trails atop Spooner's Mesa that are located over 1 mile away to the west of the Project site. As such, impacts to views available from TRVRP multi-use and equestrian and pedestrian trails would be **less than significant**.

Reclamation, Landform Creation, and Revegetation Phase Summary

As discussed above, Project impacts to views from public roads, trails, scenic vistas and/or highways, and recreation areas during reclamation, landform creation, and revegetation would be **less than significant**.

Post-Grading and Revegetation

Following the completion of Project activities, long-term impacts to scenic views from public roads, trails, scenic vistas and/or highways, and recreation areas would be minimal. As previously assessed above for the reclamation, landform creation, and revegetation phases, proposed activities on the Project site would not result in the substantial obstruction of scenic views. Similarly, new terrain and vegetation on the Project site would not create substantial view obstruction and would not result in substantial view interruption or degradation. Rather, the visual quality of the Project site (specifically, landscape intactness and unity) would improve and new terrain would gradually blend in with the established visual character of the Border Highlands. For example, establishment of upland vegetation on new terrain would help to soften the incremental introduction of new terrain. Established upland vegetation would also aid in visually blending new terrain with intact areas of the adjacent Border Highlands. Once final elevations are achieved and vegetation is established, the Project site would be visually consistent with the visual character and quality of the surrounding Border Highlands area.

Overall, new vegetated slopes would not obstruct or interrupt scenic views available from local roads and recreational areas, including nearby trails. The existing east-facing slopes and nearby terrain of the Border Highlands create a topographical impediment to particularly long views from local roads, including Monument Road and Camino De La Plaza. Similarly, these features tend to limit the availability of distant south and southwest oriented views from the few TRVRP trails within the viewshed of the Project site. New terrain and vegetation would also not occupy the foreground of a designated scenic vista and would therefore not result in substantial blockage of an existing scenic view. Therefore, the Project would not substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista. Impacts would be **less than significant**.

4. *Would the Project result in the loss of any distinctive or landmark tree(s), or stand of mature trees as identified in a community plan?*

The Project site does not support distinctive or landmark trees. The Project site also does not support a stand of mature trees as identified in the Tijuana River Valley Local Coastal Program Land Use Plan, which is the applicable community plan. Rather, the area within the proposed limits of grading on Project site

encompasses lands mapped primarily as diegan coastal sage scrub and disturbed lands. Dense to scant shrub vegetation covers the flat and east-facing slope of the Project site, and scrub vegetation atop the centrally located ridge has generally been disturbed by access road development and regular use of the area by CBP agents for patrols (see Figures 3.1-3 and 3.1-4). While Project activities would result in the removal of existing vegetation within the limits of grading, implementation of the Project would not result in the loss of any distinctive or landmark trees and would not require the removal of stands of mature trees. As such, **no impact** to landmark trees or stand of mature trees would occur.

5. *Would the Project result in a substantial change in the existing landform?*

According to the City's CEQA Significance Determination Thresholds, a project is considered to have a significant impact if a project would result in more than 2,000 cubic yards of earth per graded acre by either excavation or fill. In addition, one or more of the following conditions must apply to meet this significance threshold (City of San Diego 2016):

1. The project would disturb steep hillsides in excess of the encroachment allowances of the Environmentally Sensitive Lands regulations (Land Development Code Chapter 14, Article 3, Division 1).
2. The project would create manufactured slopes higher than 10 feet or steeper than 2:1 (50%).
3. The project would result in a change in elevation of steep hillsides as defined by the San Diego Municipal Code Section 113.0103 from existing grade to proposed grade of more than 5 feet by either excavation or fill, unless the area over which excavation or fill would exceed 5 feet is only at isolated points on the site.
4. The project design includes mass terracing of natural slopes with cut or fill slopes in order to construct flat-pad structures.

However, the above conditions may not be considered significant if one or more of the following apply:

1. The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed landforms will very closely imitate the existing on-site landform and/or the undisturbed, pre-existing surrounding neighborhood landforms. This may be achieved through "naturalized" variable slopes.
2. The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed slopes follow the natural existing landform and no point vary substantially from the natural landform elevations.
3. The proposed excavation or fill is necessary to permit installation of alternative design features such as step-down or detached buildings, non-typical roadway or parking lot designs, and alternative retaining wall designs which reduce the projects overall grading requirements.

Reclamation, Landform Creation, and Revegetation

Phase 1 of the Project grading plans is focused on the reclamation of the eroded and oversteepened east-facing slope centrally located on the Project site. Following the completion of Phase 1, sequential phases of the grading plan would, over an up to 15-year timeframe, extend the existing eroded slope to the east and northeast and restore the historic topography on the Project site through the placement and compaction of excess sediment that is dredged from channels and basins in the Tijuana River Valley. Historic, pre-quarry operations terrain is depicted in Figure 2-3c in Chapter 2. Sediment hauling, processing, placement, and compaction activities would occur seasonally and would gradually alter the massing and bulk of existing on-site terrain. In addition, the flatter portions of the Project site would be gradually covered by newly created hill terrain. While the slopes of new terrain would generally be no steeper than 2:1 (horizontal to vertical), implementation of the grading plan would repair existing oversteepened slopes and

create naturalistic manufactured slopes higher than 10 feet. Mass terracing of natural slopes for the purpose of constructing flat pad surfaces for building development is not proposed.

Topographical changes to existing degraded landform on the Project site would be substantial. Over an up to 15-year period, over 1 million cubic yards of excess sediment dredged from in-valley sources are proposed to be gradually placed on the Project site for the creation of new terrain that would receive an erosion control seed mix or, if final elevations have been achieved, a habitat forming coastal sage scrub seed mix. However, the grading plan reflects variable slopes and later phases depict elongated, curved contours to promote a more naturalistic appearance and avoidance of forced, unnatural, and overly manufactured slope lines and forms. The broad, rounded, and undulating slopes associated with later grading phases would also blend into the contours of natural terrain on the Project site. Because naturalized and variable slopes are proposed and would be revegetated with coastal sage scrub vegetation common to and visually consistent with vegetation in the Border Highlands area, the Project would not be considered to result in a significant impact concerning a substantial change in the existing landform. With implementation of the Project grading plans, revegetation plan, and revegetation monitoring and management plan, impacts would be **less than significant**.

Post-Grading and Revegetation

Following the completion of grading and establishment of vegetation, the geometric form of constructed slopes would be softened and masked. With established vegetation, constructed contours would appear more natural than immediately following construction and new landforms would resemble the existing terrain of the Border Highlands area. Therefore, impacts would be **less than significant**.

6. *Would the Project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?*
7. *Would the Project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?*
8. *Would the Project generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property?*

Reclamation, Landform Creation, and Revegetation

When seasonally active, Project activities would operate during daylight hours, generally between 7:00 a.m. and 5:00 p.m., Monday through Friday. The Project site would be closed on Saturdays, Sundays, and holidays.

Class I Lighting is classified as lighting for commercial and industrial uses, while Class II lighting is classified as parking and security lighting for all uses (County of San Diego 2012). The future site operator may install security lighting, classified as Class II lighting, at the Project site. Specifically, temporary outdoor lighting for security may be installed on the operations office/trailer and potentially near the mobile processing screen for security purpose and would be designed to minimize glare and reflection onto neighboring areas. All lighting would typically be directed downward in accordance with the County Light Pollution Code. Further, the Project would comply with applicable regulations by using fully shielded, pole-mounted sodium, metal halide, or fluorescent lighting types of 4,050 lumens or below for outdoor lighting, per the County's Light

Pollution Code and Private Outdoor Lighting Regulations (County of San Diego 2009, 2012). These lighting sources would minimize energy use and, in combination with cut-offs, reduce light pollution.

The Project site is surrounded by undeveloped land and water treatment facilities to the east, undeveloped land to the immediate south and west, and undeveloped hillsides and TRVRP facilities to the north. Residential uses are located to the northwest along Monument Road; however, the site is visually screened from residences by intervening terrain and vegetation. Due to the interior location of temporary lighting on the Project site and the use of shielded and downward casting light fixtures, significant impacts associated with light trespass onto adjacent properties are not anticipated. No other nighttime lighting sources are anticipated on the Project site and no night-time construction activities or operations are proposed.

Because the Project does not include a major new source of permanent outdoor lighting and because all outdoor lighting would comply with existing regulations related to lamp types and shielding, the Project would not result in significant light trespass impacts.

The Project would introduce vegetation removal, grading, sediment processing, and compaction activities on site that would not result in construction of structures. A temporary utility line for the construction trailers would be installed off an existing nearby line. Existing power poles are located near the entrance to the Project site off Monument Road. The temporary utility line would be aboveground but not highly noticeable. Project activities would introduce equipment on site that may incorporate metallic components. Although this equipment may be visible from nearby roads such as Monument Road and Dairy Mart Road, these materials are not particularly reflective and would not be expected to create nuisance or distraction glare that would result in unsafe driving conditions. As such, impacts related to light and glare during the reclamation, landform creation, and revegetation phase would be **less than significant**.

Post-Grading and Revegetation

No new lighting sources would be present on the Project site after Project activities are completed. Therefore, the Project would conform with the County's Guidelines for Dark Skies and Glare, associated policies, and the San Diego County Zoning Ordinance governing light and glare during Project operation. Impacts related to light and glare during the post-grading and revegetation phase would be **less than significant**.

9. *Would the Project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?*
10. *Would the Project not conform to applicable Federal, State, or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?*

No permanent buildings are proposed to be constructed on the Project site. While a prefabricated and temporary operations office/trailer would be located on site during active operations, the structure would be typical of those located on construction sites throughout the County. Specifically, the temporary structure would most likely be constructed of wood, vinyl siding, or similar materials and would not be highly reflective. The structure would include a limited number of windows that are likely to feature low-reflectivity glass that would not generate substantial glare. Further, due to the presence of intervening (and elevated) terrain and scrub vegetation, the office/trailer would be partially screened from view of Monument Road and Dairy Mart Road motorists and fully screened from view of local residents.

No permanent lighting fixtures are proposed to be installed on site and all temporary lighting fixtures used during construction would conform to local regulations related to dark skies and glare. Lastly, building materials associated with the temporary operations office would not include highly reflective materials. As such, daytime glare impacts would be **less than significant**.

3.1.5 Cumulative Impacts

The geographic scope for the aesthetics cumulative analysis encompasses the Project viewshed. Cumulative impacts analysis requires the analysis of other projects located within the Project viewshed. Impacts are considerable if the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects.

Valued Visual Character or Image of the Neighborhood or Community

The geographic context for the analysis of cumulative impacts regarding valued visual character or image of the neighborhood or community is the viewshed of the proposed Project. Several of the cumulative projects listed within Table 2-11 in Chapter 2 are located within the viewshed of the Project and include projects associated with wastewater and pollution control in the main channel of the Tijuana River and the U.S./Mexico international border walls (i.e., original and secondary wall). The Project would result in less-than-significant impacts to valued visual character or the image of the neighborhood and would not combine with other projects to create a cumulative impact to the visual character of the Project viewshed. While the identified cumulative projects would alter the visual landscape, construction effects would be temporary and would occur where existing wastewater and pollution control facilities and border facilities are in place and contribute to the existing visual character or image of the Tijuana River Valley. Therefore, impacts associated with scenic resources **would not be cumulatively considerable**.

Visual Character and Quality

The geographic context for the analysis of cumulative impacts with regards to visual character and quality is public views of the Project site and surrounding areas. A significant cumulative impact would occur if the development of cumulative projects would significantly change the overall visual character of the area. As detailed in Section 3.1.4, implementation of the Project would not result in a substantial adverse change to the existing visual character of the local area. Proposed visual change would be gradual and would occur on a visually degraded site where existing wastewater and pollution control facilities and border facilities are in place and contribute to the existing visual character or image of the Tijuana River Valley. Thus, the Project would not combine with other projects to jointly introduce features that would detract or contrast with the visual character and quality of the area. Therefore, impacts associated with visual character **would not be cumulatively considerable**.

Scenic Vistas

The geographic context for the analysis of cumulative impacts regarding scenic vistas is the viewshed of the proposed Project. As discussed in Section 3.1.4, views of the Project site are available from I-5, Monument Road, Sunset Avenue, Camino De La Plaza, Bibler Drive, and trails in the TRVRP. Further, implementation of the Project was determined not to result in a potentially significant impact to scenic vistas. Of the projects considered in Table 2-11, nearly all are located to the west and northwest, and those to the northeast are not within the viewshed of the proposed Project. Several, including the border walls and sediment and pollution controls systems and management activities in the Tijuana River, are located in the Project viewshed; however, due to their location in

relation to the identified roads and viewpoints listed above, they would not result in substantial view blockage, interrupt, or degradation. Therefore, impacts associated with scenic vistas **would not be cumulatively considerable**.

Loss of any Distinctive or Landmark Trees or Stand of Mature Trees

The Project site does not support distinctive or landmark trees and thus would **not contribute to a cumulatively considerable aesthetic impact**.

Substantial Change to Existing Landform

Gradual visual change during reclamation, landform creation, and revegetation activities would result in a substantial change in the existing on-site landform. However, the Project grading plan reflects variable slopes and later phases depict elongated, curved contours to promote a more naturalistic appearance and avoid forced, unnatural, and overly manufactured slope lines and forms. The broad, rounded, and undulating slopes associated with later grading phases would also blend into the contours of natural terrain on the Project site. Because naturalized and variable slopes are proposed and would be revegetated with coastal sage scrub vegetation common to and visually consistent with vegetation in the Border Highlands area, impacts to changes to existing landform would be less than significant.

Of the developments located in the viewshed of the Project, none would result in landform alteration to a similar extent. The construction of sediment basins in the main channel of the Tijuana River would alter the elevation of the existing floodplain; however, they would not result in a significant change to visual character of the floodplain. None of the other projects located in the Project viewshed would result in a substantial change to existing landform and, as such, the Project would **not contribute to a cumulative considerable aesthetic impact**.

Lighting and Glare

The geographic context for the analysis of cumulative impacts regarding lighting and glare is the cumulative projects throughout Tijuana River Valley and those listed in Table 2-11 in Chapter 2. These projects include, but are not limited to, sediment management, campground, and residential projects. Residential and campground cumulative projects could have the potential to introduce new sources of light and glare to the valley without the Project (lighting is not used during regular sediment management activities in the Tijuana River Valley). However, cumulative projects would be required to comply with County and/or City Zoning Ordinances governing light and glare. The Project would include shielded night lighting for security purposes at the operations trailer/office, which would be designed to minimize glare and reflection onto adjacent uses. Further, the Project would comply with all applicable regulations, including the County Guidelines for Dark Skies and Glare. No lighting would be present on the Project site after grading and revegetation activities are completed. Therefore, impacts associated with lighting and glare **would not be cumulatively considerable**.

3.1.6 Mitigation Measures

Impacts would be less than significant and therefore no mitigation measures are required.

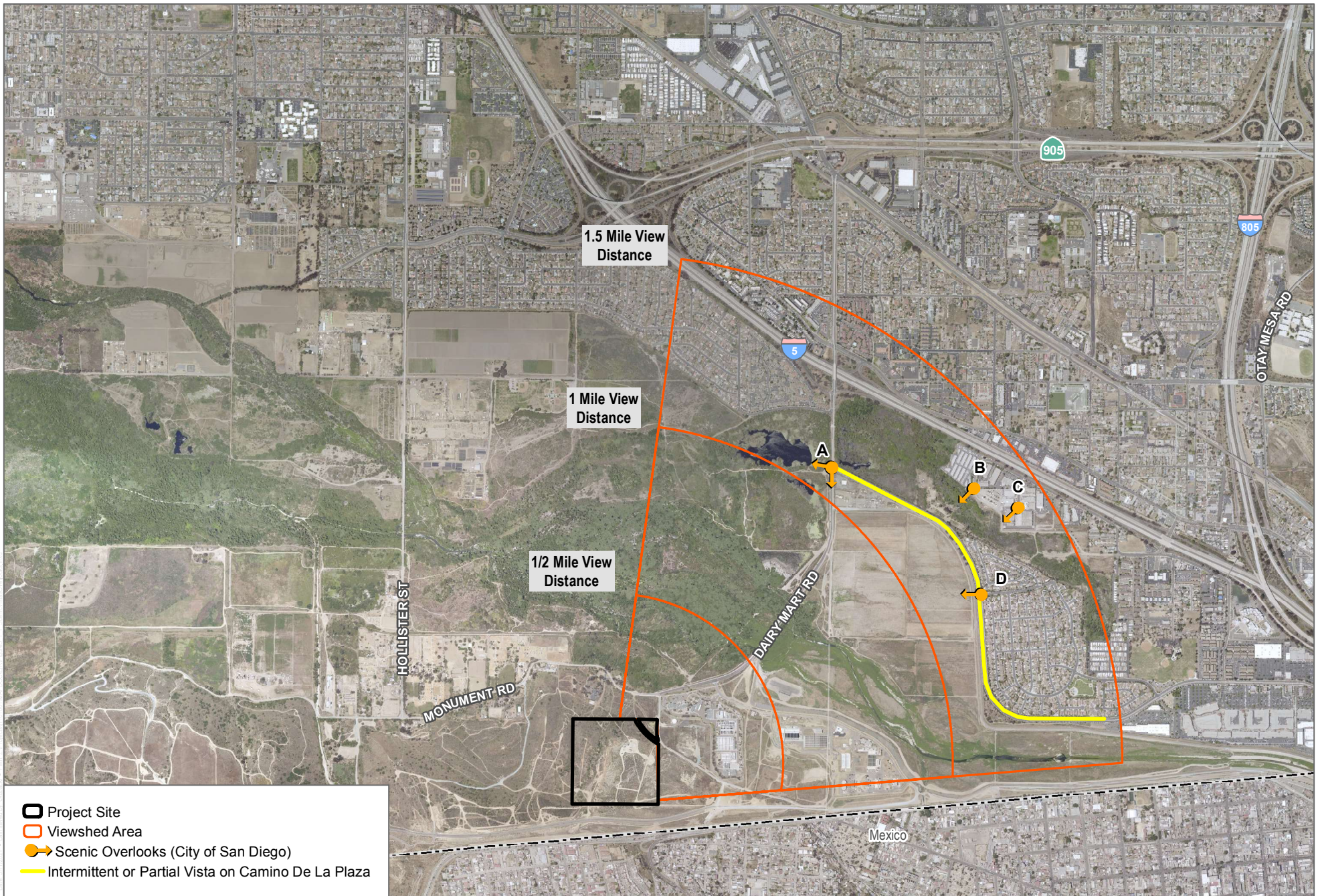
3.1.7 Level of Significance After Mitigation

All impacts were determined to be less than significant.

3.1.8 References

- Caltrans (California Department of Transportation). 2020. "2017 Traffic Volumes: Route 5-6." Accessed June 5, 2020. <https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-5-6>.
- City of San Diego. 1999. *Tijuana River Valley Local Coastal Program Land Use Plan*. Adopted December 8, 1976, and amended June 1, 1999. <https://www.sandiego.gov/sites/default/files/trvprint.pdf>.
- City of San Diego. 2008. "Conservation Element." In *City of San Diego General Plan*. March 2008. <https://www.sandiego.gov/sites/default/files/legacy//planning/genplan/pdf/2012/ce120100.pdf>.
- City of San Diego. 2015. "Land Use & Community Planning Element." In *City of San Diego General Plan*. June 2015. https://www.sandiego.gov/sites/default/files/lu_2015.pdf.
- City of San Diego. 2016. *City of San Diego California Environmental Quality Act Significance Determination Thresholds*. July 2016. https://www.sandiego.gov/sites/default/files/july_2016_ceqa_thresholds_final_0.pdf.
- City of San Diego. 2017. *San Ysidro Community Plan and Local Coastal Program Land Use Plan*. Adopted November 2016, amended October 2017.
- City of San Diego. 2020. "Open Portal – Traffic Volumes." Accessed June 2, 2020. <https://data.sandiego.gov/datasets/traffic-volumes/>.
- County of San Diego. 2007a. *Tijuana River Valley Regional Park Area Specific Management Directives*. Adopted June 22, 2007.
- County of San Diego. 2007b. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Visual Resources*. July 30, 2007. https://www.sandiegocounty.gov/content/dam/sdc/pds/docs/visual_guidelines.pdf.
- County of San Diego. 2007c. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Dark Skies and Glare*. July 30, 2007. https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/Dark_Skies_Guidelines.pdf
- County of San Diego. 2009. "San Diego County Code of Regulatory Ordinances, Title 5, Chapter 2: Light Pollution. Section 51.201 to Section 51.209." Accessed June 4, 2020. <https://www.sandiegocounty.gov/pds/docs/LightPollutionCode.pdf>.
- County of San Diego. 2011. "Chapter 5: Conservation and Open Space Element." In *San Diego County General Plan: A Plan for Growth, Conservation and Sustainability*. Adopted August 3, 2011. <https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/ConservationandOpenSpace.pdf>
- County of San Diego. 2012 Private Outdoor Lighting Regulations. PDS 211, revised 09/24/2012
- County of San Diego. 2020. "Tijuana River Valley Regional Park" [brochure]. Accessed June 5, 2020. <http://www.sdparcs.org/content/sdparcs/en/park-pages/TJRVRP.html>.

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017; 2020; Bing Maps 2021

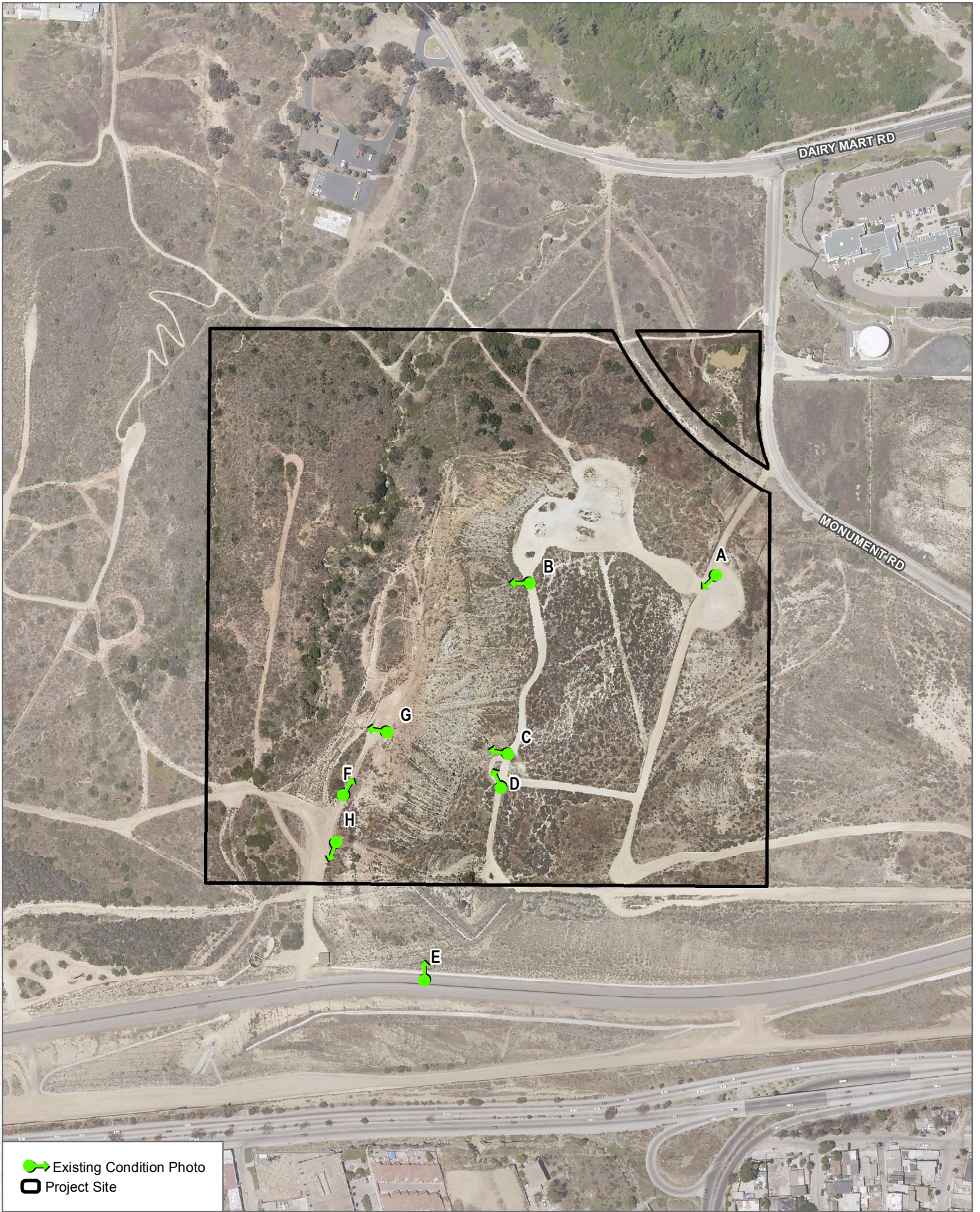


FIGURE 3.1-1

Scenic Vistas and Overlooks

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017

FIGURE 3.1-2

Existing Conditions: Key Map

INTENTIONALLY LEFT BLANK



Photograph A



Photograph B



Photograph C



Photograph D

PHOTOGRAPHS BY BOB HARTMAN/DCO/EEB

INTENTIONALLY LEFT BLANK



Photograph E



Photograph F



Photograph G



Photograph H

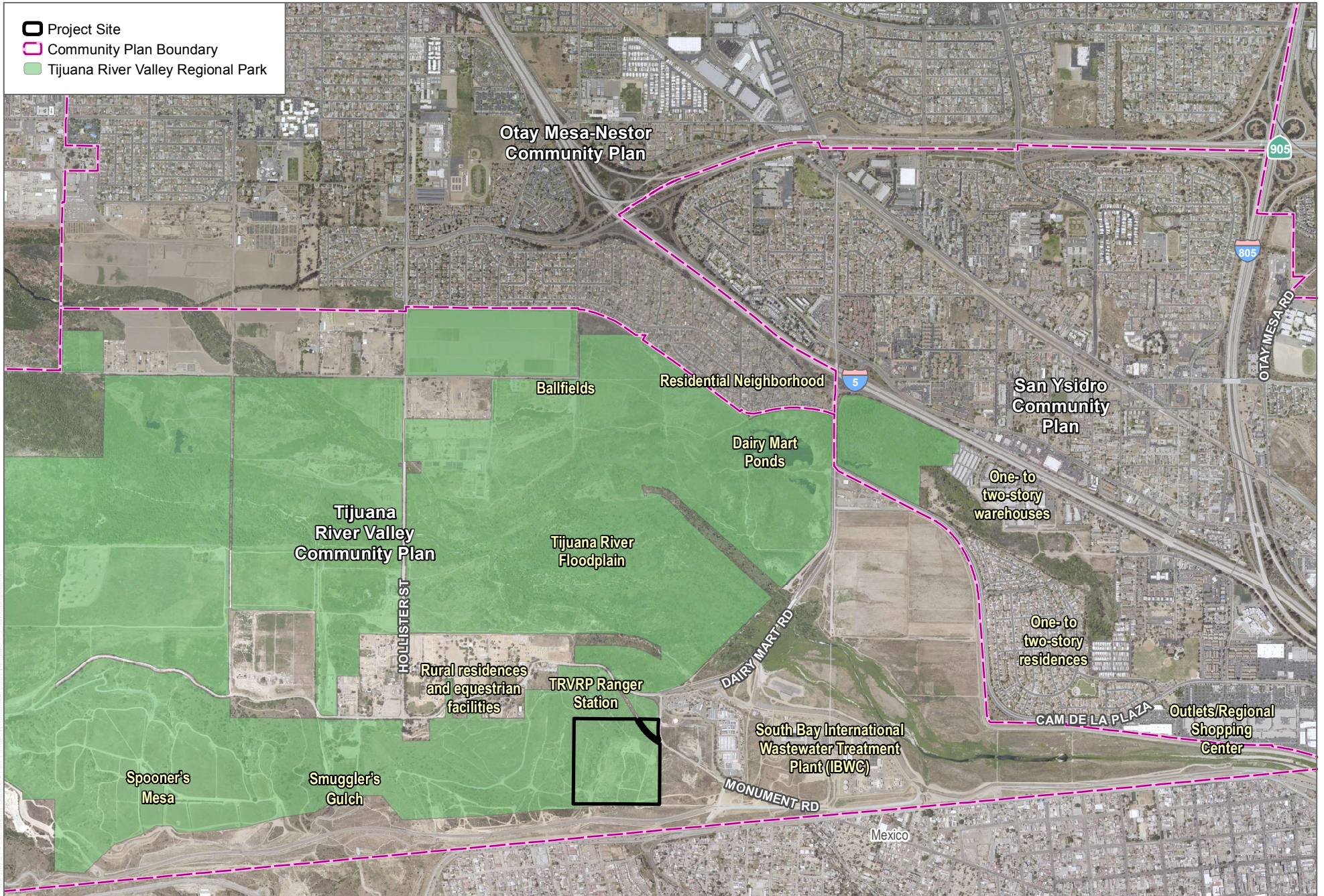
PHOTOGRAPHS BY BOB LANGRISH/CC BY

FIGURE 3.1-4

Existing Conditions: Project Site

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017; 2020; Bing Maps 2021



FIGURE 3.1-5
Surrounding Area

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



View from Dairy Mart Road near bridge (Northeast of Project Site)



View from Monument Road (East of Project Site)

FIGURE 3.1-6

Existing Views from Local Roads: Dairy Mart Road and Monument Road

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



View from Camino De La Plaza towards Project Site



View from Bibler Road/Camino De La Plaza Intersection

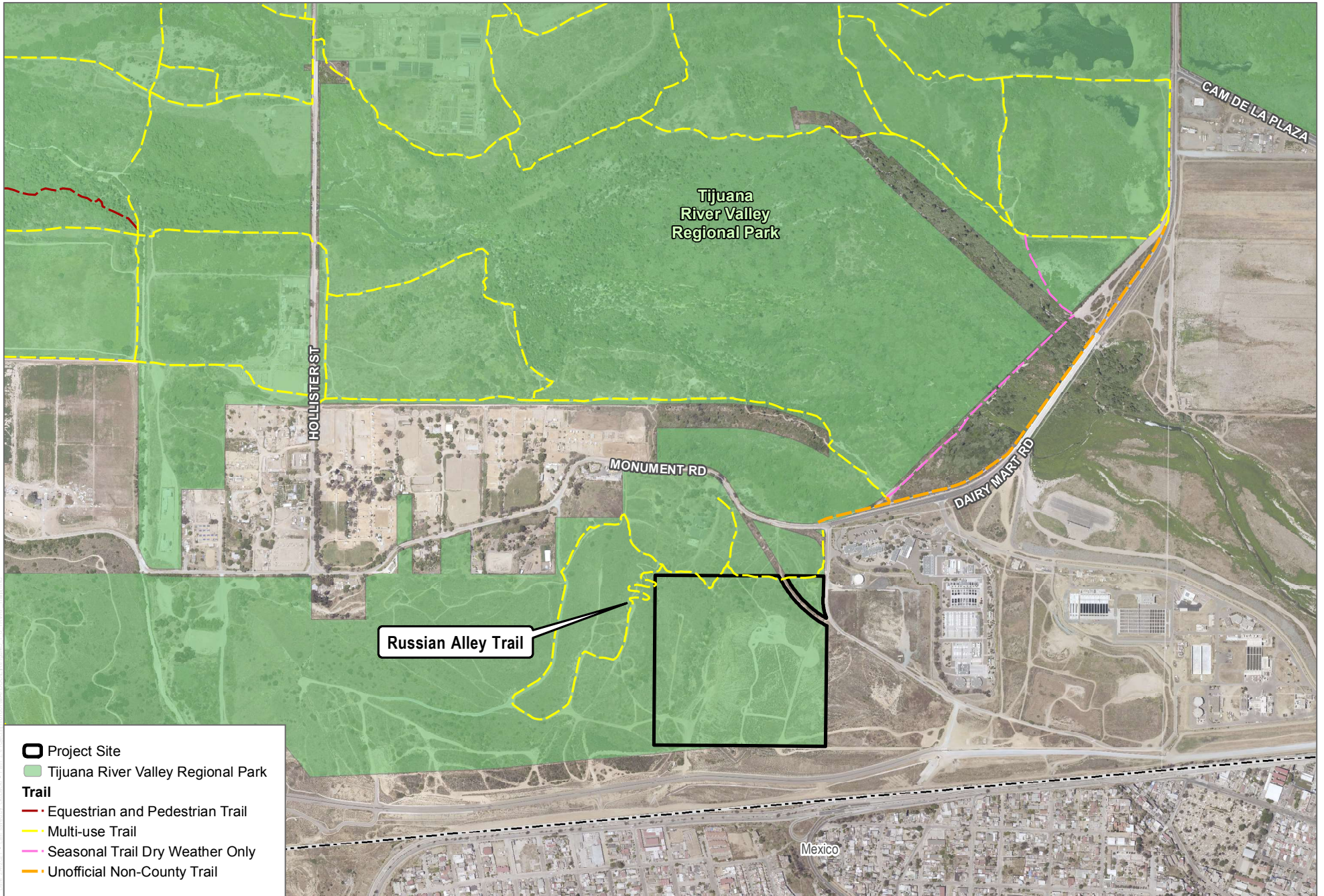
Z:\Projects\1118101\WAP\DCR

FIGURE 3.1-7

Existing Views from Local Roads: Camino De La Plaza and Bibler Road

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017; 2020

FIGURE 3.1-8
TRVRP: Trails

INTENTIONALLY LEFT BLANK

3.2 Air Quality

This section describes the existing air quality conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

3.2.1 Existing Conditions

Climate and Topography

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. Meteorological and topographical factors that affect air quality in the San Diego Air Basin (SDAB) are described below.¹

Regional Climate and Meteorological Conditions

The climate of the San Diego region, as in most of Southern California, is influenced by the strength and position of the semi-permanent high-pressure system over the Pacific Ocean, known as the Pacific High. This high-pressure ridge over the west coast often creates a pattern of late-night and early morning low clouds, hazy afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The SDAB is characterized as a Mediterranean climate with dry, warm summers and mild, occasionally wet winters. Average temperatures range (in degrees Fahrenheit [°F]) from the mid-40s to the high 90s, with an average of 201 days warmer than 70°F. The SDAB experiences 9 to 13 inches of rainfall annually, with most of the region's precipitation falling from November through March, with infrequent (approximately 10%) precipitation during the summer. El Niño and La Niña patterns have large effects on the annual rainfall received in San Diego, where San Diego receives less than normal rainfall during La Niña years.

The interaction of ocean, land, and the Pacific High maintains clear skies for much of the year and influences the direction of prevailing winds (westerly to northwesterly). The winds tend to blow onshore in the day and offshore at night. Local terrain is often the dominant factor in terms of influencing wind patterns inland, as winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

The favorable climate of San Diego also works to create air pollution problems. Sinking, or subsiding, air from the Pacific High creates a temperature inversion known as a subsidence inversion, which acts as a lid on vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic emissions combined with strong sunshine lead to photochemical reactions that result in the creation of ozone (O₃) at this surface layer. In addition, light winds during the summer further limit ventilation.

¹ The discussion of meteorological and topographical conditions of the SDAB is based on information provided in the San Diego Air Pollution Control District 2016 Monitoring Plan (SDAPCD 2017), the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality (County of San Diego 2007), the County of San Diego General Plan Update Environmental Impact Report (County of San Diego 2011), and the California Air Resources Board Recommended Area Designation for the 2010 Federal Sulfur Dioxide Standard (CARB 2011).

In the fall, the SDAB is often impacted by Santa Ana winds, which are the result of a high-pressure system over the Nevada and Utah regions that overcomes the westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. Santa Ana winds are powerful and can blow the SDAB's pollutants out to sea. However, a weak Santa Ana can transport air pollution from the South Coast Air Basin and greatly increase O₃ concentrations in the San Diego area.

Under certain conditions (weak Santa Ana winds), atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County. This often produces high O₃ concentrations, as measured at air pollutant monitoring stations within San Diego County. The transport of air pollutants from the Los Angeles region to San Diego County can also occur within the stable layer of the elevated subsidence inversion, where high levels of O₃ are transported.

Site-Specific Meteorological Conditions

The local climate in southeastern San Diego County is characterized as semi-arid with consistently mild, warmer temperatures throughout the year. The 2020 average summertime high temperature in the region is approximately 79°F. The 2020 average wintertime low temperature is approximately 49°F. Total annual precipitation in the local area in 2020 was approximately 7.83 inches, with the bulk of precipitation falling December through April (NOAA 2021).

Topographical Conditions

Topography in the San Diego region varies greatly, from beaches in the west to mountains and desert in the east; much of the topography in between consists of mesa tops intersected by canyon areas. Along with local meteorology, topography influences the dispersal and movement of pollutants in the SDAB. Mountains to the east prohibit dispersal of pollutants in that direction and help trap pollutants in inversion layers.

The topography of the SDAB also drives pollutant levels, and the SDAB is classified as a "transport recipient," whereby pollutants are transported from the South Coast Air Basin to the north and, when the wind shifts direction, from Tijuana, Mexico, to the south.

Sensitive Land Uses and Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The City of San Diego's California Environmental Quality Act Significance Determination Thresholds (City of San Diego 2016) define a sensitive receptor as "a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large [such as] long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences (such as medical patients in homes), schools, playground, child care centers, [and] athletic facilities." People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where people most likely to be affected by air pollution live or spend considerable amounts of time are known as sensitive receptors. Sensitive receptors near the Project site include residences along and the north of Monument Road and residents to the east and south of the Project site.

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O₃, nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter less than or equal to 10 microns in diameter (PM₁₀) (i.e., coarse particulate matter), particulate matter less than or equal to 2.5 microns in diameter (PM_{2.5}) (i.e., fine particulate matter), and lead. Lead, which is a criteria air pollutant, was phased out of gasoline in the early 1990s. As a result of this phase-out, manufacturing facilities, which are separately regulated by the San Diego Air Pollution Control District (SDAPCD), became the largest source of lead emissions; manufacturing facilities are not included in this analysis. The remaining pollutants of concern are discussed in the following paragraphs.² In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O₃ is a pale blue gas that is formed in the atmosphere when volatile organic compounds (VOCs), sometimes referred to as reactive organic gases, and oxides of nitrogen (NO_x) react in the presence of ultraviolet sunlight. O₃ is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO_x, the precursors of O₃, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O₃ formation, and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide. NO₂ is a brownish, highly reactive gas that is present in all urban atmospheres. Most NO₂, like O₃, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide and atmospheric oxygen. Nitric oxide and NO₂ are collectively referred to as NO_x and are major contributors to O₃ formation. High concentrations of NO₂ can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2021a).

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for most CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

² The descriptions of each of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's Glossary of Climate Change Terms (EPA 2017) and the GHG Inventory Glossary (CARB 2021a).

Sulfur Dioxide. SO₂ is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO₂ are coal and oil used in power plants and industries; as such, the highest levels of SO₂ are generally found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits on the sulfur content of fuels. SO₂ is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO₂ can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{2.5} and PM₁₀ represent fractions of particulate matter. Fine particulate matter, or PM_{2.5}, is roughly 1/28 the diameter of a human hair. PM_{2.5} results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM_{2.5} can be formed in the

atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOC. Inhalable or coarse particulate matter, or PM₁₀, is about 1/7 the thickness of a human hair. Major sources of PM₁₀ include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

PM_{2.5} and PM₁₀ pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5} is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Non-Criteria Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer or acute and/or chronic noncancer health effects upon exposure.

A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples include certain aromatic and chlorinated hydrocarbons, formaldehyde, certain metals, and asbestos. TACs are generated by several sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas, and particle, both of which contribute to health risks. The California Air Resources Board (CARB) classified “particulate emissions from diesel-fueled engines” (i.e., DPM) as a TAC in August 1998 (17 CCR 93000). DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person’s reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory, and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Examples of land uses and industrial operations that are commonly associated with odor complaints include agricultural uses, wastewater treatment plants, food processing facilities, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. In addition to the odor source, the distance between the sensitive receptors and the odor source and the local meteorological conditions are considerations in the potential for a project to frequently expose the public to objectionable odors. Although localized air quality impacts are focused on potential impacts to sensitive receptors (such as residences), schools, playgrounds, and childcare centers should also be considered in the evaluation of potential odor nuisance impacts.

Valley Fever. Coccidioidomycosis, more commonly known as valley fever, is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. San Diego County (County) is not considered a highly endemic region for valley fever as the latest report from the California Department of Public Health listed the County as having 4.4 cases per 100,000 people per year (Nelson, pers. comm. 2018). The Project area (zip code 92154) showed an incident rate of 15.1 per 100,000 people from 2009 through 2018, with 122 cases reported over that time period. Statewide incidences in 2018 were 19.1 per 100,000 people (CDPH 2019).

Even if present at a site, earth-moving activities may not result in increased incidence of valley fever. Propagation of *Coccidioides immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest

following early seasonal rains and long dry spells. *Coccidioides immitis* spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to *Coccidioides immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

Local Air Quality

San Diego Air Basin Attainment Designation

An area is designated in attainment when it follows the National Ambient Air Quality Standards (NAAQS) and/or California Ambient Air Quality Standards (CAAQS). These standards are set by the U.S. Environmental Protection Agency (EPA) or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The criteria pollutants of primary concern that are considered in this analysis are O₃, NO₂, CO, SO₂, PM₁₀, and PM_{2.5}. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O₃.

Table 3.2-1 summarizes the SDAB's federal and state attainment designations for each of the criteria pollutants.

Table 3.2-1. SDAB Attainment Classification

| Pollutant | Federal Designation | State Designation |
|---|---|-------------------|
| O ₃ (1 hour) | Attainment ^a | Nonattainment |
| O ₃ (8 hours – 1997) (8 hours – 2008) | Attainment (Maintenance) Nonattainment (Moderate) | Nonattainment |
| NO ₂ | Unclassifiable/Attainment | Attainment |
| CO | Attainment (Maintenance) | Attainment |
| SO ₂ | Unclassifiable/Attainment | Attainment |
| PM ₁₀ | Unclassifiable/Attainment | Nonattainment |
| PM _{2.5} | Unclassifiable/Attainment | Nonattainment |
| Lead | Unclassifiable/Attainment | Attainment |
| Sulfates | No federal standard | Attainment |
| Hydrogen sulfide | No federal standard | Unclassified |
| Visibility-reducing particles | No federal standard | Unclassified |
| Vinyl chloride | No federal standard | No designation |

Source: SDAPCD 2020.

Notes: O₃ = ozone; NO₂ = nitrogen dioxide; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter

^a The federal 1-hour standard of 0.12 was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in state implementation plans.

In summary, the SDAB is designated as an attainment area for the 1997 8-hour O₃ NAAQS and as a nonattainment area for the 2008 8-hour O₃ NAAQS. The SDAB is designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5} CAAQS. Except for sulfates, hydrogen sulfides, vinyl chloride, and visibility-reducing particles, for which there is no federal standard, the portion of the SDAB where the Project area is located is designated as attainment or unclassified for all other criteria pollutants under the NAAQS and CAAQS.

Air Quality Monitoring Data

The SDAPCD operates a network of 11 ambient air monitoring stations throughout the County that measure ambient concentrations of pollutants and determine whether the ambient air quality meets the CAAQS and NAAQS. Due to its proximity to the Project site, similar geographic and climactic characteristics, and available measured ambient concentrations of pollutants, the Otay Mesa-Donovan monitoring station, located approximately 8.5 miles from the Project site, is considered most representative of the Project site. Pollutant concentrations of CO, SO₂, and PM_{2.5} are not measured at the Otay Mesa-Donovan station; therefore, those measurements from the nearest monitoring station that includes those pollutants, the El Cajon Floyd Smith Drive monitoring station located approximately 18 miles from the Project site (CO and SO₂) and the Chula Vista monitoring station located approximately 6 miles west of the Project site (PM_{2.5}), are presented below.

Ambient concentrations of pollutants from 2017 through 2019 are presented in Table 3.2-2. The number of days exceeding the NAAQS and CAAQS is also shown in Table 3.2-2.

Table 3.2-2. Local Ambient Air Quality Data

| Monitoring Station | Unit | Averaging Time | Agency/ Method | Ambient Air Quality Standard | Measured Concentration by Year | | | Exceedances by Year | | |
|--|------|------------------------------|----------------|------------------------------|--------------------------------|-------|-------|---------------------|------|------|
| | | | | | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 |
| Ozone (O₃) | | | | | | | | | | |
| Otay Mesa-Donovan | ppm | Maximum 1-hour concentration | State | 0.09 | 0.097 | 0.092 | 0.073 | 1 | 0 | 0 |
| | ppm | Maximum 8-hour concentration | State | 0.070 | 0.082 | 0.079 | 0.062 | 6 | 1 | 0 |
| Federal | | | 0.070 | 0.082 | 0.078 | 0.062 | 6 | 1 | 0 | |
| Nitrogen Dioxide (NO₂) | | | | | | | | | | |
| Otay Mesa-Donovan | ppm | Maximum 1-hour concentration | State | 0.18 | 0.074 | 0.054 | 0.086 | 0 | 0 | 0 |
| | | | Federal | 0.100 | 0.074 | 0.054 | 0.086 | 0 | 0 | 0 |
| | ppm | Annual concentration | State | 0.030 | 0.008 | 0.006 | 0.007 | 0 | 0 | 0 |
| | | | Federal | 0.053 | 0.008 | 0.006 | 0.007 | 0 | 0 | 0 |
| Carbon Monoxide (CO) | | | | | | | | | | |
| El Cajon-First Street | ppm | Maximum 1-hour concentration | State | 20 | 1.5 | 1.4 | 1.3 | 0 | 0 | 0 |
| | | | Federal | 35 | 1.5 | 1.4 | 1.3 | 0 | 0 | 0 |
| | ppm | Maximum 8-hour concentration | State | 9.0 | 1.4 | 1.1 | 1.0 | 0 | 0 | 0 |
| | | | Federal | 9 | 1.4 | 1.1 | 1.0 | 0 | 0 | 0 |
| Sulfur Dioxide (SO₂) | | | | | | | | | | |
| El Cajon-First Street | ppm | Maximum 1-hour concentration | Federal | 0.075 | 0.001 | 0.004 | 0.001 | 0 | 0 | 0 |

Table 3.2-2. Local Ambient Air Quality Data

| Monitoring Station | Unit | Averaging Time | Agency/ Method | Ambient Air Quality Standard | Measured Concentration by Year | | | Exceedances by Year | | |
|--|-------------------|-------------------------------|----------------|------------------------------|--------------------------------|--------|--------|---------------------|-------------|-------------|
| | | | | | 2017 | 2018 | 2019 | 2017 | 2018 | 2019 |
| | ppm | Maximum 24-hour concentration | Federal | 0.140 | 0.0004 | 0.0004 | 0.0003 | 0 | 0 | 0 |
| | ppm | Annual concentration | Federal | 0.030 | 0.0011 | 0.0001 | 0.0001 | 0 | 0 | 0 |
| Coarse Particulate Matter (PM₁₀)^a | | | | | | | | | | |
| Otay Mesa-Donovan | µg/m ³ | Maximum 24-hour concentration | State | 50 | 69 | 55 | 199.8 | 24.4 (4) | 18.3 (3) | 50.9 (8) |
| | | | Federal | 150 | 68 | 55 | 199.0 | 0 | 0 | 6.6 (1) |
| | µg/m ³ | Annual concentration | State | 20 | 26.9 | 26.3 | 31.4 | — | — | — |
| Fine Particulate Matter (PM_{2.5})^a | | | | | | | | | | |
| Chula Vista-80 E J. St. | µg/m ³ | Maximum 24-hour concentration | Federal | 35 | 42.7 | 41.9 | 18.6 | — (1) | 2.7 (1) | 0.0 (0) |
| | | | State | 12 | — | 10.0 | 8.1 | — | — | — |
| | µg/m ³ | Annual concentration | Federal | 12.0 | — | 10.0 | 8.1 | — | — | — |

Sources: CARB 2021b; EPA 2021b.

Notes: — = not available or applicable; µg/m³ = micrograms per cubic meter; ppm = parts per million

Data taken from CARB iADAM (<http://www.arb.ca.gov/adam>) and EPA AirData (<http://www.epa.gov/airdata/>) represent the highest concentrations experienced over a given year.

Exceedances of federal and state standards are only shown for O₃. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour O₃, annual PM₁₀, or 24-hour SO₂, nor is there a state 24-hour standard for PM_{2.5}.

Otay Mesa - Donovan Correctional Facility monitoring station is located at 480 Alta Road, San Diego, California.

El Cajon-First Street monitoring station is located at 533 First Street, El Cajon, California.

Chula Vista monitoring station located at 80 E. J. Street Chula Vista, California.

^a Measurements of PM₁₀ and PM_{2.5} are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

3.2.2 Relevant Plans, Policies, and Ordinances

Federal

Criteria Air Pollutants

The federal Clean Air Act (CAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the CAA, including setting the NAAQS for major air pollutants, setting hazardous air pollutant standards, approving state attainment plans, setting motor vehicle emissions standards, setting stationary source emissions standards and approving permits, providing acid rain control measures, implementing stratospheric O₃ protection, and providing enforcement provisions.

The NAAQS are established by the EPA for “criteria pollutants” under the CAA, which are O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The CAA requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health, based on current scientific evidence. The EPA sets the NAAQS based on a lengthy process that involves science policy workshops; a risk/exposure assessment that draws on the information and conclusions of the science policy workshops to development quantitative characterizations of exposures and associated risks to human health or the environment; and a policy assessment by EPA staff that bridges the gap between agency scientific assessments and the judgments required of the EPA administrator, who then takes the proposed standards through the federal rulemaking process (EPA 2021c). States with areas that exceed the NAAQS must prepare State Implementation Plans (SIPs) that demonstrate how those areas will attain the standards within mandated timeframes.

Hazardous Air Pollutants

The 1977 federal CAA amendments required the EPA to identify national emission standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard based on scientific studies of exposure to humans and other mammals. Under the 1990 CAA amendments, which expanded the control program for hazardous air pollutants, 187 substances and chemical families were identified as hazardous air pollutants.

State

Criteria Air Pollutants

The federal CAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal CAA, and regulating emissions from motor vehicles and consumer products.

CARB established the CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered in attainment if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, PM_{2.5}, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

Similar to the federal process, the standards for the CAAQS are adopted after review by CARB staff of the scientific literature produced by agencies such as the Office of Environmental Health Hazard Assessment (OEHHA); the Air Quality Advisory Committee, which consists of experts in health sciences, exposure assessment, monitoring methods, and atmospheric sciences appointed by the Office of the President of the University of California; and public review and comment (CARB 2021c). The NAAQS and CAAQS are presented in Table 3.2-3.

Table 3.2-3. Ambient Air Quality Standards

| Pollutant | Averaging Time | California Standards ^a | National Standards ^b | |
|--------------------------------|--------------------------------------|---|--|---------------------------------------|
| | | Concentration ^c | Primary ^{c,d} | Secondary ^{c,e} |
| O ₃ | 1 hour | 0.09 ppm (180 µg/m ³) | — | Same as Primary Standard ^f |
| | 8 hours | 0.070 ppm (137 µg/m ³) | 0.070 ppm (137 µg/m ³) ^f | |
| NO ₂ ^g | 1 hour | 0.18 ppm (339 µg/m ³) | 0.100 ppm (188 µg/m ³) | Same as Primary Standard |
| | Annual Arithmetic Mean | 0.030 ppm (57 µg/m ³) | 0.053 ppm (100 µg/m ³) | |
| CO | 1 hour | 20 ppm (23 mg/m ³) | 35 ppm (40 mg/m ³) | None |
| | 8 hours | 9.0 ppm (10 mg/m ³) | 9 ppm (10 mg/m ³) | |
| SO ₂ ^h | 1 hour | 0.25 ppm (655 µg/m ³) | 0.075 ppm (196 µg/m ³) | — |
| | 3 hours | — | — | 0.5 ppm (1,300 µg/m ³) |
| | 24 hours | 0.04 ppm (105 µg/m ³) | 0.14 ppm (for certain areas) ^g | — |
| | Annual | — | 0.030 ppm (for certain areas) ^g | — |
| PM ₁₀ ⁱ | 24 hours | 50 µg/m ³ | 150 µg/m ³ | Same as Primary Standard |
| | Annual Arithmetic Mean | 20 µg/m ³ | — | |
| PM _{2.5} ⁱ | 24 hours | — | 35 µg/m ³ | Same as Primary Standard |
| | Annual Arithmetic Mean | 12 µg/m ³ | 12.0 µg/m ³ | 15.0 µg/m ³ |
| Lead ^{j,k} | 30-day Average | 1.5 µg/m ³ | — | — |
| | Calendar Quarter | — | 1.5 µg/m ³ (for certain areas) ^k | Same as Primary Standard |
| | Rolling 3-Month Average | — | 0.15 µg/m ³ | |
| Hydrogen sulfide | 1 hour | 0.03 ppm (42 µg/m ³) | — | — |
| Vinyl chloride ^l | 24 hours | 0.01 ppm (26 µg/m ³) | — | — |
| Sulfates | 24 hours | 25 µg/m ³ | — | — |
| Visibility reducing particles | 8 hour (10:00 a.m. to 6:00 p.m. PST) | Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70% | — | — |

Source: CARB 2020.

Notes: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $\text{PM}_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

- a California standards for O_3 , CO, SO_2 (1-hour and 24-hour), NO_2 , suspended particulate matter (PM_{10} , $\text{PM}_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b National standards (other than O_3 , NO_2 , SO_2 , particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10} , the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than 1. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- i On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
- j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

A TAC is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. Federal laws use “hazardous air pollutants” to refer to the same types of compounds that are referred to as TACs under state law. California regulates TACs primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588).

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. Pursuant to AB 2588, existing facilities that emit air pollutants above specified levels were required to prepare a TAC Emissions Inventory Plan and Report; prepare a risk assessment if TAC emissions were significant; notify the public of significant risk levels; and, if health impacts were above specified levels, prepare and implement risk reduction measures.

The following regulatory measures pertain to the reduction of DPM and criteria pollutant emissions from off-road equipment and diesel-fueled vehicles.

Idling of Commercial Heavy-Duty Trucks

In July 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to control emissions from idling trucks (13 CCR 2485). The ATCM prohibits idling for more than 5 minutes for all commercial trucks with a gross vehicle weight rating (GVWR) over 10,000 pounds. The ATCM contains an exception that allows trucks to idle while queuing or involved in operational activities.

In-Use Off-Road Diesel-Fueled Fleets

In July 2007, CARB adopted an ATCM for in-use off-road diesel vehicles (13 CCR 2449 et seq.). This regulation requires that specific fleet average requirements are met for NO_x emissions and for particulate matter emissions. Where average requirements cannot be met, best available control technology requirements apply. The regulation also includes several recordkeeping and reporting requirements.

In response to AB 8 2X, the regulations were revised in July 2009 (effective December 3, 2009) to allow a partial postponement of the compliance schedule in 2011 and 2012 for existing fleets. On December 17, 2010, CARB adopted additional revisions to further delay the deadlines reflecting reductions in diesel emissions due to the poor economy and overestimates of diesel emissions in California. The revisions delayed the first compliance date until no earlier than January 1, 2014, for large fleets, with final compliance by January 1, 2023. The compliance dates for medium fleets were delayed until an initial date of January 1, 2017, and final compliance date of January 1, 2023. The compliance dates for small fleets were delayed until an initial date of January 1, 2019, and final compliance date of January 1, 2028. Correspondingly, the fleet average targets were made more stringent in future compliance years. The revisions also accelerated the phase-out of equipment, with older equipment added to existing large and medium fleets over time, requiring the addition of Tier 2 or higher engines starting on March 1, 2011, with some exceptions: Tier 2 or higher engines on January 1, 2013, without exception; and Tier 3 or higher engines on January 1, 2018 (January 1, 2023, for small fleets).

On October 28, 2011 (effective December 14, 2011), the Executive Officer of CARB approved amendments to the regulation. The amendments included revisions to the applicability section and additions and revisions to the definition. The initial date for requiring the addition of Tier 2 or higher engines for large and medium fleets, with some exceptions, was revised to January 1, 2012. New provisions also allow for the removal of emissions control devices for safety or visibility purposes. The regulation also was amended to combine the particulate matter and NO_x fleet average targets under one, instead of two, sections. The amended fleet average targets are based on the fleet's NO_x fleet average, and the previous section regarding particulate matter performance requirements was deleted completely. The best available control technology requirements, if a fleet cannot comply with the fleet average requirements, were restructured, and clarified. Other amendments to the regulations included minor administrative changes to the regulatory text.

In-Use On-Road Diesel-Fueled Vehicles

On December 12, 2008, CARB adopted an ATCM to reduce NO_x and particulate matter emissions from most in-use on-road diesel trucks and buses with a GVWR greater than 14,000 pounds (13 CCR 2025). The original ATCM regulation required fleets of on-road trucks to limit their NO_x and particulate matter emissions through a combination of exhaust retrofit equipment and new vehicles. The regulation limited particulate matter emissions for most fleets by 2011, and limited NO_x emissions for most fleets by 2013. The regulation did not require any vehicle to be replaced before 2012, and never required all vehicles in a fleet be replaced.

In December 2009, the CARB Governing Board directed staff to evaluate amendments that would provide additional flexibility for fleets adversely affected by the poor California economy. On December 17, 2010, CARB revised this ATCM to delay its implementation, along with limited relaxation of its requirements. Starting on January 1, 2015, lighter trucks with a GVWR of 14,001 to 26,000 pounds with 20-year-old or older engines needed to be replaced with newer trucks (2010 model year emissions equivalent as defined in the regulation). Trucks with a GVWR greater than 26,000 pounds with 1995 model year or older engines needed to be replaced by January 1, 2015. Trucks with 1996–2006 model year engines had to install a Level 3 (85% control) diesel particulate filter starting on January 1, 2012, to January 1, 2014, depending on the model year, and then be replaced after 8 years. Trucks with 2007–2009 model year engines have no requirements until 2023, at which time they must be replaced with 2010 model year emissions-equivalent engines as defined in the regulation. Trucks with 2010 model year engines would meet the final compliance requirements. The ATCM provides a phase-in option under which a fleet operator would equip a percentage of trucks in the fleet with diesel particulate filters, starting at 30% by January 1, 2012, with 100% by January 1, 2016.

On September 19, 2011 (effective December 14, 2011), the Executive Officer of CARB approved amendments to the regulations, including revisions to the compliance schedule for vehicles with a GVWR of 26,000 pounds or less to clarify that all vehicles must be equipped with 2010 model year emissions-equivalent engines by 2023. The amendments included revised and additional credits for fleets that have downsized; that implement early particulate matter retrofits; that incorporate hybrid vehicles, alternative-fueled vehicles, and/or vehicles with heavy-duty pilot ignition engines; and/or that implement early addition of newer vehicles. The amendments included provisions for additional flexibility, such as for low-usage construction trucks, and revisions to previous exemptions, delays, and extensions. Other amendments to the regulations included minor administrative changes to the regulatory text, including recordkeeping and reporting requirements related to other revisions.

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person cannot discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Local

San Diego Air Pollution Control District

Although CARB is responsible for the regulation of mobile emissions sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The Project site is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

In San Diego County, O₃ and particulate matter are the pollutants of main concern, since exceedances of CAAQS for those pollutants are experienced in the County in most years. For this reason, the SDAB has been designated as a nonattainment area for the state PM₁₀, PM_{2.5}, and O₃ standards. The SDAB is also a federal O₃ attainment (maintenance) area for 1997 8-hour O₃ standard, an O₃ nonattainment area for the 2008 8-hour O₃ standard, and a CO maintenance area (western and central part of the SDAB only) (CARB 2020).

Federal Attainment Plans

In December 2016, the SDAPCD adopted an update to the Eight-Hour Ozone Attainment Plan for San Diego County. The 2016 Eight-Hour Ozone Attainment Plan for San Diego County indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O₃ standard by 2018 (SDAPCD 2016). In the Eight-Hour Ozone Attainment Plan, SDAPCD relies on the Regional Air Quality Strategy (RAQS) to demonstrate how the region will comply with the federal O₃ standard. The RAQS details how the region will manage and reduce O₃ precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these pollutants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

Currently, the County is designated as moderate nonattainment for the 2008 NAAQS and maintenance for the 1997 NAAQS. As documented in the 2016 8-Hour Ozone Attainment Plan for San Diego County, the County has a likely chance of obtaining attainment due to the transition to low-emissions cars, stricter new source review rules, and continuing the requirement of general conformity for military growth and the San Diego International Airport. The County will also continue emissions control measures, including ongoing implementation of existing regulations in O₃ precursor reduction to stationary and area-wide sources, subsequent inspections of facilities and sources, and adoption of laws requiring best available retrofit control technology for control of emissions (SDAPCD 2016).

State Attainment Plans

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing a clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The RAQS for the SDAB was initially adopted in 1991 and is generally updated on a triennial basis, most recently in 2016 (SDAPCD 2016, 2021). The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O₃. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to forecast future emissions and then determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of development of their general plans.

In December 2016, the SDAPCD adopted the revised RAQS for the County. Since 2007, the San Diego region reduced daily VOC emissions and NO_x emissions by 3.9% and 7.0% respectively; the SDAPCD expects to continue reductions through 2035 (SDAPCD 2016). These reductions were achieved through implementation of six VOC control measures and three NO_x control measures adopted in the SDAPCD's 2009 RAQS (SDAPCD 2009a); in addition, the SDAPCD is considering additional measures, including three VOC measures and four control measures to reduce 0.3 daily tons of VOC and 1.2 daily tons of NO_x, provided the control measures are found to be feasible region-wide. In addition, the SDAPCD has implemented nine incentive-based programs, has worked with SANDAG to implement regional transportation control measures, and has reaffirmed the state emissions offset repeal.

In regard to particulate matter emissions reduction efforts, in December 2005, the SDAPCD prepared a report titled Measures to Reduce Particulate Matter in San Diego County to address implementation of Senate Bill 656 in San Diego County (Senate Bill 656 required additional controls to reduce ambient concentrations of PM₁₀ and PM_{2.5}) (SDAPCD 2005). In the report, SDAPCD evaluated implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including

earthmoving, demolition, and grading; bulk material storage and handling; carryout and trackout removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust (SDAPCD 2005).

SDAPCD Rules and Regulations

The SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of the SDAPCD, and would apply to the Project:

SDAPCD Regulation II: Permits; Rule 20.2: New Source Review Non-Major Stationary Sources. Requires new or modified stationary source units (that are not major stationary sources) with the potential to emit 10 pounds per day or more of VOC, NO_x, SO_x, or PM₁₀ to be equipped with best available control technology. For those units with a potential to emit above Air Quality Impact Assessments Trigger Levels, the units must demonstrate that such emissions would not violate or interfere with the attainment of any NAAQS (SDAPCD 2016).

SDAPCD Regulation IV: Prohibitions; Rule 50: Visible Emissions. Prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

The Project may result in visible emissions, primarily during earth-disturbing activities, which would be subject to SDAPCD Rule 50.

SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).

Any criteria air pollutant emissions, TAC emissions, or odors that would be generated during the Project would be subject to SDAPCD Rule 51. Violations can be reported to the SDAPCD in the form of an air quality complaint by telephone, email, or online form. Complaints are investigated by the SDAPCD as soon as possible.

SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site (SDAPCD 2009b).

The Project, primarily during earth-disturbing activities, may result in fugitive dust emissions that would be subject to SDAPCD Rule 55. Compliance with SDAPCD Rule 55 would limit fugitive dust emissions through a Fugitive Dust Control Plan. Fugitive dust emissions are not anticipated during operation of the Project.

SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1200: Toxic Air Contaminants – New Source Review. Requires new or modified stationary-source units with the potential to emit TACs above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million (SDAPCD 2017).

SDAPCD Regulation XII: Toxic Air Contaminates; Rule 1210: Toxic Air Contaminant Public Health Risks – Public Notification and Risk Reduction. Requires each stationary source that is required to prepare a public risk assessment to provide written public notice of risks at or above the following levels: maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute noncancer health hazard index equal to or greater than 1.0, or total chronic noncancer health hazard index equal to or greater than 1.0 (SDAPCD 2017).

San Diego Association of Governments

SANDAG is the regional planning agency for the County and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization for the County. With respect to air quality planning and other regional issues, SANDAG prepared its San Diego Forward: The Regional Plan (Regional Plan) for the San Diego region (SANDAG 2015). The Regional Plan combines the big-picture vision for how the region will grow over the next 35 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy, is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050 (SANDAG 2015).

The Regional Plan sets the policy context for how SANDAG participates in and responds to the SDAPCD's air quality plans and builds off the SDAPCD's air quality plan processes that are designed to meet health-based criteria pollutant standards (SANDAG 2015). The Regional Plan complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support technology-based control measures in air quality plans. The Regional Plan also emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sector of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution (SANDAG 2015).

On September 23, 2016, SANDAG's Board of Directors adopted the final 2016 Regional Transportation Improvement Program (RTIP). The 2016 Regional Transportation Improvement Program is a multibillion-dollar, multi-year program of proposed major transportation projects in the San Diego region. Transportation projects funded with federal, state, and TransNet (the San Diego transportation sales tax program) must be included in an approved regional transportation improvement program. The programming of locally funded projects also may be programmed at the discretion of SANDAG. The 2016 Regional Transportation Improvement Program covers 5 fiscal years and incrementally implements the Regional Plan (SANDAG 2016).

In February 2019, SANDAG prepared a 2019 Federal Regional Transportation Plan that complies with federal requirements for the development of regional transportation plans, retains air quality conformity approval from the U.S. Department of Transportation, and preserves funding for the region's transportation investments (SANDAG 2019). The 2019 Federal Regional Transportation Plan built on the the 2015 Regional Plan with updated project costs, revenues, and a new regional growth forecast. Lastly, in May 2021, SANDAG released their draft 2021 Regional Plan for public review from May 28 to August 6. The draft 2021 Regional Plan provides a long-term blueprint for the San Diego region that seeks to meet regulatory requirements, address traffic congestion, and create equal access to jobs, education, healthcare, and other community resources (SANDAG 2021).

San Diego County

County Code Section 87.428, Dust Control Measures. As part of the San Diego County Grading, Clearing, and Watercourses Ordinance, County Code Section 87.428 requires all clearing and grading to be carried out with dust control measures adequate to prevent creation of a nuisance to people or public or private property. Clearing, grading, and improvement plans must require that measures be undertaken to achieve this result, including watering, application of surfactants,³ shrouding, control of vehicle speeds, paving access areas, and/or implementing other operational or technological measures to reduce dispersion of dust. These design measures are to be incorporated into all earth-disturbing activities to minimize the amount of particulate matter emissions from construction (County of San Diego 2003).

County Zoning Ordinance Section 6318. Section 6318 of the San Diego County Zoning Ordinance requires that all commercial and industrial uses be operated so as not to emit matter causing unpleasant odors that are perceptible by the average person at or beyond any lot line of the lot containing said uses. Section 6318 goes on to further provide specific dilution standards that must be met “at or beyond any lot line of the lot containing the uses” (County of San Diego 1979).

City of San Diego

The San Diego Municipal Code addresses air quality and odor impacts at Chapter 14, Article 2, Division 7, paragraph 142.0710, Air Contaminant Regulations, which states that air contaminants, including smoke, charred paper, dust, soot, grime, carbon, noxious acids, toxic fumes, gases, odors, and particulate matter, or any emissions that endanger human health, cause damage to vegetation or property, or cause soiling are not permitted to emanate beyond the boundaries of the premises upon which the use emitting the contaminants is located (City of San Diego 2000).

3.2.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this Environmental Impact Report (EIR), a hybridized approach concerning California Environmental Quality Act (CEQA) Appendix G, City of San Diego (City), and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. As further described below, all relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the project impacts air quality are based on the County Guidelines for Determining Significance: Air Quality and City of San Diego significance determination thresholds for air quality. According to the most stringent County and City guidelines, a significant impact related to air quality would occur if the Project would:

- conflict with or obstruct the implementation of the SDAPCD’s RAQS and/or applicable portions of the SIP (County of San Diego 2007).
- result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is in nonattainment under an applicable federal or state Ambient Air Quality Standard (County of San Diego 2007).
 - The following guidelines for determining significance must be used for determining whether the net increase during the construction phase is cumulatively considerable:

³ Surfactants are compounds that lower surface tension between liquids or between a solid and a liquid, such as a detergent.

EIR FOR NELSON SLOAN QUARRY RESTORATION AND BENEFICIAL REUSE OF SEDIMENT PROJECT 11618
SEPTEMBER 2021 3.2-17

- A project that has a significant direct impact on air quality regarding construction-related emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase (County of San Diego 2007).
- In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the construction-related emissions of concern from a proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines, including the SDAPCD's screening-level thresholds (County of San Diego 2007).
- The following guidelines for determining significance must be used for determining whether the net increase during the operational phase is cumulatively considerable:
 - A project that does not conform to the SDPACD's RAQS and/or has a significant direct impact on air quality with regard to operational-related emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase (County of San Diego 2007).
 - If a proposed development causes a six-lane road to deteriorate to LOS [level of service] E or worse, the resulting longer queuing at the traffic signals could cause a localized significant air quality impact (City of San Diego 2016). A site specific CO hotspot analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor. If a proposed development causes a six-lane road to drop to LOS F, the resultant extended wait at the signalized intersections could cause a significant air quality impact (City of San Diego 2016). A site-specific CO hotspot screening and/or analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor (City of San Diego 2016). If a proposed development causes a four-lane road to drop to LOS E or worse, the extended wait at the signalized intersection could cause a significant air quality impact. A site specific CO hotspot screening and/or analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor (City of San Diego 2016). If a proposed development is within 400 feet of a sensitive receptor and the LOS is worse than D, a site-specific CO hotspot analysis should be performed to determine if health standards are potentially exceeded and to determine the level of adverse effect on the receptors (City of San Diego 2016).

In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the operational-related emissions of concern from a proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines, including the SDAPCD's screening-level thresholds (County of San Diego 2007).
- expose sensitive receptors to substantial pollutant concentrations (County of San Diego 2007).
- place sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors (County of San Diego 2007).
- result in exposure to TACs resulting in a (County of San Diego 2007):
 - Maximum incremental cancer risk equal to or greater than 1 in one million without application of Toxics-Best Available Control Technology (T-BACT), or
 - Maximum incremental cancer risk equal to or greater than 10 in one million with application of T-BACT, or
 - Cancer burden equal to or greater than 1.0, or
 - Total acute non-cancer health hazard index equal to or greater than 1.0, or

- Total chronic non-cancer health hazard index equal to or greater than 1.0.
- The project, which is not an agricultural, commercial, or an industrial activity subject to SDAPCD standards, as a result of implementation, would either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which would affect a considerable number of persons or the public (County of San Diego 2007).

As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 requiring the preparation of an Air Quality Impact Assessment for permitted stationary sources. The SDAPCD sets forth quantitative emissions thresholds below which a stationary source would not have a significant impact on ambient air quality. Project air quality impacts estimated in this environmental analysis would be significant if any of the applicable significance thresholds presented in Table 3.2-4 are exceeded.

Table 3.2-4. SDAPCD Air Quality Significance Thresholds

| Construction Emissions | | | |
|---|----------------------------------|-----------------|---------------|
| Pollutant | Total Emissions (Pounds per Day) | | |
| Respirable Particulate Matter (PM ₁₀) | 100 | | |
| Fine Particulate Matter (PM _{2.5}) | 55 | | |
| Oxides of Nitrogen (NO _x) | 250 | | |
| Sulfur Oxides (SO _x) | 250 | | |
| Carbon Monoxide (CO) | 550 | | |
| Volatile Organic Compounds (VOC) | 75 ^a | | |
| Operational Emissions | | | |
| Pollutant | Total Emissions | | |
| | Pounds per Hour | Pounds per Day | Tons per Year |
| Respirable Particulate Matter (PM ₁₀) | — | 100 | 15 |
| Fine Particulate Matter (PM _{2.5}) | — | 55 | 10 |
| Oxides of Nitrogen (NO _x) | 25 | 250 | 40 |
| Sulfur Oxides (SO _x) | 25 | 250 | 40 |
| Carbon Monoxide (CO) | 100 | 550 | 100 |
| Lead and Lead Compounds | — | 3.2 | 0.6 |
| Volatile Organic Compounds (VOCs) | — | 75 ^a | 13.7 |

Sources: SDAPCD Rule 1501 (SDAPCD 1995) and Rule 20.2(d)(2) (SDAPCD 2016).

^a VOC threshold based on the threshold of significance for VOC from the South Coast Air Quality Management District for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance (County of San Diego 2007).

The thresholds listed in Table 3.2-4 represent screening-level thresholds that can be used to evaluate whether project emissions could cause a significant impact on air quality. Emissions below the screening level thresholds would not cause a significant impact. The emissions-based thresholds for O₃ precursors are intended to serve as a surrogate for an O₃ significance threshold (i.e., the potential for adverse O₃ impacts to occur). This approach is used because O₃ is not emitted directly, and the effects of an individual project's emissions of O₃ precursors (VOC and NO_x) on O₃ levels in ambient air cannot be determined through air quality models or other quantitative methods. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 3.2-4, the Project could have the potential to result in a cumulatively considerable net increase in these pollutants, and, thus, could have a significant impact on ambient air quality.

With respect to odors, SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of people or endangers the comfort, health, or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

Emissions Assessment Methodology

The Project would involve relocation of approximately 1,056,500 cubic yards of sediment up to a 15-year period. The sediment would be excavated and hauled from sediment basins within the Tijuana River Valley and transported to the Project site. The sediment would be screened and processed at the Project site and then used to backfill the previous quarry at the Project site.

For purposes of estimating Project emissions and based on information provided by the California Department of Parks and Recreation, it is assumed that the reclamation phases of the Project would commence in September 2021⁴ and would last up to approximately 15 years. The Project would primarily operate September through November within this time. The Project would occur over 6 phases. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate). Detailed construction equipment modeling assumptions are provided in Appendix A. Table 3.2-5 shows the estimated sediment volume and duration per phase.

Table 3.2-5. Estimated Reclamation and Grading Phases

| Phase | Sediment Volume Required (cubic yards) | Years to Complete (Approximate) ¹ |
|--------------|--|--|
| 1 | 6,500 | 0.1 |
| 2 | 115,000 | 1.5 |
| 3 | 165,000 | 2.2 |
| 4 | 240,000 | 3.2 |
| 5 | 240,000 | 3.2 |
| 6 | 290,000 | 3.9 |
| Total | 1,056,500 | 14.1 |

Notes: Total may not sum due to rounding.

¹ Years to complete are based on an average available sediment volume of 75,000 cubic yards per year.

Revegetation of disturbed areas of the site would be completed in phases and occur after final graded surfaces are achieved. Maintenance activities would be conducted concurrent with the installation of container plants and seeding, would continue throughout the initial 120-day establishment period and the interim maintenance and monitoring period, and would conclude at the end of the 5-year period for each mitigation phase. It is estimated that one biologist and vendor planter truck would travel to the site monthly. No equipment would be required during the monitoring phases.

⁴ The analysis assumes a construction start date of September 2021, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Emissions from the Project were estimated using the California Emissions Estimator Model (CalEEMod) (CAPCOA 2021). Assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the California Department of Parks and Recreation, CalEEMod defaults, and best engineering judgement.

General off-road equipment modeling assumptions are provided in Table 3.2-6. Default values for equipment horsepower and load factor provided in CalEEMod were used for all off-road equipment. For the analysis, it was generally assumed that heavy-duty off-road equipment would be operating at the site 5 days per week. Therefore, the estimates provide in Table 3.2-6 are conservative. Detailed off-road equipment modeling assumptions are provided in Appendix A. Phases that extend beyond one calendar year were broken up into multiple phases (i.e., Phase 2-1, 2-2, etc.)

Table 3.2-6. Emissions Estimation Assumptions

| Construction Phase | One-Way Vehicle Trips | | | Equipment | | |
|--------------------|----------------------------|----------------------------------|------------------------|---------------------|----------|-------------|
| | Average Daily Worker Trips | Average Daily Vendor Truck Trips | Total Haul Truck Trips | Equipment Type | Quantity | Usage Hours |
| Phase 1 | 28 | 6 | 814 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 2-1 | 28 | 6 | 8,410 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 2-2 | 28 | 6 | 5,966 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 3-1 | 28 | 6 | 3,270 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 3-2 | 28 | 6 | 9,236 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |

Table 3.2-6. Emissions Estimation Assumptions

| Construction Phase | One-Way Vehicle Trips | | | Equipment | | |
|--------------------|----------------------------|----------------------------------|------------------------|---------------------|----------|-------------|
| | Average Daily Worker Trips | Average Daily Vendor Truck Trips | Total Haul Truck Trips | Equipment Type | Quantity | Usage Hours |
| Phase 3-3 | 28 | 6 | 8,100 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 4-1 | 28 | 6 | 1,140 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 4-2 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 4-3 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 4-4 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 4-5 | 28 | 6 | 1,140 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 5-1 | 28 | 6 | 8,100 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |

Table 3.2-6. Emissions Estimation Assumptions

| Construction Phase | One-Way Vehicle Trips | | | Equipment | | |
|--------------------|----------------------------|----------------------------------|------------------------|---------------------|----------|-------------|
| | Average Daily Worker Trips | Average Daily Vendor Truck Trips | Total Haul Truck Trips | Equipment Type | Quantity | Usage Hours |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 5-2 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| | | | | | | |
| Phase 5-3 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| | | | | | | |
| Phase 5-4 | 28 | 6 | 3,420 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| | | | | | | |
| Phase 6-1 | 28 | 6 | 5,828 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| | | | | | | |
| Phase 6-2 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| | | | | | | |
| Phase 6-3 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| | | | | | | |

Table 3.2-6. Emissions Estimation Assumptions

| Construction Phase | One-Way Vehicle Trips | | | Equipment | | |
|--------------------|----------------------------|----------------------------------|------------------------|---------------------|----------|-------------|
| | Average Daily Worker Trips | Average Daily Vendor Truck Trips | Total Haul Truck Trips | Equipment Type | Quantity | Usage Hours |
| Phase 6-4 | 28 | 6 | 9,240 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |
| Phase 6-5 | 28 | 6 | 2,702 | Crawler Tractors | 1 | 8 |
| | | | | Excavators | 1 | 8 |
| | | | | Rollers | 2 | 8 |
| | | | | Rubber-Tired Dozers | 1 | 8 |
| | | | | Scrapers | 1 | 8 |

Note: See Appendix A for additional details.

The estimated number of workers (maximum 14), vendor trucks (15,974 total one-way trips), and haul trucks (132,046 total one-way trips) were provided by the California Department of Parks and Recreation. Changes to any standard default values or assumptions are reported in the CalEEMod output (see Appendix A). The CalEEMod default assumptions were used for worker and vendor trip distances. For the haul trucks, the farthest sediment basin from the Project site was assumed for all haul trips (3.2 miles). Sediment source locations (i.e., basins, channels, and habitat restoration projects) are depicted on Figure 2-2. This is conservative because the other two sediment basins are closer to the Project site. It was assumed that 15% of the sediment processed at the Project site would need to be disposed of off site. Miramar Landfill was assumed to be the disposal site, which is 26 miles from the Project site. It was assumed that 0.5 miles of unpaved road travel would occur per worker, vendor, and haul truck trip.

Regulatory Compliance Measures that Reduce Construction Criteria Air Pollutant Emissions

Construction activities would be subject to several control measures per the requirements of the County, SDAPCD rules, and CARB ATCMs. Table 3.2-7 outlines the required regulatory control measures that would apply to the Project, and what measures have been quantitatively incorporated into the construction emissions estimates.

Table 3.2-7. Regulatory Compliance Measures that Reduce Construction Criteria Air Pollutant Emissions

| Regulation Number | Regulatory Compliance Measure | Description | Quantification Details |
|---|-------------------------------|---|---|
| Particulate Matter/Fugitive Dust Control | | | |
| REG-AQ-1 | County Grading Dust Control | Per County of San Diego (County) Ordinance 87.428, all clearing, and grading shall be carried out with dust | County Ordinance 87.428 does not require specific measures; rather, it requires |

Table 3.2-7. Regulatory Compliance Measures that Reduce Construction Criteria Air Pollutant Emissions

| Regulation Number | Regulatory Compliance Measure | Description | Quantification Details |
|-------------------|--|--|---|
| | (County Ordinance 87.428) | <p>control measures adequate to prevent creation of a nuisance to persons or public or private property. County Ordinance 87.428 identifies the following measures that could be employed to control dust:</p> <ul style="list-style-type: none"> ▪ Watering ▪ Application of surfactants ▪ Shrouding ▪ Control of vehicle speeds ▪ Paving of access areas ▪ Other operational or technological measures to reduce dispersion of dust | that adequate dust control measures be employed. Watering two times daily was quantified. |
| REG-AQ-2 | Fugitive Dust Control (SDAPCD Rule 55) | <p>San Diego Air Pollution Control District (SDAPCD) Rule 55 identifies two main standards relating to airborne dust beyond the property line, and dust control track-out/carry-out.</p> <p>Regarding airborne dust beyond the property line, Rule 55 requires that no person engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.</p> <p>Regarding track-out/carry-out,¹ Rule 55 requires that visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out be minimized, and provides the following potential control measures:</p> <ul style="list-style-type: none"> ▪ Track-out grates or gravel beds at each egress point ▪ Wheel-washing at each egress during muddy conditions ▪ Use of soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding ▪ Water or treat transported material in outbound transport trucks | Watering two times daily was quantified. |

Table 3.2-7. Regulatory Compliance Measures that Reduce Construction Criteria Air Pollutant Emissions

| Regulation Number | Regulatory Compliance Measure | Description | Quantification Details |
|--|----------------------------------|---|------------------------|
| | | Rule 55 also requires that track-out/carry-out be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations. | |
| Oxides of Nitrogen (NO_x), Carbon Monoxide (CO) | | | |
| REG-AQ-3 | Reduce Idling Time (CARB's ATCM) | Per California Air Resources Board's (CARB) ATCM 13 (CCR Chapter 10 Section 2485), the California Department of Parks and Recreation shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturer specifications or for safety reasons. | Not quantified. |

Note:¹ "Track-out/carry-out" means any bulk materials that adhere to and agglomerate on the exterior surfaces of motor vehicles and/or equipment (including tires), or are inadvertently carried out, and that fall onto a paved road, creating visible roadway dust (SDAPCD Rule 55, SDAPCD 2009b).

Health Risk Assessment

A health risk assessment (HRA) was performed to assess the impact of the Project on sensitive receptors proximate to the Project site. Appendix A includes a HRA associated with emissions from the Project based on the methodologies prescribed in OEHHA's Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015). To implement the OEHHA guidelines based on Project information, the SDAPCD developed a three-tiered approach where each successive tier is progressively more refined, with fewer conservative assumptions. The SDAPCD Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments provides guidance with which to perform HRAs within the SDAB (SDAPCD 2019).

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SDAPCD recommends a carcinogenic (cancer) risk threshold of 10 in 1 million. However, the County implements a threshold of 1 in 1 million without the use of T-BACT and 10 in 1 million with the use of T-BACT. Additionally, some TACs increase non-cancer health risk due to long-term (chronic) exposures. The Chronic and Acute Hazard Index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. The SDAPCD and County recommend a Chronic Hazard Index significance threshold of 1.0 (project increment). The exhaust from diesel engines (DPM) is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts. In addition to TAC emissions from exhaust, there are TACs found within fugitive dust emissions (off-road equipment movement, processing plant, and on-site vehicle traffic). Emissions from fugitive dust TAC emissions include crystalline silica, aluminum, arsenic, barium, beryllium, chromium nonhexavalent, copper, manganese, lead, zinc, and other TAC emissions reported in the 2014 Goat Canyon Sediment Analysis (Ecology and Environment Inc. 2014). Fugitive dust emissions are generated from soil disturbance; the TAC emissions from soil constituents, when inhaled, can get trapped in the lungs alveoli and penetrate the circulatory system, causing deleterious impacts on public health. The HRA evaluated the risk to

existing residents from diesel emissions from exhaust from off-road equipment and diesel haul and vendor trucks, as well as fugitive dust TAC emissions (see Appendix A).

The dispersion modeling of DPM and fugitive dust TAC emissions was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model SDAPCD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2021d). For the Project, AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the “X/Q” values. X/Q is a dispersion factor that is the average effluent concentration normalized by source strength and is used to simplify the representation of emissions from many sources. The X/Q values of ground-level concentrations were determined for construction emissions using AERMOD and the maximum concentrations determined for the 1-hour and period-averaging times. Principal parameters of this modeling are presented in Table 3.2-8.

Table 3.2-8. AERMOD Principal Parameters

| Parameter | Details |
|---|---|
| Meteorological Data | The latest 3-year meteorological data (2010–2012) for the Chula Vista Station provided by the San Diego Air Pollution Control District (SDAPCD) were downloaded and then input to AERMOD. For cancer or chronic noncancer risk assessments, the average cancer risk of all years modeled was used. |
| Urban versus Rural Option | Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. However, based on the SDAPCD guidelines and the project location, the rural dispersion option was selected (SDAPCD 2019). |
| Terrain Characteristics | Terrain in the vicinity of the modeled Project site is generally hilly. The elevation of the modeled site is between 92 and 160 feet above sea level. Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate. |
| Elevation Data | Digital elevation data were imported into AERMOD, and elevations were assigned to the emissions sources and receptors. Digital elevation data were obtained through AERMOD View in the U.S. Geological Survey’s National Elevation Dataset format with a 30-meter resolution. |
| Emission Sources and Release Parameters | Air dispersion modeling of diesel particulate matter and fugitive dust toxic air contaminants from off-road equipment and diesel vehicles was conducted using emissions estimated using CalEEMod, assuming emissions would occur up to 8 hours per day, 5 days per week. |
| Source Release Characterizations | Off-road equipment at the Project site were modeled as a series of line volume sources with a source release height of 5 meters and a length of 25 meters on each side. The on-site vendor truck and off-site diesel exhaust from vendor and haul truck traffic were modeled as lines of adjacent volume sources. Based on U.S. Environmental Protection Agency methodology, the modeled sources would result in a release height of 3.4 meters, a plume height of 3.16 meters, and a plume width of 3.12 meters (EPA 2015). Truck idling emissions were modeled as point sources with a 4-meter exhaust height and 0.1 meters exhaust diameter (EPA 2015; SCAQMD 2003; SJVAPCD 2006). The modeling parameters for the screening plant were based on the National Stone, Sand, and Gravel Association’s Modeling Fugitive Dust Sources (NSSGA 2004). The screens were modeled as volume sources, with a source release height assumed to be 4.6 meters, and the lengths of the volume sources were assumed to be 3 meters on each side. |

Table 3.2-8. AERMOD Principal Parameters

| Parameter | Details |
|--------------------|--|
| Discrete Receptors | The receptors in proximity to the site are sporadic. Discrete receptors were placed at identified existing residential structures. Cartesian grids were placed in residential neighborhoods located across the U.S./Mexico border. |

Note: See Appendix A.

Dispersion model plotfiles from AERMOD were then imported into CARB's Hotspots Analysis and Reporting Program Version 2 to determine health risk, which requires peak 1-hour emission rates and annual-averaged emission rates for all pollutants for each modeling source. For the residential health risk, the HRA assumed exposure would start in the third trimester of pregnancy and last 14 years. Based on the HRA provided in Appendix A, the maximally exposed individual resident would be located west of the Project site. The results of the HRA are discussed in Section 3.2.4 (see Threshold 3), below, and detailed results and methodology are provided in Appendix A.

In addition to the cancer and non-cancer HRA prepared for the Project, a lead exposure screening assessment was performed in accordance with CARB's risk management guidelines for lead (CARB 2001). This screening used the same AERMOD setup as described above for the HRA but used lead as the pollutant and modeled the actual emissions of lead for the Project, as opposed to the unit emissions rate of 1 gram per second.

3.2.4 Impacts Analysis

1. *Would the Project conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP?*

The SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the SDAB, specifically the SIP and RAQS.⁵ The federal O₃ attainment plan, which is part of the SIP, was adopted in 2016. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the SDAB based on the NAAQS. The RAQS was initially adopted in 1991 and is typically updated on a triennial basis (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O₃. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to project future emissions and then determine the strategies necessary for the reduction of emissions through regulatory controls. CARB's mobile source emissions projections and SANDAG's growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of development of their general plans.

The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the County as part of development of their general plans. As such, projects that involve development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS. However, if a project involves development that is greater than that anticipated in the local plan and/or SANDAG's growth projections, that project might be in conflict with the SIP and RAQS, and may contribute to a potentially significant cumulative impact on air quality.

⁵ For this discussion, the relevant federal air quality plan is the Ozone Attainment Plan (SDAPCD 2016). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the SDAB.

The Project site is owned by the County. The site's Assessor's Parcel Numbers are 664-011-50-00 and 664-011-04-00. Under the City of San Diego General Plan, the Project site is designated as Open Space Parks and is listed as Proposition A land. Proposition A land is characterized as "very low-density, residential, open space, natural resource-based park, and agricultural uses" (County of San Diego 2011). Under the City's Tijuana River Valley Community Plan, which includes the Project site and Tijuana River Valley, the site is designated as Multiple Species Conservation Open Space, which prohibits any commercial recreation or urban residential land use designations. The Project site is zoned as AR-1-1, or Agricultural - Residential zones. Agricultural - Residential zones allow the development of single dwelling unit homes at a very low density (minimum 10-acre lots) (City of San Diego 2021). The Project site's land use designation and zoning would not change because of proposed reclamation, restoration, and landform creation activities.

The Project would be consistent with the underlying zoning for the site parcels (see Section 4.1.1, Agricultural and Forestry Resources), which means that the Project was currently included within the SIP and RAQS. Moreover, the Project does not propose residential, commercial, or growth-inducing development. Therefore, emissions from the Project would be considered consistent with what is already included within the RAQS and SIP.

Since the Project would not contribute to local population growth or substantial employment growth and growth-related emissions, the proposed Project is considered accounted for in the SIP and RAQS, and the Project would not conflict with or obstruct implementation of local air quality plans. Impacts would be **less than significant**.

2. *Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is nonattainment under an applicable federal or state ambient air quality standard?*

Cumulatively considerable net increases during the construction phase would typically occur if two or more projects near each other are simultaneously under construction. The following guidelines for determining significance must be used for determining the cumulatively considerable net increases during the construction phase (County of San Diego 2007):

- A project that has a significant direct impact on air quality regarding emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase.
- In the event direct impacts from a project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from that project, in combination with the emissions of concern from other projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of guidelines.
- A project that does not conform to the RAQS and/or has a significant direct impact on air quality regarding operational emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs would also have a significant cumulatively considerable net increase.
- Projects that cause road intersections to operate at or below LOS E (analysis only required when the addition of peak-hour trips from a project and surrounding projects exceeds 2,000) and create a CO hotspot create a cumulatively considerable net increase of CO.

Analysis

In analyzing cumulative impacts from the Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment

for the CAAQS and NAAQS. If the Project's emissions do not exceed thresholds and is determined to have less-than-significant Project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the Project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds.

The Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, and internal haul trucks) and off-site sources (e.g., vendor trucks and worker vehicle trips). Specifically, entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. Internal combustion engines used by off-road equipment, internal haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM₁₀, and PM_{2.5}. Emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions.

The Project would require the import of water for dust control. Approximately 35 acre-feet of water would be used per year. Water would be provided by the City through an existing water pipeline and meter on the Project site.

Emissions Estimation Methodology in Section 3.2.3 presents the methodology and assumptions used to estimate emissions from the Project. Appendix A presents details, including phasing and phase duration, off-road-equipment use (equipment type, quantity, horsepower, load factor, and hours of operation), and vehicle trips (internal haul trucks, vendor truck, and workers vehicle trips). Table 3.2-9 shows the estimated maximum daily emissions associated with the proposed Project.

Table 3.2-9. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

| Year | VOC | NO _x | CO | SO _x | PM ₁₀ | PM _{2.5} |
|------|----------------|-----------------|-------|-----------------|------------------|-------------------|
| | Pounds per Day | | | | | |
| 2021 | 3.86 | 56.53 | 26.48 | 0.09 | 88.78 | 11.64 |
| 2022 | 3.36 | 49.44 | 25.03 | 0.09 | 88.33 | 11.37 |
| 2023 | 2.94 | 40.96 | 23.70 | 0.09 | 88.10 | 11.18 |
| 2024 | 2.88 | 39.57 | 23.56 | 0.09 | 90.07 | 11.34 |
| 2025 | 2.65 | 36.28 | 22.68 | 0.09 | 89.78 | 11.19 |
| 2026 | 2.63 | 36.00 | 22.66 | 0.09 | 89.77 | 11.19 |
| 2027 | 2.61 | 35.61 | 22.54 | 0.09 | 87.92 | 11.00 |
| 2028 | 2.60 | 35.44 | 22.56 | 0.09 | 88.08 | 11.01 |
| 2029 | 2.59 | 35.19 | 22.54 | 0.09 | 87.92 | 11.00 |
| 2030 | 2.79 | 24.70 | 20.40 | 0.09 | 85.58 | 10.38 |
| 2031 | 2.79 | 24.69 | 20.48 | 0.09 | 87.42 | 10.57 |
| 2032 | 2.78 | 24.56 | 20.48 | 0.09 | 87.43 | 10.57 |
| 2033 | 2.77 | 24.45 | 20.48 | 0.09 | 87.43 | 10.57 |
| 2034 | 2.77 | 24.35 | 20.48 | 0.09 | 87.43 | 10.57 |
| 2035 | 2.46 | 20.86 | 20.13 | 0.09 | 87.18 | 10.40 |
| 2036 | 0.02 | 0.26 | 0.15 | 0.00 | 3.70 | 0.38 |
| 2037 | 0.01 | 0.13 | 0.07 | 0.00 | 1.85 | 0.19 |
| 2038 | 0.01 | 0.13 | 0.07 | 0.00 | 1.85 | 0.19 |

Table 3.2-9. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

| Year | VOC | NO _x | CO | SO _x | PM ₁₀ | PM _{2.5} |
|----------------------------|----------------|-----------------|-----------|-----------------|------------------|-------------------|
| | Pounds per Day | | | | | |
| 2039 | 0.01 | 0.13 | 0.07 | 0.00 | 1.85 | 0.19 |
| 2040 | 0.01 | 0.13 | 0.07 | 0.00 | 1.85 | 0.19 |
| <i>Maximum</i> | 3.86 | 56.53 | 26.48 | 0.09 | 90.07 | 11.64 |
| <i>Pollutant Threshold</i> | 75 | 250 | 550 | 250 | 100 | 55 |
| Threshold Exceeded? | No | No | No | No | No | No |

Source: See Appendix A.

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter.

Emissions represent maximum daily construction activities from sequential construction phases at any one point for a given year. Estimated emissions include compliance with all regulations and SDAPCD Rule 55.

As shown in Table 3.2-9, maximum daily construction emissions would not exceed the thresholds for VOC, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}. Therefore, impacts would be **less than significant**.

Construction of cumulative projects simultaneously with the Project would result in a temporary addition of pollutants to the local airshed caused by off-road equipment, soil disturbance, on-road haul trucks, vendor trucks, and worker vehicle trips. Maximum unmitigated daily construction emissions of PM₁₀ and PM_{2.5} generated by the Project would not exceed significance thresholds. The proposed Project would be required to comply with SDAPCD Rule 55, which regulates construction activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as trackout and carryout onto paved roads beyond the Project site. However, it is possible that other land development and infrastructure projects could be constructed in the general vicinity and during the same time frame as the proposed Project.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Table 2-11 in Chapter 2, Project Description, of this EIR provides a list of 24 reasonably foreseeable, approved, and pending projects within 1.5 miles of the Project site. Of those projects, 7 have been completed, 2 are approved but not constructed, 5 are ongoing, and 10 are under review. The two approved projects would have relatively minimal air quality impacts as they would include trash and sediment management at Smuggler's Gulch and vegetation control along the Tijuana River. The five ongoing projects include sediment management at U.S. International Boundary and Water Commission Tijuana River, Smuggler's Gulch, Pilot Channel, California Department of Parks and Recreation Goat Canyon, and Border Wall construction. It is unknown what level of activity or emissions occur from these ongoing projects. The sediment removal projects are typically seasonal and do not occur year-round.

Therefore, without further information relative to approved project schedules and emissions, it is unknown whether the Project in addition to these projects would cause a cumulative impact. As it is unknown whether the projects under review will be approved or not, and if approved when actual construction would begin, it would be purely speculative to estimate any potential overlap of the Proposed Project. Construction schedules for potential future projects near the Project site are currently unknown; therefore, potential

construction impacts associated with two or more simultaneous projects would be speculative.⁶ However, future projects would be subject to CEQA and would require an air quality analysis and, where necessary, mitigation if the project would exceed SDAPCD's significance thresholds. Criteria air pollutant emissions associated with construction activity of future proposed projects would be reduced through implementation of control measures required by the SDAPCD. Cumulative PM₁₀ and PM_{2.5} emissions would be reduced because all future projects would be subject to SDAPCD Rule 55 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SDAPCD.

Based on the previous considerations, the Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants, and cumulative impacts would be **less than significant**.

Health Effects

Construction and operation of the proposed Project would not result in emissions that would exceed the County's emission thresholds for any criteria air pollutants.

Regarding VOCs, some VOCs would be associated with motor vehicles, the emissions of which would not result in the exceedances of the County's thresholds. In addition, VOCs and NO_x are precursors to O₃, which the SDAB is designated as nonattainment for with respect to the NAAQS (2008 8-hour) and CAAQS (the SDAB is designated by EPA as an attainment area for the 1-hour O₃ NAAQS standard and 1997 8-hour NAAQS standard). The health effects associated with O₃ are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O₃ concentrations is the result of complex photochemistry. The increases in O₃ concentrations in the SDAB due to O₃ precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O₃ concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O₃ ambient air quality standards tend to occur April through October, when solar radiation is highest. The VOC and NO_x emissions associated with Project construction and operation could minimally contribute to regional O₃ concentrations and the associated health effects. Due to the minimal contribution (the Project would not exceed County thresholds), the Project would not result in significant health effects.

Like O₃, the proposed Project would not exceed thresholds for PM₁₀ or PM_{2.5} and would not contribute to exceedances of the NAAQS or CAAQS for particulate matter (SDAB is a state nonattainment area for PM₁₀ and PM_{2.5}). The proposed Project would also not result in substantial DPM emissions during operation and, therefore, would not result in significant health effects related to DPM exposure (health risks from DPM during construction are analyzed in the Toxic Air Contaminants section under Threshold 3 (would the Project expose sensitive receptors to substantial pollutant concentrations) below. Due to the minimal contribution of particulate matter during operation, the Project would not result in significant health impacts. PM₁₀ and PM_{2.5} would not contribute to potential exceedances of the NAAQS or CAAQS for particulate matter, obstruct the SDAB from coming into attainment for these pollutants, or contribute to significant health effects associated with particulates.

Regarding NO₂, according to the emissions analysis, the proposed Project would not contribute to exceedances of the NAAQS or CAAQS for NO₂ (for analysis purposes, NO_x emissions were assumed to be

⁶ The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided to show good-faith analysis and to comply with CEQA's information disclosure requirements.

NO₂ emissions). NO₂ and NO_x health effects are associated with respiratory irritation. However, these NO_x emissions would be minimal and infrequent. Therefore, the Project would not result in significant health effects.

CO tends to be a localized impact associated with congested intersections. The Project would not create any CO hotspots, and CO impacts would be less than significant. Thus, the proposed Project's CO emissions would not contribute to significant health effects associated with this pollutant.

In sum, the Project's emissions of criteria air pollutants would not contribute to potential exceedances of the NAAQS or CAAQS, obstruct the SDAB from coming into attainment for the pollutants for which it is out of attainment (O₃ and particulate matter), or contribute to significant health effects associated with particulates. Thus, impacts would be **less than significant**.

3. *Would the Project expose sensitive receptors to substantial pollutant concentrations?*

A significant impact would result if:

- If a proposed development causes a six-lane road to deteriorate to LOS E or worse, the resulting longer queuing at the traffic signals could cause a localized significant air quality impact (City of San Diego 2016). A site-specific CO hotspot analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor. If a proposed development causes a six-lane road to drop to LOS F, the resultant extended wait at the signalized intersections could cause a significant air quality impact (City of San Diego 2016). A site-specific CO hotspot screening and/or analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor (City of San Diego 2016). If a proposed development causes a four-lane road to drop to LOS E or worse, the extended wait at the signalized intersection could cause a significant air quality impact. A site-specific CO hotspot screening and/or analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor (City of San Diego 2016). If a proposed development is within 400 feet of a sensitive receptor and the LOS is worse than D, a site-specific CO hotspot analysis should be performed to determine if health standards are potentially exceeded and to determine the level of adverse effect on the receptors (City of San Diego 2016).
- Project implementation would result in exposure to TACs resulting in a maximum incremental cancer risks equal to or greater than 10 in 1 million, or cancer burden equal to or greater than 1.0, or total acute non-cancer health hazard index equal to or greater than 1.0, or total chronic non-cancer health hazard index equal to or greater than 1.0 would be deemed as having a potentially significant impact (County of San Diego 2007).

Carbon Monoxide Hotspots

A CO hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. If a proposed development causes a six-lane road to deteriorate to LOS E or worse, the resulting longer queuing at the traffic signals could cause a localized significant air quality impact. A site-specific CO hotspot analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptors. If a proposed development causes a six-lane road to drop to LOS F, the resultant extended wait at the signalized intersections could cause a significant air quality impact. A site-specific CO hotspot screening and/or analysis should be performed to determine if health

standards are potentially violated and to identify any affected sensitive receptor. If a proposed development causes a four-lane road to drop to LOS E or worse, the extended wait at the signalized intersection could cause a significant air quality impact. A site-specific CO hotspot screening and/or analysis should be performed to determine if health standards are potentially violated and to identify any affected sensitive receptor. If a proposed development is within 400 feet of a sensitive receptor and the LOS is worse than D, a site-specific CO hotspot analysis should be performed to determine if health standards are potentially exceeded and to determine the level of adverse effect on the receptors.

The Project's Transportation Technical Memorandum (Appendix I to this EIR) evaluated the impacts from traffic on the local area. The analysis showed that all studied intersections would operate at an acceptable level of service (LOS D or better). Further, the Project would not significantly contribute to peak-hour trips. As such, impacts related to CO hotspots from Project construction and decommissioning would be **less than significant**.

Toxic Air Contaminants

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard OEHHA risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs to reduce DPM emissions. According to the OEHHA, HRAs, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with a project (OEHHA 2015). Therefore, for this Project, the exposure period would be 14 years, consistent with the duration of Project activities. The emissions associated with monitoring are minimal and would not contribute to health risk impacts.

During Project activities, DPM emissions would be emitted from heavy-duty construction equipment and heavy-duty trucks, and TAC emissions would come from the fugitive dust generated by vehicle traffic, off-road equipment, and sediment processing. Heavy-duty construction equipment and diesel trucks are subject to CARB ATCMs (described in Section 3.2.2) to reduce DPM emissions.

An HRA was performed to evaluate the cancer and non-cancer risk from TAC emissions on existing sensitive receptors from Project activities. The HRA methodology is further described in Appendix A. The results of the HRA for the Project are summarized in Table 3.2-10.

Table 3.2-10. Construction Activity Health Risk Assessment Results - Unmitigated

| Impact Parameter | Units | Proposed Project Impact | CEQA Threshold | Level of Significance |
|--|----------------|-------------------------|----------------|--------------------------------|
| Cancer risk | Per million | 3.5 | 1 | Potentially Significant |
| Chronic non-cancer health hazard index | Not applicable | 0.1 | 1.0 | Less than Significant |
| Acute non-cancer health hazard index | Not applicable | 0.05 | 1.0 | Less than Significant |

Table 3.2-10. Construction Activity Health Risk Assessment Results - Unmitigated

| Impact Parameter | Units | Proposed Project Impact | CEQA Threshold | Level of Significance |
|------------------|-------------------|-------------------------|----------------|-----------------------|
| Lead exposure | µg/m ³ | 0.002 | 0.12 | Less than Significant |

Source: Appendix A.

Note: CEQA = California Environmental Quality Act; µg/m³ = microgram per cubic meter.

The results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions and fugitive dust TACs would result in cancer risk on site above the 1 in 1 million threshold without application of T-BACT, chronic and acute non-cancer health hazard indexes of less than 1.0, and lead exposure less than 0.12 microgram per cubic meter. Therefore, TAC emissions from the Project may expose sensitive receptors to substantial pollutant concentrations. Impacts would be **potentially significant** and mitigation is required.

Valley Fever Exposure

Valley fever is not highly endemic to San Diego County, and within the County, the incidence rate in the Project area is below the County and statewide averages. The Project would comply with SDAPCD Rule 55, which would limit the amount of fugitive dust generated during construction. The Project would implement strategies to comply with SDAPCD Rule 55 and control dust, including watering two times per day and limiting speed on unpaved roads to 15 miles per hour. The nearest sensitive-receptor land use (existing residence) is located approximately 750 feet south of the Project site.

Based on the low incidence rate of *Coccidioidomycosis* in the Project region and in greater San Diego County and the Project's implementation of dust control strategies, it is not anticipated that earth-moving activities would result in exposure of nearby sensitive receptors to valley fever. Therefore, Project impacts would be **less than significant** with respect to valley fever exposure for sensitive receptors.

4. *Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Based on Appendix G of the CEQA Guidelines and the County's Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality (County of San Diego 2007), a project would have a significant impact if:

- The project, which is not an agricultural, commercial, or an industrial activity subject to SDAPCD standards, as a result of implementation, would either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which would affect a considerable number of persons.

California Health and Safety Code, Division 26, Part 4, Chapter 3, Section 41700, and SDAPCD Rule 51, commonly referred to as the public nuisance law, prohibit emissions from any source whatsoever in such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public health or damage to property. The potential for an operation to result in odor complaints from a "considerable" number of persons in the area would be a significant, adverse odor impact.

Projects required to obtain permits from SDAPCD are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent

occurrence of public nuisance. Odor issues are subjective because of the nature of odors themselves and because their measurements are difficult to quantify. As a result, this guideline is qualitative, and each project is reviewed on an individual basis, focusing on the existing and potential surrounding uses and location of sensitive receptors.

Analysis

Section 6318 of the San Diego County Zoning Ordinance requires that all commercial and industrial uses be operated so as not to emit matter causing unpleasant odors that are perceptible by the average person at or beyond any lot line of the lot containing said uses. Section 6318 goes on to further provide specific dilution standards that must be met “at or beyond any lot line of the lot containing the uses” (County of San Diego 1979). SDAPCD Rule 51 (Public Nuisance) also prohibits emission of any material that causes nuisance to a considerable number of people, or endangers the comfort, health, or safety of any person. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project would not include land uses that are associated with odor complaints. Potential odors produced from the Project would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and from excavated sediment. These odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. The Project would not include the development of facilities associated with sensitive receptors who would be sensitive to off-site odor generation. The nearest off-site residential receptor to the Project is single-family residences across the U.S./Mexico border from the Project site.

Project activities would result in the emission of diesel fumes and other odors typically associated with construction activities. These compounds would be emitted in varying amounts on the Project site depending on where activities are occurring. Sensitive receptors located within and in the vicinity of the site may be affected; however, odors are highest near the source and would quickly dissipate. Any odors associated with activities would be temporary and would cease upon Project completion; therefore, odor impacts would be **less than significant**.

3.2.5 Cumulative Impacts

In analyzing cumulative impacts from a project, the analysis must specifically evaluate a project’s contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the state and federal ambient air quality standards. The SDAB has been designated as a federal nonattainment area for O₃ and a state nonattainment area for O₃, PM₁₀, and PM_{2.5}. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the SDAB. The Project would have a cumulatively considerable impact if emissions generated by the Project would exceed thresholds for VOC or NO_x (O₃ precursors), PM₁₀, or PM_{2.5}. If the Project does not exceed thresholds and is determined to have less-than-significant impacts, it may still have a cumulatively considerable impact on air quality if emissions from the Project, in combination with emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, the Project would have a cumulative impact only if the Project’s contribution accounts for a significant proportion of the cumulative total emissions.

Background ambient air quality, as measured at the monitoring stations maintained and operated by SDAPCD, is the concentration of pollutants from existing sources; therefore, past and present impacts are included in the background ambient air quality data.

Geographic Extent

The geographic extent for the analysis of cumulative impacts related to air quality is the south-central portion of the SDAB (San Diego County). Due to the nonattainment status of the SDAB, the primary air pollutants of concern are VOC and NO_x, which are O₃ precursors, and PM₁₀ and PM_{2.5}. Because of the nature of O₃ as a regional air pollutant, emissions from the entire geographic area for this cumulative impact analysis would tend to be important. PM₁₀ and PM_{2.5} impacts, on the other hand, tend to occur locally; thus, projects occurring in the same general area and at the same time tend to create cumulative air quality impacts.

Existing Cumulative Conditions

Air quality management in the geographic area for the cumulative impact assessment is the responsibility of the SDAPCD. Existing levels of development in the County have led to the nonattainment status for O₃ with respect to the CAAQS and NAAQS, and for PM₁₀ and PM_{2.5} with respect to the CAAQS. The nonattainment status is based on ambient air quality monitoring generally conducted in the urban portions of the County. Due to its proximity to the Project site, similar geographic and climactic characteristics, and available measured ambient concentrations of pollutants, data from the Otay Mesa-Donavan facility monitoring station, which monitors O₃, NO₂, PM₁₀, and PM_{2.5}, is used for this analysis. The El Cajon-Floyd Smith Drive monitoring station monitors concentrations for CO and SO₂ pollutants and is considered most representative of the Project site for those pollutants. The air quality plans prepared by the SDAPCD reflect future growth under local development plans, but they are intended to reduce emissions Countywide to levels that would comply with the NAAQS and CAAQS through implementation of new regulations at the local, state, and federal levels.

Impact Analysis

The cumulatively considerable net increase in emissions during construction was evaluated under threshold question 2 in Section 3.2.4. As shown in Table 3.2-9, maximum daily construction emissions would not exceed the thresholds for VOC, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}. Therefore, impacts would be **less than significant**.

Construction of cumulative projects simultaneously with the Project would result in a temporary addition of pollutants to the local airshed caused by off-road equipment, soil disturbance, on-road haul trucks, vendor trucks, and worker vehicle trips. Maximum unmitigated daily construction emissions of PM₁₀ and PM_{2.5} generated by the Project would not exceed significance thresholds. The proposed Project would be required to comply with SDAPCD Rule 55, which regulates construction activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as trackout and carryout onto paved roads beyond the Project site. However, it is possible that other land development and infrastructure projects could be constructed in the general vicinity and during the same time frame as the proposed Project.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the Project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be

speculative.⁷ However, future projects would be subject to CEQA and would require an air quality analysis and, where necessary, mitigation if the project would exceed SDAPCD's significance thresholds. Criteria air pollutant emissions associated with construction activity of future proposed projects would be reduced through implementation of control measures required by the SDAPCD. Cumulative PM₁₀ and PM_{2.5} emissions would be reduced because all future projects would be subject to SDAPCD Rule 55 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SDAPCD.

Based on the previous considerations, the Project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants, and cumulative impacts would be **less than significant**.

3.2.6 Mitigation Measures

Mitigation Measure (MM) AQ-1 would be implemented to reduce emissions of TACs from construction-related exhaust.

MM-AQ-1 Prior to the lead and/or responsible agency's approval of any construction-related permits, the California Department of Parks and Recreation (and/or designee or Responsible Agency) shall place the following requirements on all plans, which shall be implemented during each construction phase to minimize diesel particulate matter emissions:

- a. Heavy-duty diesel-powered construction equipment shall be equipped with Tier 4 Final or better diesel engines for engines 75 horsepower or greater. The City of San Diego and/or County of San Diego shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.
- b. Vehicles in loading and unloading queues shall not idle for more than 5 minutes and shall turn their engines off when not in use to reduce vehicle emissions.
- c. All construction equipment shall be properly tuned and maintained in accordance with manufacturer specifications.
- d. When construction equipment units that are less than 50 horsepower would be employed, that equipment shall be electrical or natural-gas-powered, where available.
- e. A Construction Traffic Control Plan shall be developed to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the amount of large pieces of equipment operating simultaneously during peak construction periods, schedule vendor and haul truck trips to occur during non-peak hours, establish dedicated construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling.

3.2.7 Level of Significance After Mitigation

With implementation of MM-AQ-1, the Project would require the use of Tier 4 Final off-road equipment. The results of the HRA for Project construction including MM-AQ-1 are summarized in Table 3.2-11. The use of Tier 4 Final construction equipment would be considered T-BACT,⁸ and the County's significance threshold would be 10 in 1 million, instead of the 1.0 in 1 million without implementation of T-BACT.

⁷ The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided to show good-faith analysis and to comply with CEQA's information disclosure requirements.

⁸ Per the County's guidance, T-BACT is determined on a case-by-case basis; however, an example of T-BACT includes diesel particulate filters. As required by MM-AQ-1, the project would use off-road equipment that meets Tier 4 Final standards. To meet stringent Tier 4

Table 3.2-11. Construction Activity Health Risk Assessment Results - Mitigated

| Impact Parameter | Units | Proposed Project Impact | CEQA Threshold | Level of Significance |
|--|-------------------|-------------------------|----------------|-----------------------|
| Cancer risk | Per million | 2.1 | 10 | Less than Significant |
| Chronic non-cancer health hazard index | Not applicable | 0.1 | 1.0 | Less than Significant |
| Acute non-cancer health hazard index | Not applicable | 0.05 | 1.0 | Less than Significant |
| Lead exposure | µg/m ³ | 0.002 | 0.12 | Less than Significant |

Source: Appendix A.

Note: CEQA = California Environmental Quality Act; µg/m³ = microgram per cubic meter.

The results of the HRA demonstrate that the TAC exposure from construction diesel exhaust emissions and fugitive dust sources would result in cancer risk on site below the 10 in 1 million threshold with application of T-BACT, chronic and acute non-cancer health hazard indices of less than 1.0, and lead exposure less than 0.12 micrograms per cubic meter.

With implementation of MM-AQ-1, impacts associated with emissions of TACs from construction-related exhaust would be reduced to a **less-than-significant level**.

3.2.8 References

CAPCOA 2021. "California Emissions Estimator Model." Accessed September 8, 2021. <http://caleemod.com/>.

CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000. Accessed November 2017. <https://www.arb.ca.gov/diesel/documents/rrpFinal.pdf>.

CARB. 2001. Risk Management Guidelines for New, Modified, and Existing Sources of Lead. March 2001. https://ww2.arb.ca.gov/sites/default/files/classic/toxics/lead/leadmain.pdf?_ga=2.91311379.862007760.1631203541-1801449903.1579817761.

CARB. 2011. *Recommended Area Designation for the 2010 Federal Sulfur Dioxide Standard*.

CARB. 2020. "California Ambient Air Quality Standards." May 4, 2016. Accessed September 2020. <https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf>.

CARB. 2021a. "GHG Inventory Glossary." Accessed September 8, 2021. <https://ww2.arb.ca.gov/ghg-inventory-glossary>

Final particulate matter emissions standards, equipment manufacturers typically use diesel particulate filters, selective catalytic reduction systems that employ diesel particulate filters or combination diesel particulate filters and diesel oxidation catalysts, or other equivalent device to remove DPM from the exhaust of a diesel engine. As such, T-BACT is reasonably expected to be achieved by the project's off-road equipment fleet. Because T-BACT is incorporated, the HRA for the project's mitigated scenario applies the maximum incremental cancer risk equal to or greater than 10 in 1 million threshold to evaluate the significance of health risk impacts.

- CARB. 2021b. "iADAM: Air Quality Data Statistics." Accessed January 2021. <https://www.arb.ca.gov/adam/topfour/topfour1.php>.
- CARB. 2021c. "California Ambient Air Quality Standards." Accessed September 8, 2021. <https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>.
- CDPH (California Department of Public Health). 2019. *Epidemiologic Summary of Valley Fever (Coccidioidomycosis) in California, 2019*. <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf>.
- City of San Diego. 2000. San Diego Municipal Code Chapter 14: General Regulations. Article 2: General Development Regulations Division 7: Offsite Development Impact Regulations. Section 142.0710 Air Contaminant Regulations. Effective January 1, 2000.
- City of San Diego. 2016. *California Environmental Quality Act Significance Determination Thresholds*. July 2016.
- City of San Diego. 2021. "Zoning and Parcel Information Portal." Accessed August 2021. <https://www.sandiego.gov/development-services/zoning/>.
- County of San Diego. 1979. County Code of Regulatory Ordinance Section 6318, Odors. Adopted May 16, 1979.
- County of San Diego. 2003. County Code of Regulatory Ordinances. Title 8 Zoning and Land Use Regulations, Division 7, Grading, Clearing, and Watercourses. Section 87.428 Dust Control Measures.
- County of San Diego. 2007. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Air Quality*. March 19, 2007.
- County of San Diego. 2011. *County of San Diego General Plan Update EIR*. August 2011.
- Ecology and Environment Inc. 2014. *Letter Report, Border Field Site Removal Assessment*. April 9, 2014.
- EPA (U.S. Environmental Protection Agency). 2017. "Glossary of Climate Change Terms." Accessed September 18, 2020. https://19january2017snapshot.epa.gov/climatechange/glossary-climate-change-terms_html.
- EPA. 2021a. "Basic Information about NO₂." Accessed September 8, 2021. <https://www.epa.gov/no2-pollution/basic-information-about-no2>.
- EPA. 2021b. "Outdoor Air Quality Data, Monitor Values Report." Accessed January 2021. <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.
- EPA. 2021c. "Process of Reviewing the National Ambient Air Quality Standards." Accessed September 8, 2021. <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.
- EPA. 2021d. "Air Quality Dispersion Modeling – Preferred and Recommended Models." Accessed September 8, 2021. <https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod>.
- Nelson, J. 2018. Coccidioidomycosis Data Requests. Email from J. Nelson (County of San Diego Health & Human Services Agency, Epidemiologist II) to J. Reed (Dudek). April 26, 2018.

- NOAA (National Ocean and Atmospheric Administration). 2021. "Local Climatological Data Annual Summary with Comparative Data San Diego, California (KSAN)." Accessed September 5, 2021. https://wrcc.dri.edu/Climate/west_lcd.php.
- OEHHA (Office of Environmental Health Hazard Assessment). 2015. Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments. February.
- SANDAG. 2015. San Diego Forward: The Regional Plan. October 2015.
- SANDAG. 2016. 2016 Regional Transportation Improvement Program. September 2016.
- SANDAG. 2019. San Diego Forward: The Federal Regional Transportation Plan. October 2019.
- SANDAG. 2021. San Diego Forward: The 2021 Draft Regional Plan. May 2021.
- SDAPCD (San Diego Air Pollution Control District). 1976. *Regulation IV Prohibitions. Rule 51 – Nuisance*. Effective November 8, 1976.
- SDAPCD. 1997. *Regulation IV Prohibitions. Rule 50 – Visible Emissions*. Effective August 13, 1997.
- SDAPCD. 2005. *Measures to Reduce Particulate Matter in San Diego County*. Accessed April 2018. <http://sandiegohealth.org/air/SB656StaffRpt.pdf>.
- SDAPCD. 2009a. Regional Air Quality Strategy Revision. April 22, 2009.
- SDAPCD. 2009b. *Regulation IV Prohibitions. Rule 55 – Fugitive Dust Control*. Effective June 24, 2009. Accessed June 2017.
- SDAPCD. 2016. *2016 Revision of the Regional Air Quality Strategy for San Diego County*. December 2016. Accessed June 2017. <http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/2016%20RAQS.pdf>.
- SDAPCD. 2017. *2016 Monitoring Plan*. Accessed April 2018. https://www.sdapcd.org/content/dam/sdc/apcd/monitoring/2016_Network_Plan.pdf.
- SDAPCD. 2019. Supplemental Guidelines for Submission of Rule 12 Health Risk Assessments (HRAs). July 2019.
- SDAPCD. 2020. "Attainment Status". Accessed September 18, 2020. <https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html>
- SDAPCD. 2021. "Air Quality Planning". Accessed September 8, 2021. <https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning.html>.
- USGS (U.S. Geological Survey). 2000. *Operational Guidelines (version 1.0) for Geological Fieldwork in Areas 1 Endemic for Coccidioidomycosis (Valley Fever)*.

INTENTIONALLY LEFT BLANK

3.3 Biological Resources

This section describes the existing biological resources conditions of the study area (which includes the Project site and Project Impact Area) and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project).

The information provided in this section was incorporated from the Biological Resources Technical Report for the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project. This report was prepared by Dudek in February 2021 and is included in this Environmental Impact Report (EIR) as Appendix B.

3.3.1 Existing Conditions

Project Overview

The study area is located within the southeastern corner of Tijuana River Valley Regional Park. Further, the study area is located within the Coastal Zone, City of San Diego Multiple Species Conservation Program (MSCP) Multi-Habitat Planning Area (MHPA) and is designated as MSCP Open Space within the Tijuana River Valley Local Coastal Program/Land Use Plan (LCP/LUP) (see Figure 3.3-1, Property Ownership and Project Areas). Monument Road and the City of San Diego (City) South Bay International Wastewater Treatment Plant are located approximately 0.25 miles to the east. Federal lands managed by U.S. Customs and Border Protection are located to the south (the international border fence is located 450 feet south of the Project boundary) and County of San Diego (County) jurisdictional lands are located to the west and north. Border Field State Park, Tijuana Slough National Wildlife Refuge, and the Tijuana River National Estuarine Research Reserve are located to the west, northwest, and northwest, respectively. Interstate 5 and Interstate 805 provide regional access to the proposed Project area and are 1.15 miles and 1.9 miles east of the study area, respectively.

The Nelson Sloan sand and gravel quarry was permitted in 1982 by the City through approval of an Environmental Impact Report and issuance of a 20-year conditional use permit (CUP) that covered 172 acres (City of San Diego 1982a, 1982b). The quarry was assessed in a Only a portion of the approved quarry area under the CUP was subject to mining during the 1982–2002 period. No portion of the CUP area has been reclaimed as required under the original Reclamation Plan prepared as part of the CUP and as required by the state Surface Mining and Reclamation Act. After 2002, the County purchased the property with funds provided by a grant from the California Coastal Conservancy with an agreement to utilize the property for habitat protection and open space consistent with the Tijuana River Valley Regional Park (Appendix B).

In order to facilitate evaluation of the CUP Reclamation Plan in the context of the biological resource impacts and mitigation addressed in the 1982 CUP and applicable biological resource regulations, Dudek completed baseline surveys and focused surveys in 2011, 2019, and 2020 to determine presence/absence of various special-status species including coastal California gnatcatcher (*Polioptila californica californica*), Quino checkerspot butterfly (*Euphydryas editha quino*), and narrow endemic plant species. This report includes a description of the site, survey methods, results in terms of biological resources, potential Project impacts, and conformance with applicable biological resource regulations.

The term “study area” refers to the 71.9-acre Nelson Sloan Quarry property evaluated in the BTR prepared for this Project for purposes of establishing baseline conditions. The term “Project site” refers to the two easternmost parcels within the study area wherein all activities associated with the proposed Project would occur. The term

“Reclamation Area” refers to the 20.93-acre area within the Project site where the reclamation, sediment placement, and restoration activities will occur. The “proposed Project” refers to the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project, which proposes to implement the Reclamation Plan and Restoration Plan through the placement of fill material for landform reclamation, creation, and habitat restoration. An overall restoration plan (also referred to as a revegetation plan) would be approved by the County prior to the initiation of Phase 1 operations, including invasive species removal outside of the Project limits. Individual restoration plans would be prepared for each phase and approved prior to the initiation of operations for the phase (Appendix B).

Existing Physical Conditions

Topography and Land Uses

The study area is generally flat in the eastern half, with a steep cut slope bisecting the middle of the site. The western half of the study area has two steep canyons draining north toward the Tijuana River. Elevations on site are approximately 30 feet above mean sea level (amsl) in the northeast portion and approximately 440 feet amsl along the southern boundary in the western portion of the site. The eastern portion of the study area (i.e., the Project site) was previously used as a quarry. A brief review of historical aerial photographs indicates that a third canyon existed in the area of the quarry, east of and parallel to the two existing canyons on site. The U.S./Mexico border security infrastructure was expanded around 2008 and occupies approximately 200–250 feet of land extending from the international border on the U.S. side. Fill slopes and a drainage structure from the recent expansion have removed any drainage to this historical canyon; drainage now flows to the existing canyon immediately east of the quarry. The fill slope has brow ditches that drain towards the quarry.

Adjacent land uses include open space and agricultural operations. The U.S. Border Patrol uses all open areas throughout the site to patrol the border. The South Bay International Wastewater Treatment Plant is located northeast of the Project site (i.e., east of Assessor’s Parcel No. 664-011-0550 and Monument Road).

Soils

The following soil types occur within the study area: Olivenhain cobbly loam (2% to 9% slopes), Olivenhain cobbly loam (9% to 30% slopes), Olivenhain cobbly loam (30% to 50% slopes), Huerhuero loam (5% to 9% slopes, eroded), and terrace escarpment.

Olivenhain series soils are found throughout the site. Olivenhain series soils form from gravelly and cobbly alluvium on dissected marine terraces. The topsoil layer is brown to reddish-brown and about 10 inches deep over subsoil that extends to about 60 inches depth. Olivenhain cobbly loam 2% to 9% slopes, 9% to 30% slopes, and 30% to 50% slopes are mapped on site (Appendix B). Olivenhain soils are substrates associated with sensitive plant species.

Huerhuero series soils are moderately well-drained loams that derived from sandy marine sediments. The topsoil is strongly acid (pH 5.3) pale-, yellowish-, grayish- or strong-brown in color and sandy loam to loam in texture, and from 5 to 30 inches thick. Below this is an alkaline pan of clay or heavy clay loam. The subsoil extends to 68 inches depth, grading into a sandy loam texture. Huerhuero soils support tarweeds and annual grasses and forbs. Huerhuero loam soils (5% to 9% slopes, eroded) are found in the middle and western portions of the study area.

Terrace escarpment is mapped in the western portion of the study area. Terrace escarpments are steep or very steep landscapes that occur on nearly even fronts of terraces or alluvial fans. Typically, this soil has 4–10 inches of loamy or gravelly soil over soft marine sandstone, shale, or gravelly sediments (Appendix B).

Method and Survey Conditions

Dudek conducted mapping of vegetation communities, a jurisdictional delineation, reconnaissance surveys, focused gnatcatcher survey, and focused rare plant surveys in 2019 and 2020 within the study area. Four plant community types were identified within the proposed study area: maritime succulent scrub (32400), Diegan coastal sage scrub (32500) (including disturbed forms), mulefat scrub (63310), and southern riparian scrub (63300). Two land cover types were identified within the study area: open water (64100) and disturbed land-xeric cliff face, escarpment, ruderal (4.6, 10.1). A complete list of data sources reviewed during the literature review can be found in Appendix B.

Vegetation and Land Cover Mapping

Vegetation was mapped in the field within the study area directly onto a 100 scale (1inch = 100 feet) aerial map of the property with the assistance of collector classic application (Collector for ArcGIS). These boundaries and locations were digitized and downloaded by Dudek Geographic Information Systems Technician Mark McGinnis using ArcGIS software.

Per City municipal Land Development Code (LDC), vegetation community classifications used in this report follow Oberbauer et al. (2008) and Gray and Bramlet (1992). Both manuals were used in order to describe both vegetation and land cover types. Gray and Bramlet (1992) consists of detailed land cover type descriptions that specifically apply to this study area. These land cover codes can be cross-walked over to apply to the City of San Diego Biological Guidelines (City of San Diego 2018) for tier classification. Oberbauer et al. (2008) and Sawyer and Keeler-Wolf (1995) do not describe land cover type classifications in as much detail as Gray and Bramlet (1992). Pursuant to the City's Biological Guidelines, vegetation communities within the MSCP study area have been divided into four tiers of sensitivity (the first includes the most sensitive, the fourth the least) based on rarity and ecological importance. For example, Tier I habitats include lands classified as southern foredunes, Torrey pines forest, coastal bluff scrub, maritime succulent scrub, maritime chaparral, native grasslands, and oak woodlands. Tier II includes lands classified as coastal sage scrub and coastal sage scrub/chaparral. Tier IIIA includes lands classified as mixed chaparral and chamise chaparral. Tier IIIB includes lands classified as non-native grassland. Tier IV includes lands classified as disturbed, agriculture, and eucalyptus (City of San Diego 2018).

Flora and Fauna

All plant species encountered during the field surveys were identified and recorded directly into a custom digital field note recording system. Those species that could not be identified immediately were brought into the laboratory for further investigation under a microscope. A compiled list of plant species observed on the property is presented in Appendix A, Plant Compendium, to Appendix B of this EIR. Latin and common names for plant species with a California Rare Plant Rank (CRPR) (formerly California Native Plant Society List) follow the California Native Plant Society Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2019). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2019) and common names follow the California Department of Fish and Wildlife (CDFW) California Natural Community List (CDFW 2020) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2020).

Wildlife species detected during the field surveys by sight, calls, tracks, scat, or other signs were recorded directly into forms. A list of wildlife species observed on the property is presented in Appendix B. In addition to species detected during the surveys, the expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area.

Latin and common names of animals follow Crother (2017) for reptiles and amphibians, American Ornithological Society (AOS 2018) for birds, Wilson and Reeder (2005) for mammals, and North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies.

Jurisdictional Delineation

Jurisdictional delineations of regulated waters were conducted to identify the presence or absence (including types, location, boundaries, and acreages) of potential waters of the United States and state (including federal and state defined wetlands) within the study area.

Prior to conducting the field delineation for potential jurisdictional waters of the United States and state (including wetlands) within the study area, pre-field analyses were conducted to review historical land use, local and regional climactic data, survey reports, and areas with topographical configurations and vegetative signatures that may suggest the potential or presence of jurisdictional waters of the United States and state at the time of the delineation field survey.

Dudek formally delineated potential jurisdictional waters (including federally defined wetlands) occurring within the study area using a Trimble XH sub-foot accuracy handheld GPS unit and Collector for ArcGIS on March 17, 2019. These boundaries were modified based on aerial topography and final jurisdictional determinations following data review and evaluation under currently applicable regulations. Detailed delineation methodologies and definitions can be found in Appendix B.

Focused Surveys for Sensitive Biological Resources

Sensitive biological resources are those defined by the City's Biology Guidelines (City of San Diego 2018) as follows: (1) lands that have been included in the MHPA as identified in the City of San Diego MSCP Subarea Plan (City of San Diego 1997); (2) wetlands (as defined by the Municipal Code, Section 113.0103); (3) lands outside the MHPA that contain Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the LDC-Biology Guidelines (City of San Diego 2018); (4) lands supporting species or subspecies listed as rare, endangered, or threatened; (5) lands containing habitats with narrow endemic species as listed in the City of San Diego Municipal Code, LDC-Biology Guidelines (City of San Diego 2018); and (6) lands containing habitats of covered species as listed in the City of San Diego Municipal Code, LDC-Biology Guidelines (City of San Diego 2018).

Additionally, sensitive biological resources are defined as follows: (1) species that have been given special recognition by federal, state, or local agencies and organizations due to limited, declining, or threatened population sizes; (2) habitat types recognized by local and regional agencies as sensitive; (3) habitat areas or plant communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; and (4) wildlife corridors and habitat linkages. Sources used for determination of sensitive biological resources are as follows: plants—U.S. Fish and Wildlife Service (USFWS) (2020a), CDFW (2020b), and CNPS (2019); wildlife—USFWS (2020b) and CDFW (2020b); plant communities—City of San Diego MSCP Subarea Plan (City of San Diego 1997) and City of San Diego Biology Guidelines (City of San Diego 2018).

Qualified biologists conducted surveys and/or habitat assessments for the following sensitive biological resources: sensitive upland and wetland (i.e., jurisdictional) vegetation communities, focused surveys for sensitive plants, focused protocol surveys for coastal California gnatcatcher, larval host plant survey for Quino checkerspot butterfly, and focused protocol surveys for Quino checkerspot butterfly. Incidental detections of other sensitive wildlife species, either through sight, calls, tracks, scat, or other signs, were also recorded. A summary of the dates and site conditions for the field efforts are provided in Section 3.2.4 of Appendix B.

Survey Results

Vegetation Communities and Land Cover Types

Four plant community types and two land cover types were identified within the study area: Diegan coastal sage scrub–Baccharis dominated, disturbed habitat, maritime succulent scrub, mulefat scrub, open water, and southern riparian scrub. Holland (1986) codes are provided for each community and land cover mapped in the heading. Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, and disturbed land are the dominant mapped communities and land cover within the Reclamation Area. The acreage of each community and land cover is presented in Table 3.3-1. Plant community and land cover type locations are shown in Figure 3.3-2a, Biological Resources – Vegetation Communities and Jurisdictional Delineation.

As noted in Table 3.3-1, one plant community type and one land cover were identified in the Reclamation Area.

Table 3.3-1. Vegetation Communities and Land Cover Types in Study Area

| Vegetation Community/ Land Cover | Reclamation Area (County ownership) | Remainder of Study Area (County Ownership) | Total Study Area acreage ¹ |
|---|--|--|---|
| Maritime succulent scrub (32400) (Tier I) | – | 10.06 | 10.06 |
| Disturbed Maritime succulent scrub (32400) (Tier I) | – | 0.34 | 0.34 |
| Diegan coastal sage scrub (32500) (Tier II) | 6.09 | 30.57 | 36.67 |
| Diegan coastal sage scrub, revegetated (32500) (Tier II) | – | 2.55 | 2.55 |
| Disturbed Diegan coastal sage scrub (32500) (Tier II) | 7.50 | 3.64 | 11.14 |
| Mulefat scrub (63310) (Wetland) | – | 0.20 | 0.20 |
| Southern riparian scrub (63300) (Wetland) | – | 0.04 | 0.04 |
| Open water (64100) (N/A) | – | 0.08 | 0.08 |
| Disturbed land- xeric cliff face, escarpment, ruderal land (4.6,10.1) (Tier IV) | 7.34 | 3.50 | 10.84 |
| Total | 20.93 | 50.98 | 71.91 |

Note:

¹ Totals may not sum due to rounding.

Maritime Succulent Scrub (32400)

Maritime succulent scrub is a low-lying community with openings that range from 25% to 75% cover and is dominated by drought deciduous, woody, malacophyllous shrubs with a rich admixture of stem and leaf succulents. Cacti are more dominant in inland populations and southern populations. Large portions of the ground are bare between the shrubs. The majority of growth occurs in the springtime (Appendix B).

Within the study area, numerous succulent species are present and, in some areas, abundant. Succulents are scattered around the plant community and include coastal barrel cactus (*Ferocactus viridescens*), golden spined cereus (*Bergerocactus emoryi*), coast cholla (*Cylindropuntia prolifera*), and coastal prickly pear (*Opuntia littoralis*). Larger shrubs

growing with the succulents include wart-stemmed ceanothus (*Ceanothus verrucosus*), cliff spurge (*Euphorbia misera*), California encelia (*Encelia californica*), Mojave yucca (*Yucca schidigera*) and San Diego County viguiera (*Bahiopsis laciniata*). Less commonly occurring species within the maritime succulent scrub include spiny redberry (*Rhamnus crocea*), laurel sumac (*Malosma laurina*), and chamise (*Adenostoma fasciculatum*). The majority of the maritime succulent scrub is high quality with few non-native species. Maritime succulent scrub is a dominant plant community within the study area but is not mapped on the Reclamation Area (the highest quality maritime succulent scrub occurs on the western portion of the study area).

Diegan Coastal Sage Scrub (32500)

Diegan coastal sage scrub is a native plant community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.), with scattered evergreen shrubs, including lemonade berry (*Rhus integrifolia*) and laurel sumac. It typically develops on south-facing slopes and other xeric locations (Appendix B). Coastal sage scrub is recognized as a sensitive plant community by local, state, and federal resource agencies. It supports a rich diversity of sensitive plants and animals, and it is estimated that it has been reduced by 75% to 80% of its historical coverage throughout Southern California. It is the focus of the current State of California Natural Communities Conservation Plan (Appendix B).

Within the study area, dominant species include California sagebrush, California buckwheat, spreading goldenbush (*Isocoma menziesii* spp. *menziesii*), deerweed (*Acmispon glaber*), black sage (*Salvia mellifera*), bladderpod (*Peritoma arborea*) and lemonade berry. Less commonly occurring species include wild cucumber (*Marah macrocarpus*), pygmyweed (*Crassula connata*), white sage (*Salvia apiana*), mock parsley (*Apiastrum angustifolium*) and small flowered stipa (*Stipa lepida*). Diegan coastal sage scrub is a dominant plant community within the Reclamation Area. The Diegan coastal sage scrub within the Reclamation Area is high quality for numerous species. Few non-native plant species are present within this community and the floor consists of numerous bryophytes, spike mosses, small annuals, and cryptogamic crusts.

Disturbed Diegan Coastal Sage Scrub (32500)

Disturbed coastal sage scrub is similar to coastal sage scrub but is dominated by desert broom (*Baccharis sarothroides*) with large patches of crown daisy (*Glebionis coronarium*). Disturbed coastal sage scrub typically occurs where soils are nutrient poor and disturbance is present. Disturbed coastal sage scrub typically fills in areas after high levels of disturbance (Oberbauer et al. 2008; Gray and Bramlet 1992).

Within the flat portions of the Reclamation Area, desert broom and crown daisy dominate. Less commonly occurring species within the understory of desert broom and crown daisy include annual yellow sweetclover (*Melilotus indicus*), slender leaf iceplant (*Mesembryanthemum nodiflorum*), pygmyweed, California encelia, and combseeds (*Pectocarya* spp.). Large sections of this community are disturbed, and some portions consist of bare soils that have been graded.

Mulefat Scrub (63310)

Mulefat scrub is a riparian scrub community dominated by mulefat (*Baccharis salicifolia*). Mulefat scrub is maintained by frequent flooding. Absent frequent flooding, most stands would be succeeded by cottonwood or sycamore riparian forests or woodlands. Mulefat occurs on intermittent stream channels with generally sandy soils and a moderate water table (Appendix B).

Within the study area, mulefat scrub is dominated by mulefat and is found in wet areas that have occasional water flow or saturation. Non-native herbs make up some of the understory within the mulefat scrub community. Mulefat scrub occurs in two sections of the study area, near the central portion in a canyon located to the west of the Reclamation Area and around the open water located in the northeastern corner of the Project site (i.e., in the northeast corner of Assessor's Parcel No. 664-011-0500) (see Figure 3.3-2a).

Southern Riparian Scrub (63320)

Southern riparian scrub typically occurs within riparian zones that consist of shrubs or small trees and generally lacks taller riparian trees. Southern riparian scrub can encroach into some coastal saltmarsh habitats. Southern riparian scrub regularly occurs on river systems, where flood scour occurs, and areas that receive runoff. Plant species in this community include arroyo willow (*Salix lasiolepis*), willow species (*Salix* sp.), mulefat, and broom baccharis (*Baccharis sarothroides*). Southern riparian scrub is found throughout the County (Oberbauer et al. 2008).

Within the study area, southern riparian scrub consists of nearly a monoculture of red willow (*Salix laevigata*) with a few mulefat interspersed in the vegetation community. Southern riparian scrub was not mapped on the Reclamation Area but occurs to the immediate west and northeast (see Figure 3.3-2a).

Open Water (64100)

Open water refers to a small pond located in the northeastern corner of the study area. The pond appears to support perennial surface water; areas without ponded water have cracked soils that are mostly unvegetated mud flats. The source of the water is unknown but is presumed to be supported by more than just surface water runoff from the surrounding area.

Disturbed Land–Xeric Cliff Face, Escarpment, Ruderal Land (4.6, 10.1)

Ruderal land or waste ground includes invasive plant species that are the first to inhabit disturbed land due to human activity. Soils are heavily disturbed. Disturbed land offers no important attributes for wildlife (Appendix B).

Within the study area, ruderal lands consist of old quarry lands, including much of the east-facing slope within the Reclamation Area, access roads, and other areas of visible disturbance (see Figure 3.3-2a). Leftover soil mounds, invasive plant species, wood piles, and trash describe the ruderal land within the study area. The most abundant plant within the ruderal disturbed land is crown daisy, a non-native invasive species from East Asia, which is having a detrimental impact on much of western San Diego County. This species has especially impacted coastal areas and the Otay region. Crown daisy covers over 80% of the ruderal disturbed lands within the study area. The Invasive Plant Council has described crown daisy as an invasive plant due to the dry dead remnants of crown daisy crowding out massive areas of land for numerous years and preventing the potential for native plants to recolonize. Crown daisy can reach up to 5 feet in height, also preventing the potential for native plants to recolonize.

Xeric cliff face or escarpment is described as a long, steep slope. The slope is often found on the edge of a plateau and is eroded. Xeric cliff face is described as having minimal attributes for wildlife, but if vegetation is present, nesting bird habitat may occur.

Floral Diversity

A total of 211 species of vascular plants, 158 native plants (75%) and 53 non-native plants (25%) were recorded from the study area. The complete list of plant species identified on site can be found in Appendix B.

Special-Status Plants

Plant species are considered sensitive if they have been listed or proposed for listing by the federal or state government as rare, endangered, or threatened (“listed species”); have a CRPR of 1–4; are listed as a MSCP Covered Species; and/or have been adopted by the City as a narrow endemic.

Sensitive plant surveys were conducted within the study area. Prior to special-status plant species surveys, an evaluation of known records was conducted in the Imperial Beach quadrangle and the surrounding quadrangles, including Point Loma, National City, Jamul Mountains, and Otay Mesa (Appendix B). In addition, biological resource and regional distribution of each species, as well as elevation, habitat, and soils present within the study area, were evaluated to determine the potential for various special-status species to occur.

The majority of these recorded observations occurred to the west of the Reclamation Area and within the central and western portions of the study area. Mapped locations of plants identified during field surveys are depicted on Figure 3.3-2b, Biological Resources – Special-Status Plants.

During focused rare plant surveys in 2019, 16 special-status plant species were observed in the study area: Baja California birdbush (*Ornithostaphylos oppositifolia*), California adder’s-tongue (*Ophioglossum californicum*), California desert thorn (*Lycium californium*), Lewis’s evening-primrose (*Camissoniopsis lewisii*), Orcutt’s bird’s-beak (*Dicranostegia orcuttiana*), San Diego needle grass (*Stipa diegoensis*), San Diego County viguiera, San Diego barrel cactus (*Ferocactus viridescens*), San Diego bur-sage (*Ambrosia chenopodiifolia*), ashy spike-moss (*Selaginella cinerascens*), cliff spurge, golden spined cereus, sea dahlia (*Leptosyne maritima*), seaside cistanthe (*Cistanthe maritima*), western dichondra (*Dichondra occidentalis*), and wart-stemmed ceanothus. Wart-stemmed ceanothus is a relatively restricted species, endemic to San Diego County, and an indicator of southern maritime chaparral. San Diego County viguiera (sunflower family) and San Diego barrel cactus are relatively widespread and common components of coastal sage scrub throughout the southern portion of San Diego County. The majority of these recorded observations occurred to the west of the Reclamation Area and within the central and western portions of the study area.

Table 4 of Appendix B lists those special-status plant species that occur or that have a potential to occur on site based on the location of the site and general soils mapping. This list includes all plants that are covered in the MSCP, all plants that are listed in the CNPS nine-quad inventory search (CNPS 2019), and sensitive plants known to occur in the vicinity (CDFW 2019). For each species listed, a determination was made regarding the potential for the species to occur on site based on the location of the site, habitats and soils present, degree of disturbance to the vegetation on the site, and the results of 2019 focused surveys. Special-status plant species with low potential or not expected to occur are provided in Appendix B.

Listed or Multiple Species Conservation Program Covered Species

Wart-Stemmed Ceanothus (*Ceanothus verrucosus*), MSCP Covered Species. Wart-stemmed ceanothus is a CRPR 2B.2 and MSCP Covered species (CNPS 2019; City of San Diego 1997). Wart-stemmed ceanothus is a dicot, perennial evergreen shrub that occurs in San Diego and Riverside Counties (CNPS 2019). This species is found in chaparral. The bloom period for wart-stemmed ceanothus is between December and May. Wart-stemmed ceanothus occurs at an elevation of below 1,245 feet amsl.

Approximately 943 wart-stemmed ceanothus individuals were observed within maritime succulent scrub (including disturbed), restored Diegan coastal sage scrub, and Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Orcutt's Bird's-Beak (*Dicranostegia orcuttiana*), MSCP Covered Species. Orcutt's bird's-beak is a CRPR 2B.1 and MSCP Covered species (CNPS 2019; City of San Diego 1997). Orcutt's bird's-beak is a dicot, annual herb that occurs in San Diego County (CNPS 2019). This species is found in coastal sage scrub. Orcutt's bird's-beak occurs at an elevation between 30 feet and 1,150 feet amsl. The bloom period for Orcutt's bird's-beak is between April and July.

Approximately 26 Orcutt's bird's-beak individuals were observed within maritime succulent scrub (including disturbed) within the study area but outside of the Reclamation Area (Figure 3.3-2b).

San Diego Barrel Cactus (*Ferocactus viridescens*), MSCP Covered Species. San Diego barrel cactus is a CRPR 2B.1 and MSCP Covered species (CNPS 2019; City of San Diego 1997). This succulent occurs in San Diego County (CNPS 2019). San Diego barrel cactus is located at elevations between 5 feet and 1,475 feet amsl within chaparral, coastal scrub, valley and foothill grasslands, and sometimes vernal pools. This species blooms May through July.

Approximately 209 San Diego barrel cactus individuals were observed within maritime succulent scrub (including disturbed) and Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Baja California Birdbush (*Ornithostaphylos oppositifolia*), State Endangered. Baja California birdbush is a state endangered and CRPR 2B.1 species (CDFW 2019; CNPS 2019). Baja California birdbush is a dicot shrub that occurs in San Diego County (CNPS 2019). This species is found in chaparral at an elevation from 180 feet to 2,625 feet amsl. The bloom period for Baja California birdbush is between January and April.

Approximately 36 Baja California birdbush individuals were observed within maritime succulent scrub (including disturbed) and restored Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Other Special-Status Plants Species

San Diego Bur-Sage (*Ambrosia chenopodiifolia*). San Diego bur-sage is a CRPR 2B.1 species (CNPS 2019). San Diego bur-sage is a dicot shrub that occurs in San Diego and Orange Counties (CNPS 2019). This species is found in coastal sage scrub. The bloom period for San Diego bur-sage is between April and June. San Diego bur-sage occurs at an elevation between 180 feet and 510 feet amsl.

Approximately one San Diego bur-sage individual was observed in restored Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

San Diego County Viguiera (*Bahiopsis laciniata*). San Diego County viguiera (sunflower family) is a CRPR 4.3 species (CNPS 2019). This shrub occurs in San Diego, Los Angeles, Orange, Riverside, and Ventura Counties. San Diego County viguiera is found at elevations ranging from 195 feet to 2,460 feet amsl in chaparral and coastal scrub. This species typically blooms between February and June.

A total of approximately 5,420 San Diego County viguiera individuals were observed within maritime succulent scrub (including disturbed), restored Diegan coastal sage scrub, Diegan coastal sage scrub (including disturbed), and disturbed land in the study area, including 4,456 individuals outside the Reclamation Area and 964 individuals inside the Reclamation Area (Figure 3.3-2b).

Golden-Spined Cereus (*Bergerocactus emoryi*). Golden-spined cereus (also referred to as velvet cactus or snake cactus) is a CRPR 2B.2 species (CNPS 2019). Golden-spined cereus is a dicot shrub that occurs in San Diego and Los Angeles Counties (CNPS 2019). This species is found in chaparral, coastal sage scrub, and closed-cone pine

forest. The bloom period for golden-spined cereus is between May and June. Golden-spined cereus occurs at an elevation between 5 feet and 1,295 feet amsl.

Approximately 45 golden-spined cereus individuals were observed in maritime succulent scrub (including disturbed) within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Lewis's Evening-Primrose (*Camissoniopsis lewisii*). Lewis's evening-primrose is a CRPR 3 species (CNPS 2019). Lewis's evening-primrose is a dicot annual herb that occurs in San Diego County and southern and coastal California counties (CNPS 2019). This species is found in coastal strand, foothill woodland, coastal sage scrub, and valley grassland. Lewis's evening-primrose occurs at an elevation below 985 feet amsl. The bloom period for Lewis's evening-primrose is between March and June.

A total of approximately 14 Lewis's evening-primrose individuals were observed within maritime succulent scrub (including disturbed), Diegan coastal sage scrub, and disturbed land in the study area, including 9 individuals within the Reclamation Area and 5 individuals outside the Reclamation Area (Figure 3.3-2b).

Seaside Cistanthe (*Cistanthe maritima*). Seaside cistanthe (coastal succulent) is a CRPR 4.2 species (CNPS 2019). Seaside cistanthe is a dicot annual herb that occurs in San Diego County (CNPS 2019). This species is found in valley grassland and coastal sage scrub at an elevation between 15 feet and 985 feet amsl. The bloom period for seaside cistanthe is between March and June.

Approximately 151 seaside cistanthe individuals were observed within maritime succulent scrub (including disturbed) within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Western Dichondra/Ponyfoot (*Dichondra occidentalis*). Western dichondra/ponyfoot is a CRPR 4.2 species (CNPS 2019). Western dichondra is a dicot perennial herb that occurs in San Diego County and coastal California counties (CNPS 2019). This species is found in chaparral, valley grassland, foothill woodland, northern coastal scrub, and coastal sage scrub. Western dichondra occurs at an elevation between 160 feet and 1,640 feet amsl. The bloom period for western dichondra is between March and July.

Approximately 20 western dichondra individuals were observed within Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Cliff Spurge (*Euphorbia misera*). Cliff spurge is a CRPR 2B.2 species (CNPS 2019). Cliff spurge is a dicot shrub that occurs in San Diego, Los Angeles, Orange, Riverside, and Santa Barbara Counties (CNPS 2019). This species is found in coastal sage scrub at an elevation between 30 feet and 1,640 feet amsl. The bloom period for cliff spurge is between December and April.

Approximately 5 cliff spurge individuals were observed within maritime succulent scrub (including disturbed) within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Sea Dahlia (*Leptosyne maritima*). Sea dahlia is a CRPR 2B.2 species (CNPS 2019). Sea dahlia is a dicot, perennial herb that occurs in San Diego, Los Angeles, and Santa Barbara Counties (CNPS 2019). This species is found in coastal sage scrub at an elevation from 5 feet to 490 feet amsl. The bloom period for sea dahlia is between March and May.

Approximately 151 sea dahlia individuals were observed within maritime succulent scrub (including disturbed) and Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

California Desert Thorn (*Lycium californicum*). California desert thorn is a CRPR 4.2 species (CNPS 2019). California desert thorn is a dicot shrub that occurs in San Diego County and Southern California counties (CNPS 2019). This species is found in coastal sage scrub at an elevation between 15 feet and 490 feet amsl. The bloom period for California desert thorn is between March and August.

Approximately two California desert thorn individuals were observed within Diegan coastal sage scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

California Adder's-Tongue (*Ophioglossum californicum*). California adder's-tongue is a CRPR 4.2 species (CNPS 2019). California adder's-tongue is a fern (rhizomatous) that occurs in San Diego County; coastal, southern, and central California; and inland mountain ranges, including Sierra Nevada Foothills and Great Central Valley Region (Jepson Flora Project 2019). This species is found in chaparral, valley grassland, freshwater wetlands, vernal pool edges, and wetland-riparian habitats at an elevation from 195 feet to 1,720 feet amsl. The bloom period for California adder's-tongue is between January and June.

Approximately 249 California adder's-tongue individuals were observed within Diegan coastal sage scrub within the study area but outside of the Reclamation Area (3.3-2b).

Ashy Spike-Moss (*Selaginella cinerascens*). Ashy spike-moss is a CRPR 4.1 species (CNPS 2019). Ashy spike-moss is a pteridophyte, California native fern that occurs in San Diego, Riverside, and Orange Counties (CNPS 2019). This species is found in chaparral and coastal sage scrub. Ashy spike-moss occurs at an elevation of between 65 and 2,100 feet amsl.

Approximately 4.03 acres (mapped as polygons) were observed within restored Diegan coastal sage scrub and Diegan coastal sage scrub within the study area but outside of the Reclamation Area. This species is a fern and grows as a continuous mat, which makes it difficult to provide accurate population counts (Figure 3.3-2b).

San Diego County Needle Grass (*Stipa diegoensis*). San Diego County needle grass is a CRPR 4.2 species (CNPS 2019). This shrub occurs in San Diego, Los Angeles, Santa Barbara, Ventura, San Luis Obispo, Contra Costa, and Sierra Counties. San Diego County needle grass is found at elevations ranging from 30 feet to 2,625 feet amsl in chaparral and coastal sage scrub. This species typically blooms between February and June.

Approximately five San Diego County needle grass individuals were observed within maritime succulent scrub within the study area but outside of the Reclamation Area (Figure 3.3-2b).

Wildlife Diversity

The study area and, to a slightly less extent, the Reclamation Area support habitat for a number of common upland species. During general and focused wildlife surveys within the study area, 43 species of wildlife were observed. A list of species observed can be found in Appendix B.

Birds

During Project surveys, 30 species of birds were observed. Common species observed include California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), common raven (*Corvus corax*), Anna's hummingbird (*Calypte anna*), and Cassin's kingbird (*Tyrannus vociferans*). Of the 30 species of birds observed, five special-status birds were observed within the Project area: coastal California gnatcatcher, Cooper's

hawk (*Accipiter cooperii*), northern harrier (*Circus cyaneus*), turkey vulture (*Cathartes aura*), and American peregrine falcon (*Falco peregrinus anatum*).

Reptiles and Amphibians

Five species of reptiles were observed within the study area during Project surveys: western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), striped racer (*Coluber lateralis*), southern alligator lizard (*Elgaria multicarinata*), and western skink (*Plestiodon skiltonianus*).

No amphibian species were observed during the surveys; however, it is possible that treefrogs (*Hyla regilla*, *H. cadaverina*), western toad (*Bufo boreas*), and bullfrog (*Rana catesbeiana*) could occur within or nearby the small pond in the northeast portion of the study area.

Mammals

A total of three mammals were observed within the study area during Project surveys, including desert cottontail (*Sylvilagus audubonii*), woodrat (*Neotoma* sp.), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).

Invertebrates

During focused Quino checkerspot butterfly surveys, 17 common butterfly species were observed, including funereal duskywing (*Erynnis funeralis*), southern blue (*Glaucopsyche lygdamus australis*), painted lady (*Vanessa cardui*), and checkered white (*Pontia protodice*), among others. One special-status invertebrate, Quino checkerspot butterfly, was observed within the study area including on the Reclamation Area (see Figure 3.3-2d, Biological Resources – Quino Checkerspot Butterfly Adults and Host Plants).

Special-Status Wildlife

Sensitive wildlife species are those listed as federal/state endangered or threatened, proposed for listing, fully protected by CDFW, California Watch List, California Species of Special Concern (SSC), or MSCP Covered Species. Protocol-level surveys were conducted in the study area for the following sensitive wildlife species: coastal California gnatcatcher and Quino checkerspot butterfly. Additional surveys included larval host plant surveys for Quino checkerspot butterfly prior to the protocol surveys for this species. Sensitive wildlife species directly observed in the study area during focused surveys, or those known to occur in the surrounding region, are described in Table 5 of Appendix B.

Seven special-status wildlife species were detected during the 2019 surveys of the study area, including coastal California gnatcatcher (Federal Endangered/SSC/County Group 1¹/MSCP Covered), Cooper's hawk (Watch List/County Group 1/MSCP Covered), northern harrier (SSC/Group 1/MSCP Covered), turkey vulture (County Group 1), American peregrine falcon (Federal Delisted, Bird of Conservation Concern/Fully Protected, State Delisted/Group 1/MSCP Covered), San Diego black-tailed jackrabbit (SSC/County Group 2), and Quino checkerspot butterfly (Federal Endangered/County Group 1). There are no other special-status wildlife species mapped within the study area during recent County surveys (Greystone 2005; Dudek 2012).

¹ A Group 1 (or Group 2) is based on the County of San Diego Sensitive Animal List in their Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources (County of San Diego 2010).

Table 5 of Appendix B lists special-status wildlife species that were observed or have potential to occur within the study area based on the location of the site, general vegetation communities found in the area, and known distributions of sensitive species in the region. Species observed or with potential to occur on site are described below.

Listed or MSCP-Covered Species

Birds

Coastal California Gnatcatcher (*Poliioptila californica californica*), Federal Endangered/SSC/MSCP Covered Species. Coastal California gnatcatcher occurs in coastal Southern California and Baja California year-round, where it depends on a variety of arid scrub habitats. Coastal California gnatcatcher occurs mainly on cismontane slopes (coastal side of the mountains) in Southern California, ranging from Ventura and northern Los Angeles Counties south through the Palos Verdes Peninsula to Orange, Riverside, San Bernardino, and San Diego Counties. The species' range continues south to El Rosario, Mexico. Initially it was reported that 99% of all coastal California gnatcatcher locality records occurred at or below an elevation of 984 feet amsl (Atwood 1990; Atwood and Bolsinger 1992). Since that time, data collected at higher elevations show that the species may occur as high as 3,000 feet amsl, but that more than 99% of the known coastal California gnatcatcher locations occur below 2,500 feet amsl (65 FR 63680). Because of the natural topography of the Southern California hills and mountain ranges, most of the higher-elevation locations are more inland, where population densities tend to be much lower than coastal populations.

Coastal California gnatcatcher typically occurs in or near coastal sage scrub vegetation that is composed of relatively low-growing, dry-season deciduous and succulent plants. Characteristic plants of this community include California sagebrush, various species of sage, California buckwheat, lemonade berry, California encelia, and cactus (e.g., *Opuntia* spp.). Coastal California gnatcatcher also occurs in chaparral, grassland, and riparian vegetation communities where the coastal sage scrub community is close (Bontrager 1991). Use of these vegetation communities appears to be most frequent during late summer, autumn, and winter, with smaller numbers of birds using such areas during the nesting season. Coastal California gnatcatcher tends to occur most frequently in the coastal sagebrush-dominated stands on mesas, gently sloping areas, and along the lower slopes of the Coast Ranges (Atwood 1990). Coastal California gnatcatcher occurs in high frequencies and densities in coastal scrub communities with an open or broken canopy, but is absent from coastal sage scrub dominated by tall shrubs, and occurs in low frequencies and densities in low coastal scrub with a closed canopy (Weaver 1998).

Coastal California gnatcatcher gleans insects and spiders from foliage of shrubs, primarily California buckwheat and coastal sagebrush (Atwood 1993). Its diet is primarily composed of spiders, but also includes wasps, bees, and ants (Burger et al. 1999). Coastal California gnatcatcher habitat use has been positively associated with insect abundance and diversity (Redak et al. 1996, as cited in Diffendorfer et al. 2002).

Coastal California gnatcatcher nests usually are located in a small shrub or cactus 1 to 3 feet above the ground. Territory size varies and is influenced by season and locale (Preston et al. 1998), but is unrelated to vegetation structure (Braden et al. 1997). During the breeding/nesting season, territories in coastal areas are often smaller—averaging 5.7 acres (Atwood et al. 1998a, 1998b)—than those in more inland regions, which average 8.4 acres (Braden et al. 1997).

One individual and four pairs of coastal California gnatcatchers were observed during focused surveys in February 2019. One individual (uncapped) was heard and observed in the central portion of the study area during week 1 and week 2. The following four coastal California gnatcatcher pairs were individually identified and mapped separately: Pair 1 was located on the westernmost side of the study area, Pair 2 was observed approximately 0.15 miles east of Pair 1, Pair 3 was observed approximately 0.35 miles northeast of Pair 2, and Pair 4 was observed

approximately 0.22 miles northeast of Pair 3. As shown on Figure 3.3-2c, Biological Resources – Special-Status Wildlife, Pairs 1, 2, and 3 were observed outside of the Reclamation Area. Pair 4 and Individual 1 (the sole individual observed) were observed within the boundaries of the Reclamation Area.

Cooper’s Hawk (*Accipiter cooperii*), Watch List/MSCP Covered. Cooper’s hawk is found throughout California in wooded areas. This species inhabits live oak, riparian, deciduous, or other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Cooper’s hawk uses patchy woodlands and edges with snags for perching while it hunts for prey such as small birds, small mammals, reptiles, and amphibians within broken woodland and habitat edges (Zeiner et al. 1990).

Three Cooper’s hawks were observed in the central and western portion of the study area (Figure 3.3-2c).

Northern Harrier (*Circus cyaneus*), SSC/MSCP Covered. Northern harrier use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes. This species can also forage over coastal sage scrub or other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 2011). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated in areas with low vegetation.

Two northern harrier individuals were observed in the northeastern and western portion of the study area outside of the Reclamation Area (Figure 3.3-2c).

American Peregrine Falcon (*Falco peregrinus anatum*), Federal Delisted, Bird of Conservation Concern/Fully Protected, State Delisted/MSCP Covered. American peregrine falcon is a subspecies that inhabits riparian woodland, forest, inland wetlands, and coastal habitats (Zeiner et al. 1990). This species migrates throughout California and breeds along the coast of southern and central California, inland north coastal mountains, Klamath Mountains, Cascade Range, Sierra Nevada, and Channel Islands. The American peregrine falcon frequents bodies of water in open areas with cliffs.

One American peregrine falcon was observed flying over the central portion of the study area (Figure 3.3-2c).

Invertebrates

Fairy Shrimp (*Branchiopods*). Fairy shrimp or Branchiopods are restricted to vernal pools and other non-vegetated temporary basins (USFWS 2008). Protocol fairy shrimp surveys were not conducted within the Project area due to lack of vernal pool habitat. Road ruts were incidentally observed during spring surveys on mesa top roads in the western portion of the study area and one location east of the Reclamation Area. Fairy shrimp (unidentified species) were visually observed in one mesa top dirt road approximately 500 feet west of the proposed Reclamation Area on February 28, 2020. During a visit the following week and subsequent visits in 2020, the road rut had dried up and no vernal pool indicator plants were observed in any of the road ruts.

Federally listed fairy shrimp have high potential to occur in the study area on site; however, they have low potential to occur within the Reclamation Area.

Quino Checkerspot Butterfly (*Euphydryas editha quino*), Federal Endangered. Quino checkerspot butterfly is found only in western Riverside County, southern San Diego County, and northern Baja California, Mexico (USFWS 2003). This species is found on sparsely vegetated hilltops, ridgelines, and occasionally on rocky outcrops in open chaparral and coastal sage scrub habitat (typically at less than 3,000 feet amsl). This species requires host plants within these vegetation communities

for feeding and reproduction. The primary larval host plant is dotseed plantain (*Plantago erecta*); however, several other species have been documented as important larval host plants, including desert plantain, sometimes called woolly plantain (*Plantago patagonica*); thread-leaved bird's beak (*Cordylanthus rigidus*); white snapdragon (*Antirrhinum coulterianum*); owl's clover (*Castilleja exserta*); and Chinese houses (*Collinsia* spp.) (USFWS 2003).

Host Plant Mapping Results

The entire study area was surveyed for host plants. The western side and central side of the mesa complex supports an abundance of dotseed plantain, a known host plant of Quino checkerspot butterfly. In addition to dotseed plantain, numerous nectar plants were also discovered exclusively within the western and central portion of the mesa complex. High-quality host plant habitat and quality nectar are mapped outside of the Reclamation Area.

- 91 locations were mapped as **very low density** (1–19 individuals)
- 76 locations were mapped as **low density** (20–99 individuals)
- 269 locations were mapped as **medium density** (100–999 individuals)
- 114 locations were mapped as **high density** (1,000+ individuals)

Quino Findings and Behavior

Quino checkerspot butterfly were observed in 2019 and 2020. A total of five adult Quino checkerspot butterfly were observed on April 2, 2019, by permitted biologist Margie Mulligan (TE-88969B-0). The Quino checkerspot butterfly observations in 2019 occurred during a rare plant survey and not a protocol Quino checkerspot butterfly survey. It occurred within the study area. The first Quino checkerspot butterfly individual was observed for approximately 15 minutes at 9:44 a.m. The Quino checkerspot butterfly individual landed and then was observed flying low along access road, periodically landing on the road, perched with wings open, for several moments on the western side of the mesa. The second observation occurred at 12:05 p.m. At a new location, one male and one female were observed to be mating for at least 20 minutes. They were first observed on the ground and then flew to a chamise shrub. They were both in good condition. Soon after, two other butterflies were observed nearby, one in good condition and one that had a battered wing.

A total of three Quino were observed during the 2020 focused protocol surveys on March 3, 2020, within the study area but outside of the Reclamation Area (see Appendix B to Appendix B of this EIR). Specifically, the three Quino observed on March 3, 2020, were located approximately 0.40 miles west of the Reclamation Area boundary. One Quino larval host plant, dotseed plantain, was observed within the immediate area of the observation locations. The first Quino observed appeared to have just emerged from a chrysalis as the wing was slightly bent. Two additional Quino were observed flying from near the U.S./Mexico border. These two Quino performed hilltopping behaviors. "Hilltopping" is a mate-seeking behavior wherein insects seek out the highest points in the landscape and congregate to seek mates. A gust of wind moved the two butterflies further north. These Quino were only observed during this one survey week on this one day. No other Quino were observed during the 2020 protocol surveys.

Quino were found in areas away from the densest host plant populations performing hilltopping behaviors or basking behaviors on the disturbed dirt roads utilized frequently by U.S. Border Patrol. Soils on these elevated locations were disturbed to highly disturbed with little to no nectar resources. Quino were only observed in disturbed areas hilltopping near the ridgelines and regaining energy basking. During the hilltopping observation, mating did occur, but the mating Quino butterflies moved back toward better habitat after the hilltopping behavior was concluded.

Other Special-Status Wildlife Species

Mammals

San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*), SSC. San Diego black-tailed jackrabbit is confined to coastal Southern California, with marginal eastern records in Mount Piños, Arroyo Seco, Pasadena, San Felipe Valley, and Jacumba (Hall 1981). It is found in many diverse habitats, but primarily in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to move quickly, and the openness of open scrub habitat likely is preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle, and they are well adapted to using low-intensity agricultural habitats (Hall 1981).

San Diego black-tailed jackrabbits were observed throughout the study area, including the Reclamation Area (Figure 3.3-2c).

Jurisdictional Aquatic Resources

The presence/absence of jurisdictional water was assessed for the study area (Table 3.3-2; Figure 3.3-2a). A canyon drainage in the western portion of Reclamation Area supports an ephemeral stream channel that suggests that it is “waters under state regulations” (i.e., CDFW and Regional Water Quality Control Board [RWQCB] jurisdiction) and possibly federal regulations (i.e., U.S. Army Corps of Engineers [USACE]). The channel varies from 4 to 8 feet in width and conveys storm flows towards the Tijuana River immediately following rain events. Mulefat scrub is present in small patches along the drainage. Given the presence of areas predominated by hydrophytic vegetation in association with a stream channel, these areas of mulefat scrub are considered wetlands under CDFW, California Coastal Commission (CCC), and City regulations.

Historically, it appears that a similar canyon existed parallel to this one, immediately to the east. A deep erosional gully is present in the south-central portion of the study area where this canyon existed. However, drainage improvements from the Southwestern Border Project have directed water flow into the western canyon described above and drainage to the remainder of the site is limited to runoff from brow ditches within the border slope.

The open water and surrounding mulefat scrub associated with the pond in the northeastern portion of the study area (i.e., the northeast corner of Assessor’s Parcel No. 664-011-0500; mapped open water and mulefat scrub is located outside of the Reclamation Area), despite the presence of hydric soils and hydrophytic vegetation, is not considered jurisdictional under USACE, CDFW, and RWQCB regulation. The area does not have evidence of hydrology and is separated from any stream channels and or other means of surface or subsurface connectivity with the Tijuana River. The area is under the jurisdiction of the CCC and City as a wetland under the California Coastal Act and City LDC due to the presence of hydrophytic vegetation and hydric soils.

Table 3.3-2. Jurisdictional Resources in Study Area

| Jurisdictional Resource | Total Study Area acreage ¹ |
|-------------------------|---------------------------------------|
| Non-wetland waters | 0.08 (3,868 linear feet) |
| Riparian area | 0.24 |
| Total | 0.30 |

Notes:

Jurisdictional resources do not occur within the Reclamation Area.

¹ Totals may not sum due to rounding.

Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by assuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as stepping-stones for dispersal.

Although the study area is part of a regional open space park, the study area has limited function as a wildlife corridor or habitat linkage due to its location on the international border and because of natural topography. Wildlife movement in the region likely is concentrated in the valley bottom itself. Movement across the site is relatively free but U.S. Border Patrol vehicular traffic is regular throughout the day and night and likely limits movement. The study area has good connectivity to the river valley but the regional area is relatively isolated from other large blocks of open space (e.g., Otay Mesa, Otay Mountain, Otay River Valley).

Regional Resource Planning Context

The City's Biology Guidelines require that the Project be developed in accordance with MSCP Subarea Plan general guidelines (City of San Diego 1997), specific guidelines for the Tijuana River Valley (City of San Diego 1999), and Land Use Adjacency Guidelines. In addition, the location of the Project within the Tijuana River Valley LCP/LUP requires conformance with many of these same guidelines. The guidelines are listed below.

City of San Diego MSCP Subarea Plan

The City of San Diego is a permittee in accordance with an Implementing Agreement with USFWS and CDFW based on the City MSCP Subarea Plan. The study area occurs within the Southern Area of the City's MSCP Subarea Plan. The majority of the study area and all of the Reclamation Area are completely within the MHPA; the MHPA is generally designated for preservation of biological resources with specific land use restrictions and guidelines (Figure 3.3-1).

The reclamation of mining operations is addressed in the MSCP Subarea Plan for properties within the MHPA in Section 1.4.1, Compatible Land Uses (City of San Diego 1997):

Currently permitted mining operations that have approved restoration plans may continue operating in the MHPA. New operations are permitted in the MHPA if: 1) impacts have been assessed and conditions incorporated to mitigate biological impacts and restore mined areas; 2) adverse impacts to covered species in the MHPA have been mitigated consistent with the Subarea Plan; and 3) requirements of other City land use policies and regulations (e.g., Adjacency Guidelines, Conditional Use Permit) have been satisfied. Existing and any newly permitted operations adjacent to or within the MHPA shall meet noise, air quality and water quality regulation requirements, as identified in the conditions of any existing or new permit, in order to adequately protect adjacent preserved areas and covered species. Such facilities shall also be appropriately restored upon cessation of mining activities. All existing and future mined lands adjacent to or within the MHPA shall be reclaimed pursuant to SMARA [Surface Mining and Reclamation Act].

Ponds are considered compatible uses where they provide native wildlife and wetland habitats and do not conflict with conservation goals of the MSCP and Subarea Plan.

In addition, Section 1.4.2, General Planning Policies and Design Guidelines, of the MSCP Subarea Plan includes discussion of siting and construction methods for roads, utilities, fencing, lighting, signage, materials storage, and flood control. These guidelines generally require that projects within or adjacent to the MHPA be developed with avoidance and minimization of impacts to the MHPA and habitat of MSCP covered species, and avoidance and minimization of impacts to wildlife movement. Projects within the MHPA may not include constraints or barriers to natural drainage flows, unless reviewed by all appropriate agencies and adequately mitigated, and may not include riprap, concrete, or other unnatural material in the stabilization of drainage banks (rock gabions are allowed where necessary).

Section 1.4.3, Land Use Adjacency Guidelines, of the MSCP Subarea Plan contains measures that minimize the impact to adjacent MHPA habitats through restrictions/requirements on drainage, toxic materials, lighting, noise, barriers, invasive species, brush management, and grading/manufactured slopes. Although the Reclamation Area is within the MHPA, as opposed to adjacent, during grading operations the site will function similar to a development adjacent to conserved habitats and, therefore, should abide by these guidelines in order to minimize impacts. These measures include requirements such as developing drainage into the MHPA to prevent release of pollutants, directing lighting away from the MHPA, minimizing noise (especially during the breeding season) adjacent to sensitive species habitats, using barriers to direct public access to appropriate locations, and not using invasive species.

Section 1.5.2, General Management Directives, of the MSCP Subarea Plan includes sections on mitigation and restoration that would apply to the restoration project. These directives indicate that mitigation needs to be provided in accordance with the City's Environmentally Sensitive Lands Ordinance and Biology Guidelines and that restoration be provided in accordance with a plan that includes elements addressing financial responsibility, site preparation, planting specifications, maintenance, monitoring and success criteria, remediation, and contingency measures.

Section 1.5.5, Specific Management Policies and Directives for the Tijuana River Valley, of the MSCP Subarea Plan includes language on goals and objectives and specific priorities for Mesa Areas within the river valley. The goals and objectives, as applicable to this Project, include a vision of natural habitat mixed with agricultural, recreational, and water quality uses with prohibitions against off-road activities, control of trash, and removal of invasive species. Within the Mesa Areas specifically, a priority is the restoration of the Border Highlands areas (which includes the Nelson Sloan Quarry) "to coastal sage scrub, maritime succulent scrub, possibly some grasslands and/or chaparral . . . The border patrol should be involved in exploring limiting vehicle access to well-defined roads through the area" (City of San Diego 1997). Another priority is to "restore areas of the mesas that have been mined and excavated. Restoration should include reconfiguration to the natural landform, with surrounding natural areas as reference. Restoration of these areas may present research opportunities if not already required as part of the existing CUPs" (City of San Diego 1997).

Tijuana River Valley Local Coastal Plan/Land Use Plan

The Tijuana River Valley LCP/LUP (City of San Diego 1999) includes similar language as the goals and objectives of the MSCP Subarea Plan listed above. The plan designates the County-owned portion of the quarry CUP area as MSCP Open Space and provides the following applicable recommendations regarding land use: maintain adequate habitat for covered species; existing permitted mining operations "shall meet noise, air quality, and water quality regulation requirements and shall be restored appropriate upon cessation of mining activities," shall include "noise reduction methods that take into consideration the breeding and nesting seasons of sensitive bird species," "shall consider changes and impacts to water quality, water table level,

fluvial hydrology, flooding, and wetlands and habitat upstream and downstream, and provide adequate mitigation;" provide a minimum 100-foot wetland buffer and 50-foot riparian buffer (which may be increased or decreased in consultation with CDFW); and implement drainage control measures to prevent and control runoff of pollutants into riparian and floodplain areas.

USFWS Critical Habitat

No critical habitat is designated within the study area. There is designated critical habitat for least Bell's vireo (*Vireo bellii pusillus*) north of the study area within riparian habitat associated with the Tijuana River.

3.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (FESA), as amended (16 USC 1531 et seq.), provides for listing of endangered and threatened species of plants and animals and designation of critical habitat for listed animal species. The FESA also prohibits all persons subject to U.S. jurisdiction from "taking" endangered species, which includes any harm or harassment. Section 7 of the FESA requires that federal agencies, prior to project approval, consult USFWS and/or the National Marine Fisheries Service to ensure adequate protection of listed species that may be affected by the project.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The list of bird species covered by the MBTA is extensive and is detailed in Title 50 of the Code of Federal Regulations, Section 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species, including any part, egg, or nest of such a bird (Title 50 Code of Federal Regulations Section 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the FESA. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (Title 50 Code of Federal Regulations Section 21.11). It is important to note that "take" as defined under the federal MBTA is not synonymous with "take" as defined under the FESA. The MBTA definition of "take" lacks a "harm and harassment" clause comparable to "take" under the FESA; thus, the MBTA authority does not extend to activities beyond the nests, eggs, feathers, or specific bird parts.

Clean Water Act

The federal Water Pollution Control Act Amendments of 1972 (Clean Water Act) (33 USC 1251 et seq.), as amended by the Water Quality Act of 1987 (Public Law 1000-4), is the major federal legislation governing water quality. The purpose of the Clean Water Act is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Discharges into waters of the United States are regulated under Section 404. Waters of the United States include (1) all navigable waters (including all waters subject to the ebb and flow of tides); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, or natural ponds; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above. In California, the State Water Resources Control Board and the nine RWQCBs are responsible for implementing the Clean Water Act. Important applicable sections of the Clean Water Act are discussed below:

- **Section 303** requires states to develop water quality standards for inland surface and ocean waters and submit to the U.S. Environmental Protection Agency for approval. Under Section 303(d), the state is required to list waters that do not meet water quality standards and to develop action plans, called total maximum daily loads, to improve water quality.
- **Section 304** provides for water quality standards, criteria, and guidelines.
- **Section 401** requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge would comply with other provisions of the Clean Water Act. Certification is provided by the respective RWQCB.
- **Section 402** establishes the National Pollutant Discharge Elimination System, a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. The National Pollutant Discharge Elimination System is administered by the RWQCB. Conformance with Section 402 is typically addressed in conjunction with water quality certification under Section 401.
- **Section 404** provides for issuance of dredge/fill permits by USACE. Permits typically include conditions to minimize impacts on water quality. Common conditions include (1) USACE review and approval of sediment quality analysis before dredging, (2) a detailed pre- and post-construction monitoring plan that includes disposal site monitoring, and (3) required compensation for loss of waters of the United States.

U.S. Army Corps of Engineers

USACE has primary federal responsibility for administering regulations that concern waters and wetlands in the Reclamation Area. In this regard, USACE acts under two statutory authorities, the Rivers and Harbors Act (33 USC 9 and 10), which governs specified activities in navigable waters, and the Clean Water Act (Section 404), which governs specified activities in waters of the United States, including wetlands and special aquatic sites. Wetlands and non-wetland waters (e.g., rivers, streams, and natural ponds) are a subset of waters of the United States and receive protection under Section 404 of the Clean Water Act. USACE has primary federal responsibility for administering regulations that concern waters and wetlands in the Project area under statutory authority of the Clean Water Act (Section 404). In addition, the regulations and policies of various federal agencies mandate that the filling of wetlands be avoided to the extent feasible. USACE requires obtaining a permit if a project proposes placing structures within navigable waters and/or alteration of waters of the United States.

State

California Endangered Species Act

Similar to the FESA, the California Endangered Species Act of 1970 (CESA) provides protection to species considered threatened or endangered by the State of California (California Fish and Game Code [CFGF], Section 2050 et seq.). The CESA recognizes the importance of threatened and endangered fish, wildlife, and plant species and their habitats, and prohibits the taking of any endangered, threatened, or rare plant and/or animal species unless specifically permitted for education or management purposes.

California Coastal Act

The CCC was established by voter initiative in 1972 and was made permanent by the California Legislature through the adoption of the California Coastal Act of 1976 (California Public Resources Code, Section 30000 et seq.). The CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone (COZ). Under the California Coastal Act (CCA), cities and counties are responsible for preparing Local Coastal Programs as a precondition to obtain authority to issue coastal development permits (CDPs) for projects within their jurisdiction. Local Coastal Programs consist of land use plans, zoning ordinances, zoning maps, and other implementing actions that conform to the policies of the CCA. Until an agency has a certified (i.e., approved) Local Coastal Program, the CCC is responsible for issuing CDPs.

The CCC reviews the portions of a project within the COZ that require a CCC permit or are eligible for appeal to the CCC. For a CDP to be issued, the CCC requires findings of project consistency with specific CCA conditions related to public access and recreation, habitat protection, visual resources, and water quality, and many others. Section 30007.5 of the CCA requires the CCC to resolve conflicts between CCA policies in a manner that on balance is most protective of coastal resources.

Under the CCA Section 30107.5, Environmentally Sensitive Areas means any area within the COZ “in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” According to CCA Section 30240, “environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” In addition, the CCC regulates impacts to coastal wetlands, defined in Section 30121 of the CCA as “lands within the COZ which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” The CCA requires that most development avoid and buffer coastal wetland resources in accordance with Sections 30231 and 30233, including limiting the diking, dredging, or filling of wetlands to certain allowable uses, and these are only permitted “where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects” (CCA Section 30233). Vegetation communities within the study area that may be considered Environmentally Sensitive Areas under the CCA include areas within the COZ that support wetlands or coastal sage scrub habitat assumed to be occupied by coastal California gnatcatcher.

For the Project, the CDP approval process will be determined following verification of City versus CCC permit jurisdiction (i.e., deferred certification areas). However, for purposes of this draft, it is assumed that the City will have jurisdiction to issue a CDP. Following City issuance of a CDP for the Municipal Waterways Maintenance Program, the CDP could be appealed to CCC because the Reclamation Area occurs within appealable zones.

California Fish and Game Code

Under the CFGC, CDFW provides protection from take for a variety of species, including fully protected species. “Fully protected” is a legal protective designation administered by CDFW intended to conserve wildlife species that risk extinction within California. Lists have been created for birds, mammals, fish, amphibians, and reptiles.

According to CFGC Sections 3511 and 4700, which regulate birds and mammals, respectively, a fully protected species may not be taken or possessed without a permit from the Fish and Game Commission, and incidental takes of these species are not authorized.

According to Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

For the purposes of the state regulations, CDFW Regulation 681.2(a) for CFGC Sections 3503 and 3503.5 currently defines an active nest as one that is under construction, preparing for use, or in use for egg laying. This definition includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it is considered active and is covered under these CFGC sections.

California Department of Fish and Wildlife Wetland Regulation

CDFW exercises jurisdiction over waters of the state under CFGC Sections 1600–1616 based on the definition of regulated activity provided in CFGC Section 1602 and the definition of a stream provided in Title 14, Section 1.72 of the California Code of Regulations.

CFGC Section 1602 states, “An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake” without notifying CDFW. Title 14, Section 1.72 of the California Code of Regulations defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” This definition includes a broad range of vegetation communities, including some that do not contain wetland species but are in a riparian landscape position. CDFW jurisdiction typically extends to the outer limit of riparian vegetation or to the top of bank of an unvegetated stream channel.

Under CFGC Section 1603, upon notification, CDFW “shall determine whether the activity may substantially adversely affect an existing fish and wildlife resource.” If such a determination is made, CDFW reaches an agreement with the notifying entity (a Streambed Alteration Agreement) that includes measures to protect the resources CDFW has determined the activity may substantially adversely affect.

State and Regional Water Quality Control Board Wetland Regulation

The intent of the Porter–Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board

develops statewide water quality plans and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter–Cologne Water Quality Control Act include isolated waters that are no longer regulated by USACE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing Stormwater Pollution Prevention Plans, Standard Urban Stormwater Mitigation Plans, and other measures to obtain a Clean Water Act Section 401 certification.

California Coastal Commission Wetlands Regulation

As described above, CCC regulates impacts to coastal wetlands, defined in Section 30121 of the CCA as “lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” CCC interprets this definition to mean coastal wetlands exist in any area that meets at least one of three wetland parameters: hydrology, wetland vegetation, or hydric soils. Wetlands are considered environmentally sensitive habitat areas and shall be “protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” The CCA requires that most development avoid and buffer coastal wetland resources in accordance with Sections 30231 and 30233, including limiting the filling of wetlands to certain allowable uses. Areas that are considered as environmentally sensitive habitat areas under the CCA include areas within the COZ that support wetlands.

Local

San Diego Multiple Species Conservation Program

The City is one of several jurisdictions participating in the San Diego MSCP, a comprehensive, regional long-term habitat conservation program. The MSCP is a cooperative federal, state, and local program for conservation of native vegetation communities to address the habitat needs of multiple species. It serves as an approved habitat conservation plan pursuant to Section 10(a)(2)(A) of the FESA and the California Natural Communities Conservation Planning Act. The MSCP provides permit issuance authority for incidental take of covered species to the local regulatory agencies.

The MSCP is established and implemented within the City’s jurisdiction through an Implementing Agreement and approved City MSCP Subarea Plan with the wildlife agencies, as well as referenced companion documents such as the Environmentally Sensitive Lands Regulations and San Diego Biology Guidelines. An Incidental Take Permit from USFWS establishes the City’s authority to take covered species subject to compliance with the MSCP. The MSCP Subarea Plan establishes a preserve system designed to conserve large blocks of interconnected habitat having high biological value that are delineated in the MHPA.

The MSCP identifies 85 plants and animals to be “covered” under the plan (Covered Species) and the core biological resource areas are identified within the City’s MHPAs. Many of these Covered Species are subject to one or more protective designations under state and/or federal law and some are endemic to San Diego. The MSCP seeks to provide adequate habitat in the preserve to maintain ecosystem functions and persistence of extant populations of the 85 Covered Species while also allowing participating landowners take of Covered Species on lands located outside of the preserve. The purpose of the MSCP is to address species conservation on a regional level and thereby avoid project-by-project biological mitigation, which tends to fragment habitat.

The City of San Diego Development Services Department developed the Biology Guidelines, which describe sensitive biological resources, as defined by the Environmentally Sensitive Lands Regulations, as lands within the MHPAs, as

well as other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA, or IIIB; habitat for rare, endangered, or threatened species; or narrow endemic species. Within the City, the MSCP is implemented through the MSCP Subarea Plan (City of San Diego 1997), which applies within 6,501 acres.

City of San Diego Multiple Species Conservation Program Subarea Plan

The MSCP Subarea Plan (City of San Diego 1997) encompasses 206,124 acres within the MSCP Subregional Plan area. The Reclamation Area is located within the southern area of the MSCP Subarea Plan area, which includes Otay Mesa, Otay River Valley, and Tijuana Estuary and Tijuana River Valley.

The MSCP Subarea Plan is characterized by urban land uses with approximately three-quarters either built out or retained as open space/park system. The City MHPA is a “hard-line” preserve developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997). The MHPA is considered an urban preserve that is constrained by existing or approved development and consists of habitat linkages connecting several large core areas of habitat. The criteria used to define core and linkage areas involves maintaining ecosystem function and processes, including large animal movement. Each core area is connected to other core areas or to habitat areas outside of the MSCP either through common boundaries or through linkages. Core areas have multiple connections to help ensure that the balance in the ecosystem will be maintained (City of San Diego 1997). Critical habitat linkages between core areas are conserved in a functional manner with a minimum of 75% of the habitat within identified linkages conserved (City of San Diego 1997).

As part of the authorization of the MSCP, the City entered into an Implementing Agreement with USFWS and CDFW to ensure protection of “certain plant and animal species that are or may be found in the MSCP Area and which, pursuant to the FESA or CESA or other laws or programs, have been listed as threatened or endangered, have been proposed for listing as threatened or endangered, are candidates for listing as threatened or endangered, or which are otherwise of concern” (City of San Diego 1997). The species that have sufficient coverage under the MSCP are considered Covered Species. Covered Species are also subject to take authorization, granted by these resources agencies in accordance with the Implementing Agreement. If take authorization is issued, the species are referred to as Covered Species Subject to Incidental Take, which includes listed species and species not presently listed as threatened, endangered, or candidate species. Conserving Covered Species equally under the MSCP, regardless of their listing status, will allow the consideration of any Covered Species subsequently listed under the FESA or CESA in future permitting or mitigation requirements associated with development projects constructed in the MSCP Area.

The Biology Guidelines, Section 114 of the San Diego Municipal Code, describe specific development regulations pertaining to sensitive biological resources, including wetlands. The City’s definition of wetlands is broader than the definition applied by USACE. Guidelines that supplement the development regulation requirements described in this section are provided in the Biology Guidelines (City of San Diego 2018).

The County is also a signatory of the MSCP and also has its own Subarea Plan.

City of San Diego Land Development Code – Environmentally Sensitive Lands Regulations

Environmentally Sensitive Lands Regulations

The Environmentally Sensitive Lands Regulations provide a compliance and implementation mechanism for the MSCP Subarea Plan and its Implementing Agreement., the purpose of the Environmentally Sensitive Lands Regulations are to “protect, preserve, and, where damaged restore, the Environmentally Sensitive Lands of San

Diego and the viability of the species supported by those lands” (City of San Diego 2017). Specific development regulations pertaining to sensitive biological resources exist in the LDC in the Environmentally Sensitive Lands Regulations and the OR-1-2 Zone.

The Environmentally Sensitive Lands Regulations and LDC Section 113.0103 define sensitive biological resources as upland and/or wetland areas that meet any one of the following criteria:

- (a) Lands that have been included in the City of San Diego Multiple Species Conservation Program Preserve;
- (b) Wetlands;
- (c) Lands outside the MHPA that contain Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats;
- (d) Lands supporting species or subspecies listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the Federal Endangered Species Act, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
- (e) Lands containing habitats with Narrow Endemic Species as listed in the Biology Guidelines in the Land Development Manual; or
- (f) Lands containing habitats of covered species as listed in the Biology Guidelines in the Land Development Manual.

This includes lands within the MHPA and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA, or IIIB; habitat for rare, endangered, or threatened species; or narrow endemic species.

In specific scenarios, deviations from the Environmentally Sensitive Lands Regulations are allowed. Such allowances include deviations to wetlands regulations for any project that has been demonstrated to be an Essential Public Project, the Economic Viability Option, or the Biologically Superior Option according to the City’s LDC Section 143.0150(d).

City of San Diego Wetland Definition

The extent of City wetland jurisdiction is determined based on the City definition of “wetland” provided in LDC Section 113.0103, which is regulated by the City under the Environmentally Sensitive Lands Regulations (Section 143.0141[b]), which states the following:

Wetlands are defined as areas which are characterized by any of the following conditions:

1. All areas persistently or periodically containing naturally occurring *wetland* vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools;
2. Areas that have hydric soils or *wetland* hydrology and lack naturally occurring *wetland* vegetation communities because human activities have removed the historic *wetland* vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of *wetland* vegetation as in the case of salt pannes and mudflats;
3. Areas lacking *wetland* vegetation communities, hydric soils and *wetland* hydrology due to non-permitted filling of previously existing *wetlands*;

4. Areas mapped as *wetlands* on Map No. C-713 as shown in I 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

It is intended for this definition to differentiate for the purposes of delineating *wetlands*, between naturally occurring *wetlands* and *wetlands* intentionally created by human actions, from areas with *wetlands* characteristics unintentionally resulting from human activities in historically non-wetland areas. With the exception of *wetlands* created for the purpose of providing *wetland* habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating *wetland* characteristics, which are artificially created are not considered *wetlands* by this definition. Taking into account regional precipitation cycles, all adopted scientific, regulator, and technological information available from the State and Federal resource agencies shall be used for guidance on the identification of hydrophytic vegetation, hydric soils and *wetland* hydrology.

Under the definition, an area is considered wetland based on the presence at least one of three physical criteria (vegetation, hydrology, soils) or based on “Map No. C-713 as shown in Chapter 13, Article 2, Division 6” (LDC Section 113.0103). The same code section defines wetland buffers as additional “areas or feature(s) that protects functions and values of the adjacent wetland.”

Land Development Manual – Biology Guidelines

The City developed the San Diego Biology Guidelines presented in the Land Development Manual “to aid in the implementation and interpretation of the Environmentally Sensitive Lands Regulations within the San Diego Municipal Code Chapter 14, Division 1, LDC Section 143.0101 et seq., and the Open Space Residential (OR-1-2) Zone, Chapter 13, Division 2, LDC Section 131.0201 et seq.” (City of San Diego 2018). The guidelines also provide standards for the determination of impact and mitigation under CEQA and the CCA.

Chapter 14 of the LDC describes general regulations for development with specific regulations pertaining to environmentally sensitive lands, including wetlands (Municipal Code Section 143.0141[b]). Guidelines that supplement the development regulation requirements described in this section are provided in the Biology Guidelines (City of San Diego 2018). Additional information and explanation is provided in the Biology Guidelines for the definition of wetlands, including field delineation references and interpretations for problem areas, artificial wetlands, and other situations. Within the COZ, wetland buffers should be a minimum of 100 feet wide (as determined on a case-by-case basis in consultation with CDFW, USFWS, and USACE) adjacent to a wetland. The width of the buffer is determined by factors such as type and size of development, sensitivity of the wetland resource to edge effects, topography, and the need for upland transition (City of San Diego 2018).

The Biology Guidelines also rank upland habitat values by rarity and sensitivity. The most sensitive habitats are Tier I, and the least sensitive are Tier IV. The varying mitigation ratios and conditions require that mitigation be either in-tier or in-kind are based on the sensitivity of the habitat being affected, with higher ratios being applied to lower Tiers (e.g., highest mitigation ratio requirements for Tier I habitats). In addition, the location of impact inside or outside of the City’s MHPA also determines where and how much mitigation is required, with the highest ratios being required for mitigation outside of the MHPA when the project impacts occur within the MHPA (City of San Diego 2018). Habitat mitigation requirements, along with seasonal grading restrictions, provide protections for sensitive species, with additional species-specific mitigation required for significant impacts to narrow endemic species. Limitations on development in the MHPA also protect wildlife movement corridors (e.g., linear areas of the MHPA less than 1,000 feet wide (City of San Diego 2018).

3.3.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. As further described below, all relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

According to the most stringent County and City guidelines, a significant impact related to biological resources would occur if the Project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (County of San Diego).
2. A substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS (City of San Diego).
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means (County of San Diego).
4. Interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (County of San Diego).
5. Conflict with any local policies or ordinances protecting biological resources (City of San Diego).
6. Conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan (County of San Diego).
7. Introduce a land use within an area adjacent to the MHPA that would result in adverse edge effects (City of San Diego).
8. Introduce invasive species of plants into a natural open space area (City of San Diego).

3.3.4 Impacts Analysis

1. ***Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?***

Vegetation Communities

The Project would result in direct permanent and temporary impacts to coastal sage scrub and disturbed coastal sage scrub. Figures 3.3-3a through 3.3-3d depict Project impacts in the context of vegetation communities (Figure 3.3-3a), special-status plants (Figure 3.3-3b), special-status wildlife (Figure 3.3-3d), and Quino checkerspot butterfly (Figure 3.3-3d). A typical impact within the MHPA would require 1:1 mitigation through the preservation of like habitat within the MHPA. This Project is unique, however, in that

impacts are related to restoration and would primarily result in temporary loss of habitat within the MHPA. The City’s Biology Guidelines define “temporary disruptions of habitat” as those that do not alter landform and that will be revegetated (City of San Diego 2018). The Reclamation Area was mined, and the current baseline is the altered landform. Through implementation of the Project, the land will be restored to close to pre-mine conditions. Therefore, the Project would be consistent with the City’s definition of “temporary disruptions of habitat” because the land will be restored and revegetated close to its conditions prior to the alteration and damage caused by mining.

According to the City, most temporary impacts should be mitigated at the MSCP’s mitigation ratios, which would be 1:1 ratio for impacts to coastal sage scrub with mitigation inside the MHPA. However, due to the temporary loss of habitat over the 15-year Project, the Project includes the re-establishment of coastal sage scrub habitat at a minimum 1.5:1 ratio; the ultimate restoration results in a net-gain of habitat area (Figure 3.3-4a, Biological Resources and Proposed Phased Restoration – Vegetation Communities and Jurisdictional Delineation). Figures 3.3-4b, 3.3-4c, and 3.3-4d depict the Project’s phased restoration layers in the context of special-status plants (Figure 3.3-4b), special-status wildlife species (Figure 3.3-4c), and Quino checkerspot butterfly (Figure 3.3-4d).

Compared to existing conditions and on-site habitat, the restoration of slope stability to the site and the monitored, maintained, and managed revegetation effort would result in coastal sage scrub habitat that has higher functions and values. Temporary loss of habitat has been minimized through Project phasing, including restoration outside of the sediment placement areas. Without this phasing, an approximately 20-year gap between impact and restoration would occur. Instead, on average, the temporary loss of coastal sage scrub would be approximately 10 years.

Impacts to 11.69 acres of Tier II coastal sage scrub, while temporary in nature, would be **potentially significant** and would require 17.53 acres of on-site coastal sage scrub replacement (see Table 3.3-3). Approximately 19.33 acres of coastal sage scrub enhancement/restoration will occur on site, resulting in more than the 1.5:1 ratio goal, with an additional 1.42 acres of “impact neutral” areas that may have reduced function as habitat because they are planted structures (turfmat lined channel, turf reinforced mat ditch, riprap channel, buried storm drain) (see Table 3.3-4).

Table 3.3-3. MSCP Habitat Replacement for Impacts to On-site Vegetation Communities and Land Cover Types within the Reclamation Area (Acres)

| Vegetation Community/ Land Cover | City Habitat Designation | Total Impacts | Ratio | CSS Required |
|---|------------------------------|---------------|-------|--------------|
| Diegan coastal sage scrub (Tier II) | Coastal Sage Scrub (Tier II) | 6.08 | 1.5:1 | 9.13 |
| Diegan coastal sage scrub (disturbed) (Tier II) | Coastal Sage Scrub (Tier II) | 5.61 | 1.5:1 | 8.41 |
| Total* | | 11.69 | — | 17.53 |

Note:

* Numbers may not sum precisely due to rounding.

Table 3.3-4. Restored Habitat for Impacts to On-site Vegetation Communities and Land Cover Types within the Reclamation Area (Acres)

| Vegetation Community/ Land Cover | City Habitat Designation/ Target Species | CSS Required | Pre-Project Enhancement | Pre-Phase 1 Restoration | Restoration of Temporary Impact | Total Restoration Provided | Impact Neutral |
|--|--|--------------|-------------------------|-------------------------|---------------------------------|----------------------------|----------------|
| Diegan coastal sage scrub - Type A (Slope) | Coastal Sage Scrub/ California Gnatcatcher | 17.53 | 0.99 | 1.02 | 13.49 | 15.50 | 0.71 |
| Diegan coastal sage scrub - Type B (Mesa) | Coastal Sage Scrub/ Quino Checkerspot Butterfly | | 1.03 | 0.53 | 2.27 | 3.83 | 0.71 |
| Total* | | 17.53 | 2.02 | 1.55 | 15.76 | 17.79 | 1.42 |

Note: * Numbers may not sum precisely due to rounding.

Special-Status Plant Species

The Project would result in direct impacts to Lewis's evening-primrose (within the pre-Phase 1 restoration area only) and San Diego County viguiera (within the pre-Phase 1 restoration and sediment placement/grading areas) (see Figure 3.3-3b). Impacts to Lewis's evening-primrose (CRPR 3) and San Diego County viguiera (CRPR 4.2) would be **less than significant** because both are relatively common species. Further, San Diego County viguiera is readily restored using standard revegetation techniques. The species has been incorporated into the revegetation plan for the Project so that, upon implementation and establishment, it would result in a net gain of habitat area and suitability for the species.

Special-Status Wildlife Species

Direct Impacts

Direct impacts to special-status wildlife would occur through the loss of habitat and potential mortality of individual species, particularly special-status reptiles and small mammals that may not be able to escape impacts during construction (see Figure 3.3-3b). The loss of habitat that would result from the Project would not be significant because sufficient adjacent habitat is present for these species to persist during the average 10 years of temporary habitat loss. Additionally, following restoration, the site would support a greater extent and quality of suitable habitat and, therefore, provide a net benefit to these species. The potential direct mortality of special-status species (in particular, special-status reptiles and small mammals) would be a **potentially significant impact**.

Coastal California Gnatcatcher

There are permanent impacts to 0.12 acres and temporary impacts to 11.57 acres of coastal sage scrub habitat. The Reclamation Area is expected to support one pair of California gnatcatcher, given the presence of coastal sage scrub and the results of the focused survey. Therefore, the proposed Project could result in temporary impacts to one pair of nesting California gnatcatcher. This would be a **potentially significant impact**.

Quino Checkerspot Butterfly

There are direct impacts to the areas where Quino checkerspot butterfly were observed associated with the pre-Phase 1 restoration and Phase 5 grading areas. High-quality (i.e., dense host plants) Quino checkerspot habitat occurs on the western and central mesas, located entirely outside of the impact areas (see Figure 3.3-2d). The observations of adults in the Reclamation Area was limited to the far western edge adjacent to and within the pre-Phase 1 Restoration area (Figure 3.3-2d). The Quino checkerspot butterfly observed near the impact areas demonstrated hilltopping behaviors only. Typically, Quino checkerspot butterfly will move to areas of higher elevation to find a mate and this behavior (called hilltopping) was observed on site during surveys. The Project would result in substantial net gain of suitable habitat for Quino checkerspot butterfly through restoration of mesa topography and habitat supporting host and nectar plants. Nonetheless, some activities have the potential to result in take of Quino checkerspot butterfly if they were present on site, which would be a **potentially significant impact**. Varying levels of potential take could result from the following activities.

1. Phase 1 grading would impact eight locations and Phase 5 grading could impact two locations where low-density, isolated host plants were mapped (1–19 and 20–99 counts of dotseed plantain) that have very low potential to support Quino checkerspot butterfly.
2. Pre-Phase 1 restoration activities would occur in areas where 10 low-density host plant populations were mapped (1–19 and 20–99 counts of dotseed plantain) and 9 medium-density host plant populations were mapped (100–999 counts of dotseed plantain). Take could occur if these host plants support eggs or larvae during restoration activities.
3. Collision with vehicles and equipment on site could occur during the Quino checkerspot flight season (generally February through May). Based on the topographic separation between host plants on the mesa/ridge landform and flat portions of the Project site where sediment processing and staging would occur, the potential for collision is low.

Special-Status Birds

Cooper's hawk, northern harrier, burrowing owl (*Athene cunicularia*), and American peregrine falcon were observed within the study area, and American peregrine falcon and northern harrier were observed within the Reclamation Area. However, there is no nesting habitat for these species within the Reclamation Area. Thus, **no direct impacts** to special-status birds would occur.

San Diego Black-Tailed Jackrabbit

San Diego black-tailed jackrabbit can occur throughout the Reclamation Area; however, it is a highly mobile species that would not be impacted by the Project. Thus, **no direct impacts** to San Diego black-tailed jackrabbit would occur.

Migratory Birds

Birds protected under the MBTA and Fish and Game Code 3503 and 3503.5 could be impacted during clearing and grubbing activities. The take of any active nests or the young of nesting bird species would result in a **potentially significant impact**.

Indirect Impacts

Special-Status Plants

Indirect impacts to special-status plants result primarily from adverse edge effects. During construction activities, edge effects may include dust, which could disrupt plant vitality in the short-term, or construction-related soil erosion and water runoff. All grading activities also would be subject to the Project's best management practices and typical restrictions and requirements that address dust control, erosion, and runoff as described in Section 3.2, Air Quality, and Section 3.7, Hydrology and Water Quality. Thus, **no short-term indirect impacts** to sensitive vegetation communities or special-status plants are expected to occur.

Potential long-term indirect impacts to special-status plants could include trampling by humans traveling off trail, invasion by exotic plants and animals, exposure to urban pollutants (fertilizers, pesticides, herbicides, and other hazardous materials), soil erosion, and hydrologic changes (e.g., surface water and groundwater level and quality). Project conformance with the MHPA Land Use Adjacency Guidelines would result in avoiding and reducing potential long-term indirect impacts to special-status plants. In addition, the Reclamation Area would function as preserved open space once sediment placement and revegetation activities are completed (no public use/trails are proposed). Thus, **no long-term indirect impacts** to sensitive vegetation communities or special-status plants are expected because of the Project.

Special-Status Wildlife

For occupied California gnatcatcher habitat within the MHPA, construction or operational noise levels exceeding 60 A-weighted decibels (dBA) (or exceeding the existing ambient noise level if already above 60 dBA) during the nesting season would be **potentially significant**.

Other Biological Resources

Indirect impacts of the Project are expected to be short-term in nature (during the 15-year grading period) and are expected to be minimized to the extent feasible through the Project design, which includes incorporation of best management practices to reduce erosion, control pollutants including dust and chemicals, avoid adverse drainage conditions, restrict hours of operation and lighting, and provide fencing around restoration areas. With incorporation of these measures, indirect impacts would be reduced to a level that is **less than significant**.

- 2. Would the Project have a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development manual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?***

Vegetation communities within the MSCP study area are divided into four tiers of sensitivity (the first includes the most sensitive, the fourth the least) based on rarity and ecological importance. Tier I habitats include lands classified as southern foredunes, Torrey pines forest, coastal bluff scrub, maritime succulent scrub, maritime chaparral, native grasslands, and oak woodlands. Tier II includes lands classified as coastal sage scrub and coastal sage scrub/chaparral. Tier IIIA includes lands classified as mixed chaparral and chamise chaparral. Tier IIIB includes lands classified as non-native grassland. Tier IV includes lands classified as disturbed, agriculture, and eucalyptus.

As previously shown in Table 3.3-3, the Project would result in impacts to 11.69 acres of coastal sage scrub. Coastal sage scrub is identified by the City as a Tier II habitat. Impacts to Tier I, Tier IIIA, or Tier IIIB habitat would not occur as these habitat types are not mapped within the Reclamation Area on the Project site (see Figure 3.3-3a).

As previously discussed, the Project includes the re-establishment of coastal sage scrub habitat at a 1.5:1 ratio and the ultimate restoration would result in a net gain of habitat area. Furthermore, the Project (through restored slope stability and phased revegetation efforts) would result in higher functioning and value coastal sage scrub habitat compared with the current habitat on site. While the net gains in coastal sage scrub area and functions/values are adequate to offset the temporary loss, the Project would result in direct impacts to Tier II upland habitat in excess of the City's minimum threshold. Thus, impacts to special-status vegetation communities (i.e., coastal sage scrub) as a result of the Project would be **potentially significant**.

Also, no jurisdictional wetlands or waters would be directly affected by the Project. All of the jurisdictional resources are located outside of the Reclamation Area and thus, no direct impacts to these resources would occur.

3. ***Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?***

No jurisdictional wetlands or waters would be directly affected by the Project. All of the jurisdictional resources are located outside of the impact area on Reclamation Area and thus, **no direct impacts** to these resources would occur.

4. ***Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

The Reclamation Area (and Project site) does not function as a wildlife corridor or habitat linkage, as discussed in Section 3.3.1, and, therefore, no direct impacts would occur. The Reclamation Area also does not function as a nursery site and, therefore, **no impacts** to nursery sites would occur.

5. ***Would the Project conflict with any local policies or ordinances protecting biological resources?***

6. ***Would the Project conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?***

Multiple Species Conservation Program Consistency Analysis

Quarry reclamation itself is not identified as compatible land use within the MHPA, as listed in Section 1.4.1 of the MSCP Subarea Plan. However, the section does state that "some disturbed lands within the MHPA may be targeted for enhancement and restoration in order to more fully contribute to the functioning of the MHPA." Also, certain "roads and utilities" and "mining, extraction, and processing facilities" identified in the MSCP Subarea Plan that are in compliance with general planning policies and design guidelines stated in Section 1.4.2 of the MSCP Subarea Plan are also allowed. Finally, Section 1.4.1 of the MSCP Subarea Plan acknowledges that some portions of the MHPA have existing approved development areas and, since

the previous quarry was approved development, the proposed Project is a continuation and completion of that existing approval, with an end result that is compatible with the goals of the MSCP. Therefore, the proposed Project is considered a compatible use within the MHPA, given that it is primarily a restoration Project and that any temporary adverse impacts are more than offset by the regional benefit the Project would provide in terms of sediment reuse that would allow for restoration and maintenance of multiple habitats, as well as a remediation of prior mining activity on site.

The proposed Project is compliant with the applicable sections of the MSCP Subarea Plan and Tijuana River Valley LCP/LUP as documented in Table 3.3-5 and, as such, Project conflicts with the MSCP would be **less than significant**. Note that only applicable sections of the MSCP Subarea Plan and LCP/LUP are included in the table below and, thus, there may be gaps in numbering of policies. Numbering reflected in the tables below is consistent with the numbering from the source documents.

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|--|--|
| MSCP Subarea Plan Section 1.4.2, General Planning Policies and Design Guidelines | |
| Roads and Utilities - Construction and Maintenance Policies | Not applicable |
| Fencing, Lighting, and Signage | |
| 1. Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools). | Habitat protection fencing is required as part of the Project. Refer to Chapter 2, Project Description, of this EIR. See also Figures 2-5a through 2-5f of this EIR . |
| 2. Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low-sodium or similar lighting. Signage will be limited to access and litter control and educational purposes. | The installation of shielded night lighting may be considered near the processing screen for security purposes and would be designed to minimize glare and reflection onto off-site properties. If installed, Project lighting would be removed upon Project completion. |
| Materials Storage | |
| Prohibit storage of materials (e.g., hazardous or toxic, chemicals, equipment, etc.) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA, especially due to potential leakage. | Construction equipment maintenance and storage, as well as the sediment stockpile, will be subject to best management practices to ensure that adjacent habitat areas are protected from adverse effects. |
| Flood Control | |
| 3. No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural, and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement. | The Project does propose the use of riprap to stabilize the edge of grading within the MHPA. Since these structures are not being used in a "river, creek, tributary . . . channel bank," it is considered permissible. |

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|--|--|
| MSCP Subarea Plan Section 1.4.3, Land Use Adjacency Guidelines | |
| Drainage | |
| <p>1. All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.</p> | <p>Drainage structures have been designed to control against adverse drainage impacts to the MHPA.</p> |
| Toxics | |
| <p>2. Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.</p> | <p>Best management practices will be incorporated into the Project to control the potential release of toxins.</p> |
| Lighting | |
| <p>3. Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.</p> | <p>The installation of shielded night lighting may be considered near the processing screen for security purposes and would be designed to minimize glare and reflection onto off-site properties.</p> |
| Noise | |
| <p>4. Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.</p> | <p>Noise-generating activities will occur on site; however, the majority of the noise models show noise levels would not exceed 60 dBA within the coastal sage scrub areas where California gnatcatcher were documented. Activities that may result in excessive noise during the nesting season for those species that would occupy potentially effected habitat (i.e., upland species similar to California gnatcatcher) shall be conducted outside the nesting season for</p> |

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|---|--|
| | coastal California gnatcatcher and other birds protected under the MBTA and California Fish and Game Code. |
| Barriers | |
| 5. New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation. | Habitat protection fencing is required as part of the Project . A permanent barrier is not appropriate as the Project is part of the MHPA and the TRVRP. |
| Invasives | |
| 6. No invasive non-native plant species shall be introduced into areas adjacent to the MHPA. | The Project prohibits the use of invasive plant species for erosion control or final revegetation. |
| Brush Management | |
| | Not applicable |
| Grading/Land Development | |
| 8. Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA. | All manufactured slopes would be contained within the development footprint, as described in Chapter 2, Project Description. No manufactured slopes are proposed off site. The intent of the Project is to restore existing terrain to near historic (pre-mine operations) conditions. |
| MSCP Subarea Plan Section 1.5.2, General Management Directives | |
| Mitigation | |
| Mitigation, when required as part of project approvals, shall be performed in accordance with the City of San Diego Environmentally Sensitive Lands Ordinance and Biology Guidelines. | The Project has been planned and designed in accordance with this directive. |
| Restoration | |
| Restoration or revegetation undertaken in the MHPA shall be performed in a manner acceptable to the City. Where covered species status identifies the need for reintroduction and/or increasing the population, the covered species will be included in restoration/revegetation plans, as appropriate. Restoration or revegetation proposals will be required to prepare a plan that includes elements addressing financial responsibility, site preparation, planting specifications, maintenance, monitoring and success criteria, and remediation and contingency measures. Wetland restoration/revegetation proposals are subject to permit authorization by federal and state agencies. | The Project has been planned and designed in accordance with this directive. |
| MSCP Subarea Plan Section 1.5.5 Specific Management Policies and Directives for the Tijuana River Valley | |
| Goals and Objectives | |
| The optimum future condition for the Tijuana River Valley is a broad natural floodplain containing riparian and wetland habitats, and | The Project is ultimately a habitat restoration project, which meets the |

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|---|---|
| <p>bounded by high mesas and deep canyons with chaparral, sage scrub, and grasslands. The natural habitat would be intermixed with compatible agricultural, recreational, and water quality improvement activities, all functioning in concert to maintain and enhance natural ecosystems and processes, water quality, and the full range of native species, and to generally improve the local quality of life and the environment.</p> | <p>goals and objectives listed in this section.</p> |
| Mesa Areas | |
| <p>2. Restore disturbed areas on the Border Highlands area to the east of Spooner’s Mesa to coastal sage, maritime succulent scrub, possibly some grasslands and/or chaparral. Restoration opportunities should be determined by a biologist familiar with the habitats in this area. The border patrol should be involved in exploring limiting vehicle access to well-defined roads through the area.</p> | <p>The Project is ultimately a habitat restoration project, which meets the goals and objectives listed in this section.</p> |
| <p>4. Over the long term, restore areas of the mesas that have been mined and excavated. Restoration should include reconfiguration to the natural landform, with the surrounding natural areas as reference. Restoration of these areas may present research opportunities if not already required as part of existing CUPs.</p> | <p>The Project is ultimately a habitat restoration project, which meets the goals and objectives listed in this section.</p> |
| Tijuana River Valley Local Coastal Plan/Land Use Plan | |
| Goals and Objectives | |
| <p>Restore the Tijuana River Valley to a broad natural floodplain containing riparian and wetland habitats, bounded by high mesas and deep canyons with chaparral, sage scrub, and grasslands.</p> | <p>The Project is ultimately a habitat restoration project, which results in the restoration and creation of sage scrub, which meets the goals and objectives listed in this section.</p> |
| <p>Maintain a buffer around all wetland areas, while accommodating approved trail plans.</p> | <p>The Project incorporates an approximately 200-foot buffer to wetlands.</p> |
| Specific Recommendations | |
| D. Mining, Extraction, and Processing Facilities | |
| <p>Mining operations include mineral extraction, processing and other related mining activities (e.g., asphaltic processing). Currently permitted mining operations that have approved restoration plans may continue operating in the MHPA.</p> | <p>The mining operation was permitted at the time of the LCP/LUP adoption. The Nelson-Sloan Quarry has an approved reclamation plan.</p> |
| <p>New or expanded mining operations on lands conserved as part of the MHPA are incompatible with Local Coastal Program goals for covered species and their habitats unless otherwise agreed to by the wildlife agencies at the time the parcel is conserved. New operations are permitted in the MHPA if: 1) impacts have been assessed and conditions incorporated to mitigate biological and restore mined areas; 2) adverse impacts to covered species in the MHPA have been mitigated consistent with the Subarea Plan; and 3) requirements of other City land use policies and regulations (e.g., Adjacency Guidelines, Conditional Use Permit, Coastal Development Permit, Environmentally Sensitive Lands Ordinance) have been satisfied.</p> | <p>The Project does not propose the expansion of the previously authorized mining operation.</p> |

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|--|--|
| Existing and any newly permitted operations adjacent to or within the MHPA shall meet noise, air quality and water quality regulation requirements, as identified in the conditions of any existing or new permit, in order to adequately protect adjacent preserved areas and covered species. Such facilities shall also be appropriately restored upon cessation of mining activities. | The Project is designed to meet noise, air quality, and water quality regulations and will be restored as part of the Project. |
| All mining and other related activities must be consistent with the objectives, guidelines and recommendations in all land use policy documents and zoning regulations adopted by the City of San Diego and certified by the California Coastal Commission, as well as with the State Surface Mining and Reclamation Act (SMARA) of 1975. | The Project is designed consistent with this requirement. |
| Monitor any sand removal activities for noise impacts to surrounding sensitive habitats, and all new sediment removal or mining operations proposed in proximity to the MHPA, or changes in existing operations, must include noise reduction methods that take into consideration the breeding and nesting seasons of sensitive bird species. | No noise-generating activities will occur during the breeding season for those species that would occupy potentially affected habitat (i.e., upland species like California gnatcatcher). |
| All existing and future mined lands adjacent to or within the MHPA shall be reclaimed pursuant to SMARA. Ponds are considered compatible uses where they provide native wildlife and wetland habitats and do not conflict with conservation goals of this Local Coastal Program Land Use Plan. | The Project is designed consistent with this requirement. |
| Any permitted mining activity including reclamation of sand must consider changes and impacts to water quality, water table level, fluvial hydrology, flooding, and wetlands and habitats upstream and downstream, and provide adequate mitigation. | Not applicable. |
| E. Environmentally Sensitive Habitat Areas | |
| A wetland buffer shall be maintained around all wetlands as necessary and as appropriate to protect the functions and values of the wetland. Wetland buffers should be provided at a minimum 100-foot distance adjacent to all identified wetlands and a 50-foot distance adjacent to riparian areas. The width of the buffer may be either increased or decreased as determined on a case-by-case basis, in consultation with the California Department of Fish and Game, taking into consideration the type and size of development, the sensitivity of the wetland resources to detrimental edge effects, natural features, such as topography, and the function and values of the wetland. Developments permitted in wetland buffer areas shall be limited to access paths, passive recreational areas, fences and similar improvements necessary to protect the wetland, and such improvements shall be restricted to the upper/inland half of the buffer zone. | The Project incorporates an approximately 200-foot buffer to wetlands. |
| G. Grading/Sediment Control/Water Quality | |
| Sediment control measures (debris basins, desilting basins or silt traps) shall be installed in conjunction with any new development in which grading is proposed. The prevention and control of runoff of fertilizers, pesticides and other urban pollutants into riparian and floodplain areas should be required | Drainage structures have been designed to control against adverse drainage impacts to the MHPA both during the reclamation and restoration process, and following completion of final grading. |

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|--|---|
| Special Conditions for Covered Species | |
| Covered Wildlife Species | |
| <p>Area-specific management directives for the coastal California gnatcatcher must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No clearing of occupied habitat within the cities' MHPAs and within the County's Biological Resource Core Areas may occur between March 1 and August 15.</p> | <p>Protocol surveys will be required for potential impacts to coastal California gnatcatcher habitat that may be subject to construction noise levels exceeding 60 decibels hourly. If present, no clearing of occupied habitat shall occur between March 1 and August 15 according to Mitigation Measure (MM) BIO-3. Additionally, mitigation ratios and associated mitigation proposed for impacts to coastal California gnatcatcher habitat will be mitigated in accordance with MM-BIO-1.</p> |
| <p>Area-specific management directives for least Bell's vireo must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to these species. Any clearing of occupied habitat must occur between September 15 and March 15 for vireo (i.e., outside of the specie's nesting seasons).</p> | <p>There is no nesting habitat for this species within the study area and the least Bell's vireo observation was assumed to be a migrant individual. However, nesting bird surveys will be conducted for clearing, grubbing, or other ground-disturbing activities between January 15 and September 15 and active bird nests will be avoided in accordance with MM-BIO-5.</p> |
| <p>Area-specific management directives for Cooper's hawk must include a 300-foot impact avoidance area around any active nests as well as the minimization of disturbance in oak woodlands and oak riparian forests.</p> | <p>Nesting bird surveys will be conducted for clearing, grubbing, or other ground-disturbing activities between January 15 and September 15 and active bird nests will be avoided, with appropriate buffers consistent with the City's Biology Guidelines, in accordance with MM-BIO-5.</p> |
| <p>Area specific management directives for northern harrier must manage agricultural and disturbed lands (which become part of the preserve) within four miles of nesting habitat to provide foraging habitat; and include an impact avoidance area (900 foot or maximum possible within the preserve) around active nests. The preserve management coordination group shall coordinate efforts to manage for wintering northern harriers' foraging habitat within the preserve.</p> | <p>Nesting bird surveys will be conducted for clearing, grubbing, or other ground-disturbing activities between January 15 and September 15 and active bird nests will be avoided, with appropriate buffers consistent with the City's Biology Guidelines, in accordance with MM-BIO-5.</p> |
| <p>There are no area specific management directives for American peregrine falcon. Participating jurisdictions' guidelines and ordinances and state and federal wetland regulations will provide additional habitat protection resulting in no net loss of wetlands.</p> | <p>None required. There are no impacts to nesting habitat for American peregrine falcon or wetlands.</p> |

Table 3.3-5. Compliance with Applicable MSCP Subarea Plan and Tijuana River Valley LCP/LUP Sections

| Policy Language | Project Compliance |
|---|--|
| Area specific management directives for San Diego fairy shrimp and Riverside fairy shrimp must include specific measures to protect against detrimental edge effects to this species. | None required. Fairy shrimp have low potential to occur within the Reclamation Area. |

Note: MSCP = Multiple Species Conservation Program; MHPA = Multi-Habitat Planning Area; dBA = A-weighted decibels; MBTA = Migratory Bird Treaty Act; TRVRP = Tijuana River Valley Regional Park; LCP/LUP = Tijuana River Valley Local Coastal Program/Land Use Plan.

7. Would the Project introduce a land use within an area adjacent to the MHPA that would result in adverse edge effects?

Implementation of the City’s Land Use Adjacency Guidelines would reduce indirect impacts to the MHPA and would prevent adverse effects along the edges of the Reclamation Area that border other MHPA lands. Regarding consistency with and adherence to the Land Use Adjacency Guidelines, see the discussion below. In summary, the Project, as proposed and pursuant to conformity with MSCP guidelines and directives, would result in **less-than-significant impacts** regarding adverse edge effects.

MSCP–MHPA Land Use Adjacency Guidelines

Pursuant to the City’s MSCP Subarea Plan, the Project would be required to comply with the MHPA Land Use Adjacency Guidelines outlined in Section 1.4.3 of the MSCP Subarea Plan.

The Project’s conformance with the Land Use Adjacency Guidelines is detailed below with the MHPA guideline identified in italics within each topic area. Project conformance with the guidelines would be made conditions of the Site Development Permit (should the City determine that such a permit would be required).

▪ **Drainage**

- **Guideline:** *All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.*
- **Project Conformance Discussion:** The Project does not propose parking lots and is not a “developed” use. Rather, the Project proposes beneficial reuse of in-valley sediment towards mine reclamation and landform restoration/creation. The Project does not propose the development of excessive impervious area (stormwater infrastructure is proposed to facilitate sufficient drainage of the future site). A construction detention basin is also proposed and would be maintained in accordance with MHPA drainage guidelines.

▪ **Lighting**

- **Guideline:** *Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.*
- **Project Conformance Discussion:** Any nighttime lighting, such as security lighting, will be shielded and directed away from the MHPA per the City's Outdoor Lighting Ordinance 142.0740 such that there would be no spill of light off the Reclamation Area. Also, once reclamation activities on the Project site are completed, Project-related lighting would be removed.

▪ **Noise**

- **Guideline:** *Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.*
- **Project Conformance Discussion:** Currently, the Project is located within an area subject to existing noise from local roads. Due to the site's location within the MHPA, the Project would be designed to minimize noise impacts. If construction must occur during the breeding season for the coastal California gnatcatcher, the following measures shall be implemented, as depicted in Appendix B:

- If California gnatcatchers are found off site within the MHPA during preconstruction surveys, construction within 500 feet shall not commence until temporary noise barrier(s) are placed between the construction area and occupied gnatcatcher habitat. The location of the noise barrier(s) shall be determined by the biologist and acoustician. Construction noise levels shall be monitored at the edge of occupied habitat with the noise barrier(s) in place. Other measures shall be implemented, as necessary, to reduce noise levels to below 60 dBA or to the ambient noise level if it already exceeds 60 dBA at the edge of the occupied habitat.

Construction noise shall be monitored once weekly to verify that noise at the edge of occupied habitat in the MHPA is maintained below 60 dBA or to the ambient noise level if it already exceeds 60 dBA. If this requirement cannot be met, other measures shall be implemented as necessary, to reduce noise levels to below 60 dBA or to the ambient noise level if it already exceeds 60 dBA. Such measures may include, but are not limited to, placement of construction equipment and limitations on the simultaneous use of equipment.

▪ **Barriers**

- **Guideline:** *New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.*
- **Project Conformance Discussion:** No public trails have been designated on site or are proposed. As previously discussed and as discussed in Appendix B, if coastal California gnatcatchers are found off site within the MHPA, construction within 500 feet shall not commence until temporary noise barrier(s) are placed between the construction area and occupied gnatcatcher habitat.

▪ **Invasives**

- **Guideline:** *No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.*

- **Project Conformance Discussion:** The landscape plan for the Project would utilize native species, as depicted in Figures 2-7a through 2-7f, Restoration Plan (Phase 1 through Phase 6), and as depicted in the 80% Restoration Plans (see Figures 2-7a through 2-7h of this EIR). No invasive species would be introduced on the Reclamation Area.
- **Brush Management**
 - **Guideline:** *New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zones 2 and 3 will be combined into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA. Zone 2 will be increased by 30 feet, except in areas with a low fire hazard severity rating where no Zone 2 would be required. Brush management zones will not be greater in size than is currently required by the City's regulations. The amount of woody vegetation clearing shall not exceed 50% of the vegetation existing when the initial clearing is done. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area will be the responsibility of a homeowners association or other private party.*
 - **Project Conformance Discussion:** No residential uses or brush management is proposed in the MHPA, as described in Chapter 2, Project Description.
- **Grading/Land Development**
 - **Guideline:** *Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.*
 - **Project Conformance Discussion:** All manufactured slopes would be contained within the development footprint, as described in Chapter 2. No manufactured slopes are proposed off site.

The Project has been designed to adhere to the City's MHPA adjacency guidelines, to address issues such as drainage, toxics, lighting, noise, barriers, invasive exotics, brush management, and grading/land development. Further, the Project includes a restoration plan design that aims to prevent intrusion into the adjacent MHPA sensitive areas. These design measures include native, drought-tolerant landscaping, and no non-native species used in plantings in and adjacent to the MHPA. Additionally, plantings would mimic the off-site natural environment.

General Management Directives

Pursuant to Section 1.5.2 of the City's MSCP Subarea Plan, the Project would be required to comply with General Management Directives that are applicable to all areas of the City's MSCP Subarea. The Project's conformance with the applicable General Management Directives is detailed below, with the guideline language provided in italics.

- **Mitigation**
 - **Directive:** *Mitigation, when required as part of project approvals, shall be performed in accordance with the City of San Diego Environmentally Sensitive Lands Ordinance and Biology Guidelines.*

- **Project Conformance with Directive:** The Project mitigation and restoration plan shall be performed in accordance with the City's Environmentally Sensitive Lands Ordinance and Biology Guidelines.

Public Access, Trails, and Recreation

- **Priority 1:**

1. **Directive:** *Provide sufficient signage to clearly identify public access to the MHPA. Barriers such as vegetation, rocks/boulders or fencing may be necessary to protect highly sensitive areas. Use appropriate type of barrier based on location, setting and use. For example, use chain link or cattle wire to direct wildlife movement, and natural rocks/boulders or split rail fencing to direct public access away from sensitive areas. Lands acquired through mitigation may preclude public access in order to satisfy mitigation requirements.*

Project Conformance with Directive: The Project does not propose public access, trails or recreational uses; therefore, the Project would not conflict with this guideline.

2. **Directive:** *Limit recreational uses to passive uses such as birdwatching, photography and trail use. Locate developed picnic areas near MHPA edges or specific areas within the MHPA, in order to minimize littering, feeding of wildlife, and attracting or increasing populations of exotic or nuisance wildlife (opossums, raccoons, skunks). Where permitted, restrain pets on leashes.*

Project Conformance with Directive: The Project does not propose recreational uses; therefore, the Project would not conflict with this guideline.

8. **Would the Project introduce invasive species of plants into a natural open space area?**

The Reclamation Area is within identified MHPA lands. The Project would implement the City's MHPA Land Use Adjacency Guidelines to avoid and minimize the introduction of invasive plants into natural open space. Additionally, no invasive plants would be used in the restoration plan. Instead, new plantings would be composed of native species. Moreover, no brush management is proposed in the MHPA. As such, impacts related to the introduction of invasive plant species to natural open space area would be **less than significant**.

3.3.5 Cumulative Impacts

Cumulative impacts consider the potential regional effects of a project and how a project may affect biological resources beyond the project limits and on a regional scale. As previously discussed, the Project would result in multiple significant impacts both direct and indirect to biological resources. The Project would not conflict with the MSCP or MHPA; however, it would directly impact 11.69 acres of native vegetation, which would require mitigation. Additional impacts would be expected upon implementation of the projects listed in Table 2-11. If located within the City's land use jurisdiction, projects would be required to comply with the City Biology Guidelines (City of San Diego 2018) and, if applicable, demonstrate compliance with the MSCP Subarea Plan.

Projects that comply with the MSCP as specified by the City's MSCP Subarea Plan and its implementing ordinances are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP, including vegetation communities identified as Tier I through IV. Therefore, the Project is consistent with the MSCP and cumulative impacts to uplands, sensitive plants, and sensitive wildlife would be mitigated through implementation of the plan. Unlike the Project, cumulative projects may result in impacts to unvegetated non-wetland waters of the United States and create a potentially significant cumulative impact. Because other cumulative projects,

in addition to the Project, would need to comply with City regulations pertaining to impacts to biological resources and the regulations stated above, impacts would **not be considerable and not cumulatively significant**.

3.3.6 Mitigation Measures

The following mitigation measures address the Project's potentially significant direct and indirect effects on special-status and other protected species.

MM-BIO-1 Restoration of Vegetation. Temporary impacts to Diegan coastal sage scrub shall require restoration. Restoration shall be provided at a minimum 1.5:1 ratio (restoration acreage: impact acreage). Due to the extended period of sediment placement on site, restoration will be phased to correspond to construction phases. The Restoration Plan shall include the responsible parties, revegetation implementation plan, 5-year maintenance plan, monitoring plan, contingency measures, and notification of completion of the restoration.

To avoid impacts to high-quality host plants for Quino checkerspot butterfly, the Restoration Plan requires a biologist to survey the mesa for Quino checkerspot butterfly host plants prior to the pre-restoration phase activities. All host plant populations shall be flagged and a 20-foot buffer established around the host plant populations. Restoration activities within this avoidance area shall be restricted to hand weeding and/or herbicide application only. No mechanical work shall be done in this avoidance area. Highly compacted soils that are not suitable for Quino checkerspot larvae within the 20-foot buffer can be excluded from the avoidance area as determined by the Project biologist.

MM-BIO-2 Special-Status Species Take Avoidance Surveys. Prior to initiation of each phase of site clearing, the applicant shall develop a relocation and exclusion plan for special-status terrestrial reptiles, Dulzura pocket mouse, northwestern San Diego pocket mouse, and San Diego desert woodrat with the potential to occur on site. The relocation and exclusion plan shall be submitted to the California Department of Parks and Recreation (and/or designee or Responsible Agency) for review and approval prior to initiation of site clearing for each phase of the Project. The plan shall at minimum include the timing and locations where surveys should be conducted; the habitat and conditions in the proposed relocation site(s), the methods that would be used for trapping and relocating the individual species, the method for documentation/recordation of the species and number of animals relocated, and the method of exclusion so that species cannot re-enter active construction areas.

Pre-Construction Surveys. No more than 7 days prior to each phase of site clearing, a qualified biologist shall conduct a preconstruction survey within areas of suitable habitat for special-status species wildlife. The biologist shall survey for special-status species that may be located within or immediately adjacent to the Project work areas, as permitted by access. If determined by the qualified biologist that based on the construction activities, time of year, and location of the special-status wildlife species relocation is necessary, relocation will occur to nearby undisturbed areas within suitable habitat in the open space preserve as specified in the plan and a California scientific collecting permit (SCP) (if applicable), but as close to their origin as possible (consistent with the approved plan). The biologist relocating the species shall possess a California SCP to handle these species if required by applicable California Department of Fish and Wildlife regulations.

Monitoring. A qualified biologist shall be present during each phase of initial ground-disturbing activities (i.e., vegetation removal) immediately adjacent to or within the vegetation communities

and/or disturbed habitats that could support populations of special-status wildlife species to monitor vegetation and topsoil removal. If special-status species reptiles or small mammals are detected in the work area during biological monitoring, the individual(s) will be documented and relocated as per the approved plan and in accordance with the SCP conditions as applicable. Periodic monitoring shall also be conducted by a qualified biologist following initial ground-disturbing activities, to ensure that exclusion fencing remains in place to minimize the potential for special-status species to re-enter active construction area.

MM-BIO-3 Coastal California Gnatcatcher Avoidance and Surveys.

No clearing, grubbing, grading, or other ground-disturbing activities shall occur during the coastal California gnatcatcher breeding season (March 1 through August 15) on Multi-Habitat Planning Area (MHPA) lands until the following requirements have been met to the satisfaction of the California Department of Parks and Recreation (CDPR) (and/or designee or Responsible Agency):

A qualified biologist (possessing a valid Endangered Species Act Section 10[a][1][a] Recovery Permit) shall survey those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 A-weighted decibels (dBA) hourly average for the presence of the coastal California gnatcatcher. Surveys for coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of any construction.

1. If coastal California gnatcatchers are present, then the following conditions must be met:
 - a. March 1 through August 15 on MHPA lands, no clearing, grubbing, or grading of occupied coastal California gnatcatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; and
 - b. March 1 through August 15 on MHPA lands, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dBA hourly average at the edge of occupied coastal California gnatcatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 dBA hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by CDPR (and/or designee or Responsible Agency) at least 2 weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the nesting season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; or
 - c. At least 2 weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities would not exceed 60 dBA hourly average at the edge of habitat occupied by the coastal California gnatcatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dBA hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction

activities shall cease until such time that adequate noise attenuation is achieved or until the end of the nesting season (August 16). Construction noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. If not, other measures shall be implemented in consultation with the biologist and CDPR (and/or designee or Responsible Agency), as necessary, to reduce noise levels to below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

2. If coastal California gnatcatchers are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to CDPR (and/or designee or Responsible Agency) and applicable resource agencies that demonstrates whether or not mitigation measures such as noise walls are necessary from March 1 through August 15 on MHPA lands as follows:
 - a. If this evidence indicates that the potential is high for coastal California gnatcatcher to be present based on historical records or site conditions, then Condition 1(a) shall be adhered to as specified above.
 - b. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

MM-BIO-4 Quino Checkerspot Butterfly Take Authorization. The California Department of Parks and Recreation (CDPR) (and/or designee or Responsible Agency) shall consult with the U.S. Fish and Wildlife Service (USFWS) to determine if take authorization is required for impacts to Quino checkerspot. If such take authorization is required, CDPR (and/or designee or Responsible Agency) shall demonstrate to the satisfaction of the City of San Diego that it has secured any necessary take authorization prior to the issuance of the first grading permit that impacts suitable Quino checkerspot butterfly habitat. Take authorization may be obtained through the Section 7 Consultation or Section 10 Incidental Take Permit requirements. The Project applicant will comply with any and all conditions, including preconstruction surveys that USFWS may require for take of Quino checkerspot butterfly pursuant to the Endangered Species Act. If required as a permit condition, a preconstruction survey will be conducted in accordance with USFWS protocols unless USFWS authorizes a deviation from those protocols.

MM-BIO-5 Nesting Bird Surveys. To avoid direct impacts to nesting birds (exclusive of coastal California gnatcatcher; see MM-BIO-3), removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the nesting season for these species (January 15 to September 15). If removal of habitat in the proposed area of disturbance must occur during the nesting season, the qualified biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to removal of vegetation. The California Department of Parks and Recreation (CDPR) (and/or designee or Responsible Agency) shall submit the results of the pre-construction survey to the City and/or County of San Diego for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City of San Diego's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of

birds or eggs or disturbance of nesting activities is avoided. The report or mitigation plan shall be submitted to the City and/or County of San Diego for review and approval and implemented to the satisfaction of the City and/or County of San Diego. A CDPR (and/or designee or Responsible Agency) Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. If more than 14 days lapse between clearing, grubbing, grading, or other ground-disturbing activities, nesting bird surveys should be reinitiated prior to commencing activities and follow the methods described above.

3.3.7 Level of Significance After Mitigation

With implementation of Mitigation Measure (MM) BIO-1, temporary impacts to 11.69 acres of Tier II coastal sage scrub would be reduced to a **less-than-significant impact**. MM-BIO-1 provides for the restoration of impacted coastal sage scrub habitat at a minimum 1.5:1 ratio, in accordance with the Project Restoration Plan.

With implementation of MM-BIO-2, direct impacts to special-status wildlife through the loss of habitat and potential mortality of individual species (particularly special-status reptiles and small mammals that may not be able to escape impacts during construction) would be reduced to a **less-than-significant level**. MM-BIO-2 provides for pre-construction surveys and monitoring of each phase of initial ground-disturbing activities (i.e., vegetation removal). If special-status species reptiles or small mammals are detected in the work area during biological monitoring, the individual(s) would be documented and relocated as per the approved plan and in accordance with the scientific collecting permit conditions as applicable.

With implementation of MM-BIO-3, impacts to California coastal gnatcatcher would be reduced to a **less-than-significant level** through avoiding clearing of occupied habitat between March 1 and August 15 and limiting activities within areas outside the disturbance footprint but where noise levels may exceed 60 dBA hourly average. This is in compliance with the Conditions of Coverage outlined in the MSCP Subarea Plan (City of San Diego 1997). These conditions include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, management measures to maintain or improve habitat quality including vegetation structure, and the rule that no clearing of occupied habitat within the MHPA may occur between March 1 and August 15. Regarding fire protection, MM-AQ-1 would be implemented during construction and would prohibit the idling of vehicles on the Reclamation Area when not in use. Further, the Project would be subject to standard San Diego Fire Department protocol such as limiting or ceasing construction work during high-wind weather events and would implement MM-WF-1, which includes the incorporation of pre-construction requirements including proper clearing of flammable vegetation around the sediment processing plant staging area.

With implementation of MM-BIO-1 and MM-BIO-4, impacts to Quino checkerspot butterfly would be reduced to a **less-than-significant level**. Restoration of the existing mesa top is expected to be conducted in a manner that minimizes potential impacts to diapause larvae by requiring host plant mapping prior to pre-restoration activities and avoidance of host plants and associated buffers (see MM-BIO-1). Quino checkerspot butterfly impacts would also be reduced through MM-BIO-4, which requires consultation with USFWS to determine if take authorization is required.

Implementation of MM-BIO-5, which requires nesting bird surveys and avoidance measures for active nests, would reduce impacts to nesting birds utilizing vegetation on the Project site to **less than significant**.

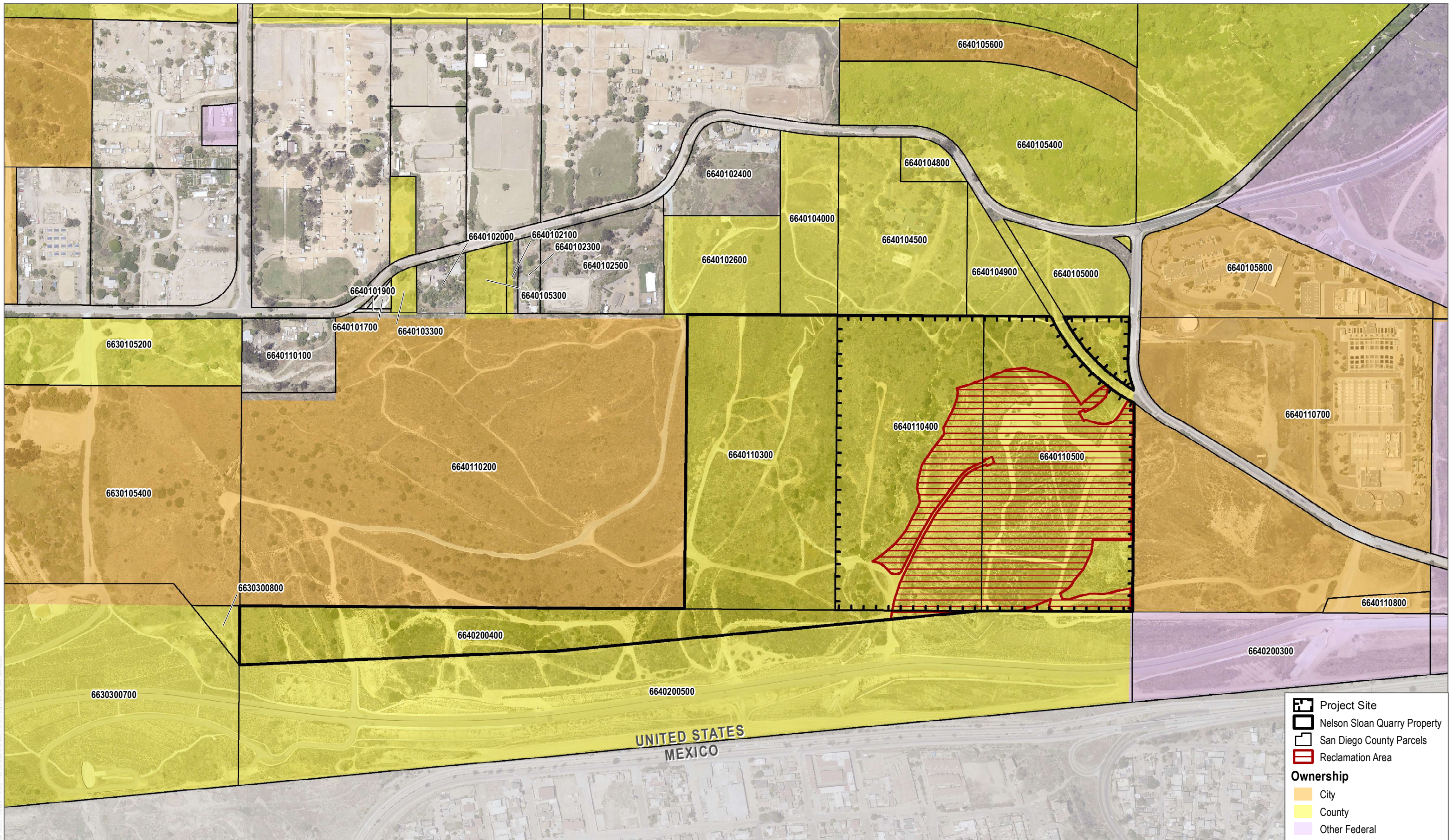
3.3.8 References

- 85 FR 96. National Wetland Plant List. Federal Register. May 18, 2020.
- AOS (American Ornithological Society). 2018. "Check-List of North and Middle American Birds." Accessed October 24, 2018. <http://checklist.aou.org/>.
- Atwood, J.L. 1990. *Status Review of the California Gnatcatcher (Polioptila californica)*. Manomet, Massachusetts: Manomet Bird Observatory. December 1990.
- Atwood, J.L. 1993. "California Gnatcatchers and Coastal Sage Scrub: The Biological Basis for Endangered Species Listing." In *Interface between Ecology and Land Development in California*, edited by J.E. Keeley, 149–169. Los Angeles, California; Southern California Academy of Science.
- Atwood, J.L., and J.S. Bolsinger. 1992. "Elevational distribution of California Gnatcatchers in the United States." *Journal of Field Ornithology* 63: 159–168.
- Atwood, J.L., S.H. Tsai, C.H. Reynolds, and M.R. Fugagli. 1998a. "Distribution and Population Size of California Gnatcatchers on the Palos Verdes Peninsula, 1993–1997." *Western Birds* 29:340–350.
- Atwood, J.L., S.H. Tsai, C.H. Reynolds, J.C. Luttrell, and M.R. Fugagli. 1998b. "Factors Affecting Estimates of California Gnatcatcher Territory Size." *Western Birds* 29:269–279.
- Bontrager, D.R. 1991. *Habitat Requirements, Home Range Requirements, and Breeding Biology of the California Gnatcatcher (Polioptila californica) in South Orange County, California*. Prepared for Santa Margarita Company, Ranch Santa Margarita, California. April 1991.
- Braden, G.T., R.L. McKernan, and S.M. Powell. 1997. "Association of Within-Territory Vegetation Characteristics and Fitness Components of California Gnatcatchers." *Auk* 114:601–609.
- Burger, J.C., M.A. Patten, J.T. Rotenberry, and R.A. Redak. 1999. "Foraging Ecology of the California Gnatcatcher Deduced from Fecal Samples." *Oecologia* 120:304–310.
- CDFW (California Department of Fish and Wildlife). 2019. California Natural Diversity Database (CNDDDB). RareFind Version 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.
- CDFW. 2020a. "California Natural Community List." Sacramento, California: CDFW. September 9, 2020. Accessed September 2020. <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities>.
- CDFW. 2020b. *Special Animals*. Biannual publication, mimeo. July 2020.
- City of San Diego. 1982a. Environmental Impact Report for the Border Area Borrow Pit. #76-09-29. Prepared by the Environmental Quality Division.
- City of San Diego. 1982b. Conditional Use Permit (CUP) 497-PC. Granted by the Planning Commission to Nelson & Sloan.

- City of San Diego. 1997. *Multiple Species Conservation Program (MSCP) Subarea Plan*. Community and Economic Development Department, City of San Diego.
- City of San Diego. 1999. *The Tijuana River Valley Local Coastal Plan/Land Use Plan*.
- City of San Diego 2017. San Diego Municipal Code Chapter 14, Article 3, Division 1: Environmentally Sensitive Lands Regulations. Added December 9, 1997.
- City of San Diego. 2018. City of San Diego Municipal Code, Land Development Code—Biology Guidelines. February 2018.
- CNPS (California Native Plant Society). 2019. "Inventory of Rare and Endangered Plants" (online edition, v8-03 0.39). Sacramento, California: California Native Plant Society. Accessed January 2019. www.rareplants.cnps.org.
- County of San Diego. 2010. *Guidelines for Determining Significance and Report Format and Content Requirements for Biological Resources*. Fourth Revision September 2010.
- Crother, B.I. 2017. "Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding" [8th ed.]. *Herpetological Circular* No. 43. Ed. J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.
- Diffendorfer, J.E., R.E. Chapman, J.M. Duggan, G.M. Fleming, M. Mitrovitch, M.E. Rahn, and R. del Rosario. 2002. *Coastal Sage Scrub Response to Disturbance: A Literature Review and Annotated Bibliography*. Prepared for the California Department of Fish and Game. February 28, 2002.
- Dudek. 2012. *Final Biological Technical Report Nelson-Sloan Quarry – Tijuana River Valley*. Prepared for: City of San Diego Transportation and Storm Wwater Department. October 2012.
- Gray, J, and D. Bramlet. 1992. "Habitat Classification System." Natural Resources Geographic Information Systems (GIS) Project. County of Orange Environmental Management Agency. May 1992.
- Greystone. 2005. *Biological Resources Technical Report for County of San Diego Tijuana River Valley Regional Park Trails and Habitat Enhancement Project*.
- Hall, E.R. 1981. *The Mammals of North America*. 2nd ed. New York, New York: John Wiley and Sons.
- Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game.
- Jepson Flora Project. 2019. "Jepson eFlora." Berkeley, California: University of California. Accessed January 3, 2019. <http://ucjeps.berkeley.edu/interchange/index.html>.
- Macwhirter, R.B., and K.L. Bildstein. 2011. "Northern Harrier (*Circus cyaneus*)," revised by K.G. Smith and S.R. Wittenberg. In *The Birds of North America Online*, edited by A.
- NABA (North American Butterfly Association). 2016. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from *North American Butterfly Association (NABA) Checklist & English Names of North American Butterflies*, eds. B. Cassie, J. Glassberg, A. Swengel, and G. Tudor. 2nd ed. Morristown, New Jersey: NABA. Accessed February 23, 2017. http://www.naba.org/pubs/enames2_3.html

- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. March 2008. http://www.sdcaanyonlands.org/pdfs/veg_comm_sdcounty_2008_doc.pdf.
- Preston, K.L., P.J. Mock, M.A. Grishaver, E.A. Bailey, and D.F. King. 1998. "California Gnatcatcher Territorial Behavior." *Western Birds* 29:242–257.
- Sawyer, J. and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society Publication.
- SDNHM (San Diego Natural History Museum). 2002. "Butterflies of San Diego County." Revised September 2002. Accessed October 14, 2016. <http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html>.
- USDA. 2020. "California." State PLANTS Checklist. Accessed March 2020 at http://plants.usda.gov/dl_state.html.
- USFWS. 2003. *Recovery Plan for the Quino Checkerspot Butterfly (Euphydryas editha quino)*. Portland, Oregon: USFWS, Region 1. August 11, 2003. http://ecos.fws.gov/docs/recovery_plan/030917.pdf.
- USFWS. 2008. *Branchinecta sandiegonensis San Diego Fairy Shrimp 5-Year Review: Summary and Evaluation*. Carlsbad, California
- USFWS. 2020a. "FWS-Listed U.S. Species by Taxonomic Group – All Plants." Accessed September 2020. <https://www.fws.gov/endangered/>.
- USFWS. 2020b. "FWS-Listed U.S. Species by Taxonomic Group – All Animals." Accessed September 2020. <https://www.fws.gov/endangered/>.
- Weaver, K.L. 1998. "Coastal Sage Scrub Variations of San Diego County and Their Influence on the Distribution of the California Gnatcatcher." *Western Birds* 29:392–405.
- Wilson, D.E., and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.
- Zeiner, D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White, eds. 1990. *California's Wildlife: Volume II. Birds*. Sacramento, California: California Department of Fish and Game.

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017, 2020

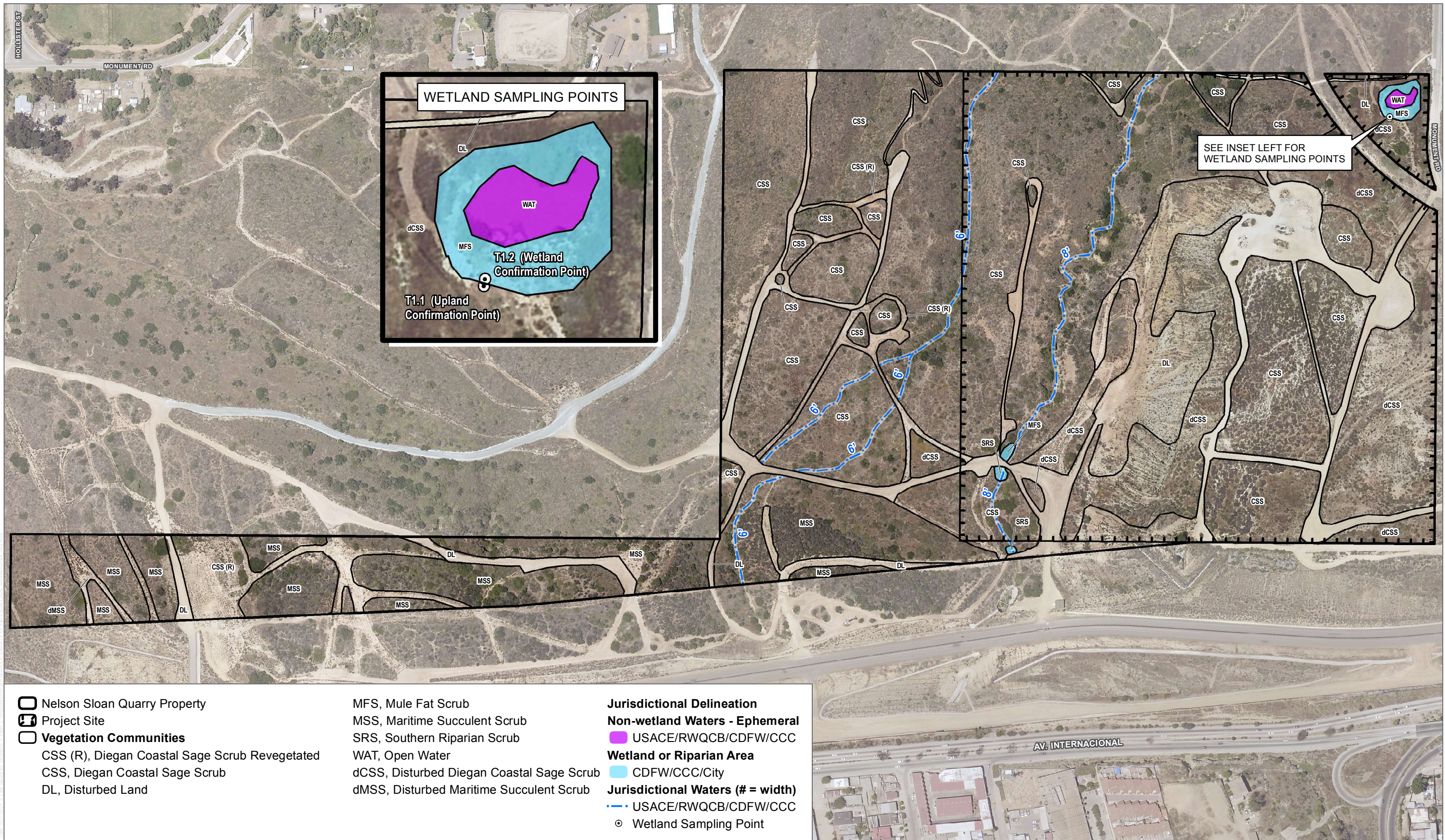


FIGURE 3.3-1

Property Ownership and Project Areas

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



- Nelson Sloan Quarry Property
- Project Site
- Vegetation Communities**
- CSS (R), Diegan Coastal Sage Scrub Revegetated
- CSS, Diegan Coastal Sage Scrub
- DL, Disturbed Land

- MFS, Mule Fat Scrub
- MSS, Maritime Succulent Scrub
- SRS, Southern Riparian Scrub
- WAT, Open Water
- dCSS, Disturbed Diegan Coastal Sage Scrub
- dMSS, Disturbed Maritime Succulent Scrub

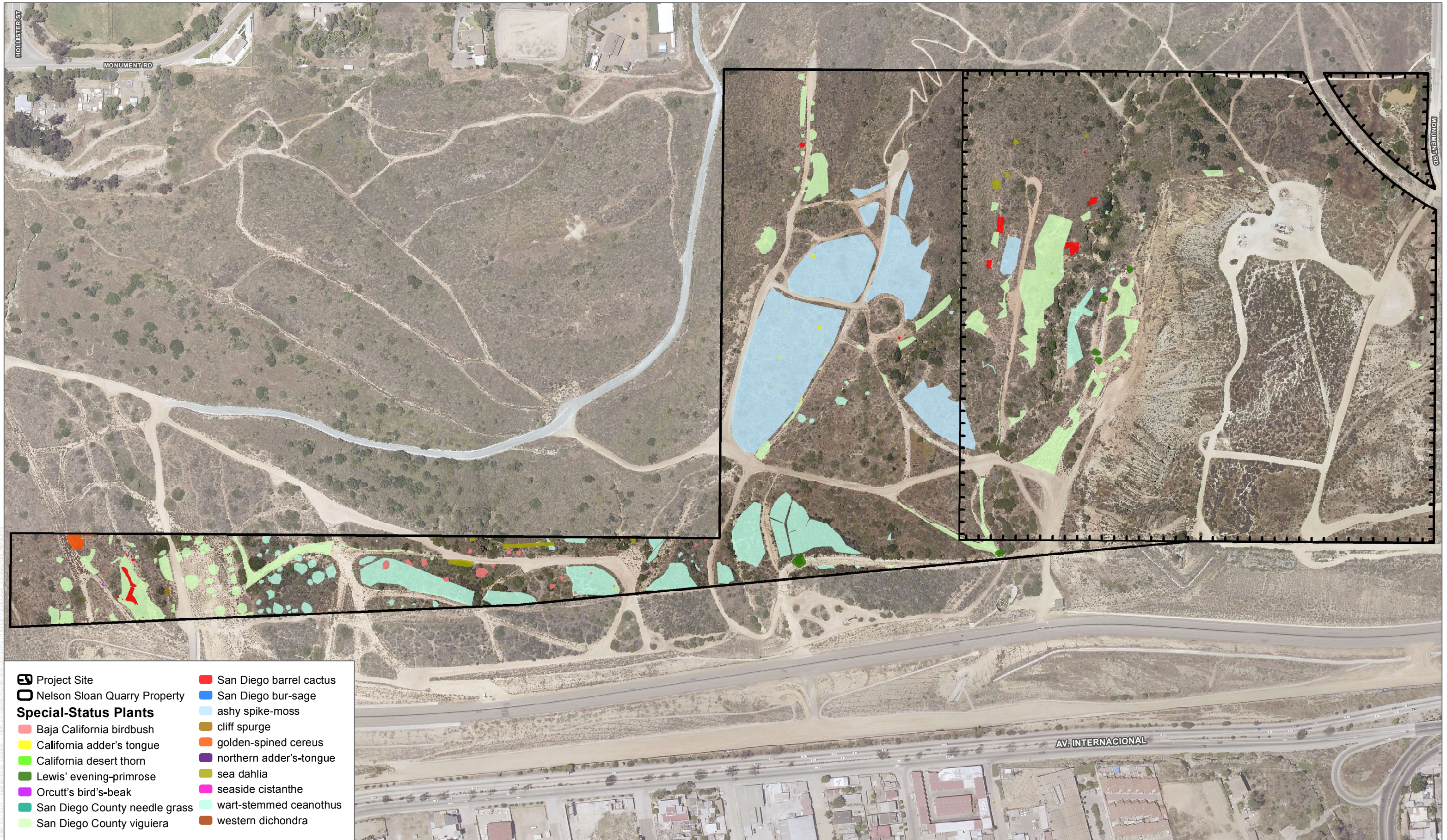
- Jurisdictional Delineation**
- Non-wetland Waters - Ephemeral**
- USACE/RWQCB/CDFW/CCC
- Wetland or Riparian Area**
- CDFW/CCC/City
- Jurisdictional Waters (# = width)**
- USACE/RWQCB/CDFW/CCC
- Wetland Sampling Point

SOURCE: SANGIS 2017



FIGURE 3.3-2a

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017

FIGURE 3.3-2b

Biological Resources - Special-Status Plants

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017

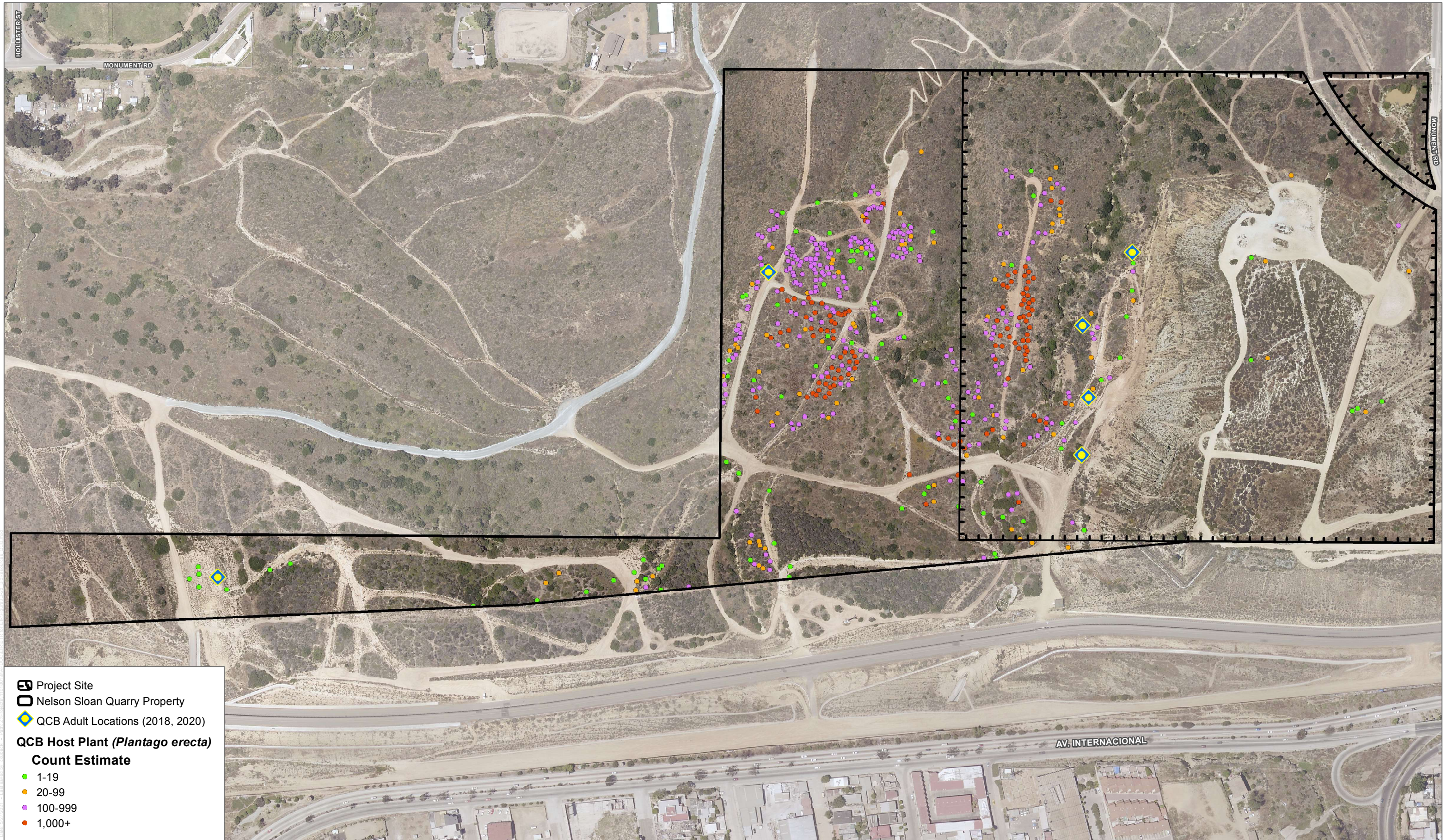


FIGURE 3.3-2c

Biological Resources - Special-Status Wildlife

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

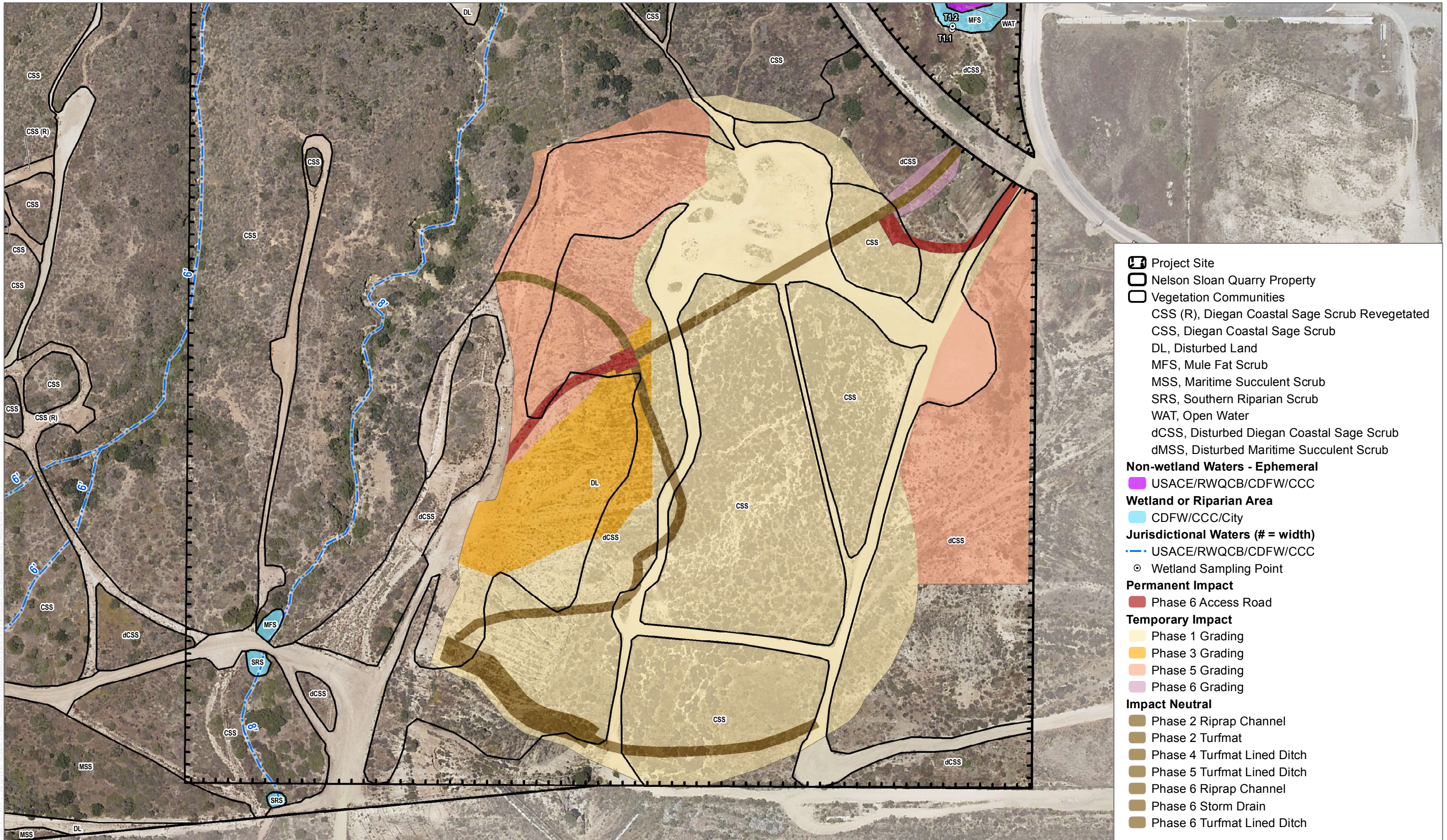


SOURCE: SANGIS 2017



FIGURE 3.3-2d
 Biological Resources - Quino Checkerspot Butterfly Adults and Host Plants
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

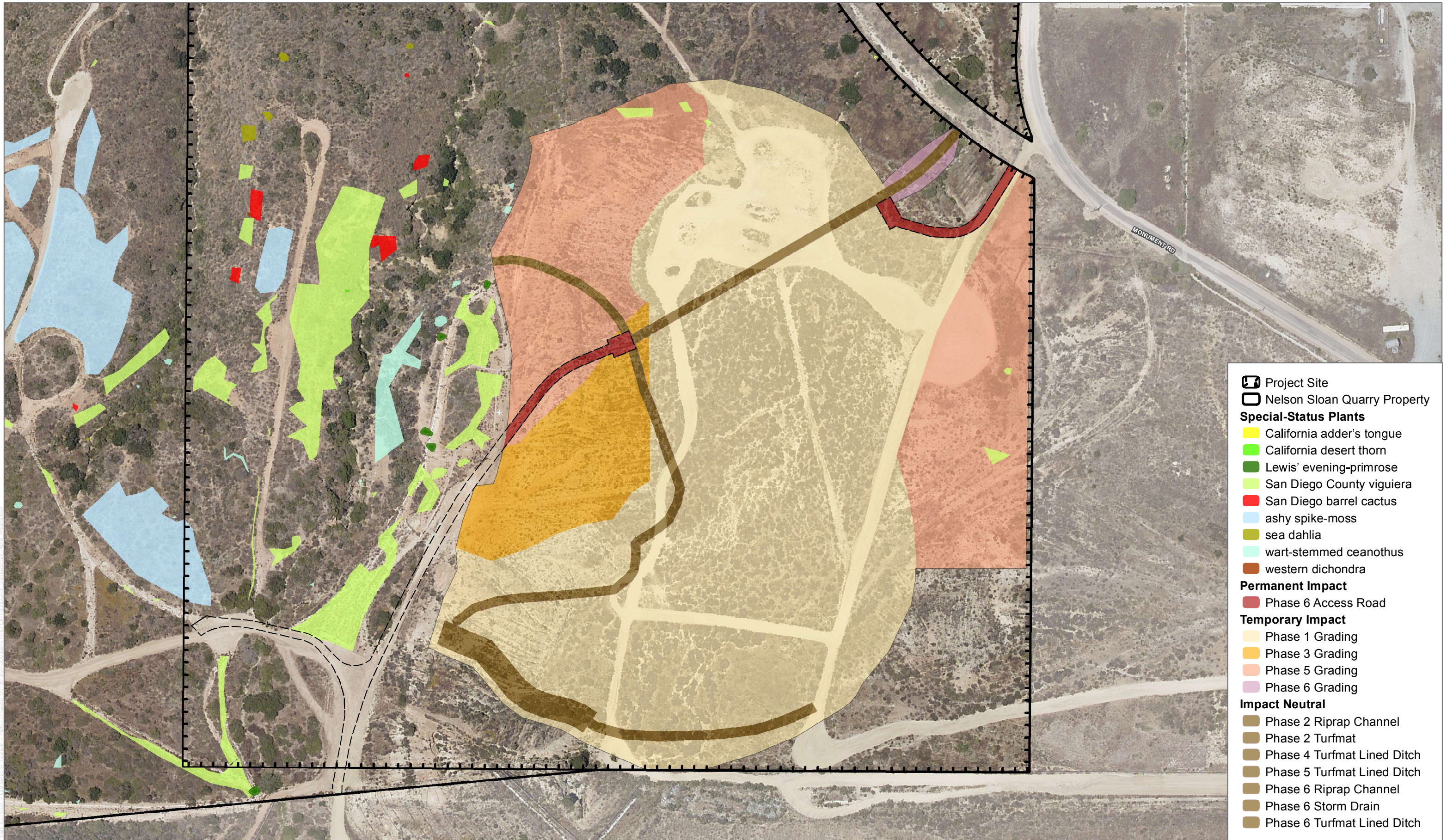


SOURCE: SANGIS 2017



FIGURE 3.3-3a
 Biological Resources and Proposed Phased Impacts - Vegetation Communities and Jurisdictional Delineation
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



- Project Site
- Nelson Sloan Quarry Property
- Special-Status Plants**
- California adder's tongue
- California desert thorn
- Lewis' evening-primrose
- San Diego County viguiera
- San Diego barrel cactus
- ashy spike-moss
- sea dahlia
- wart-stemmed ceanothus
- western dichondra
- Permanent Impact**
- Phase 6 Access Road
- Temporary Impact**
- Phase 1 Grading
- Phase 3 Grading
- Phase 5 Grading
- Phase 6 Grading
- Impact Neutral**
- Phase 2 Riprap Channel
- Phase 2 Turfmat
- Phase 4 Turfmat Lined Ditch
- Phase 5 Turfmat Lined Ditch
- Phase 6 Riprap Channel
- Phase 6 Storm Drain
- Phase 6 Turfmat Lined Ditch

SOURCE: SANGIS 2017

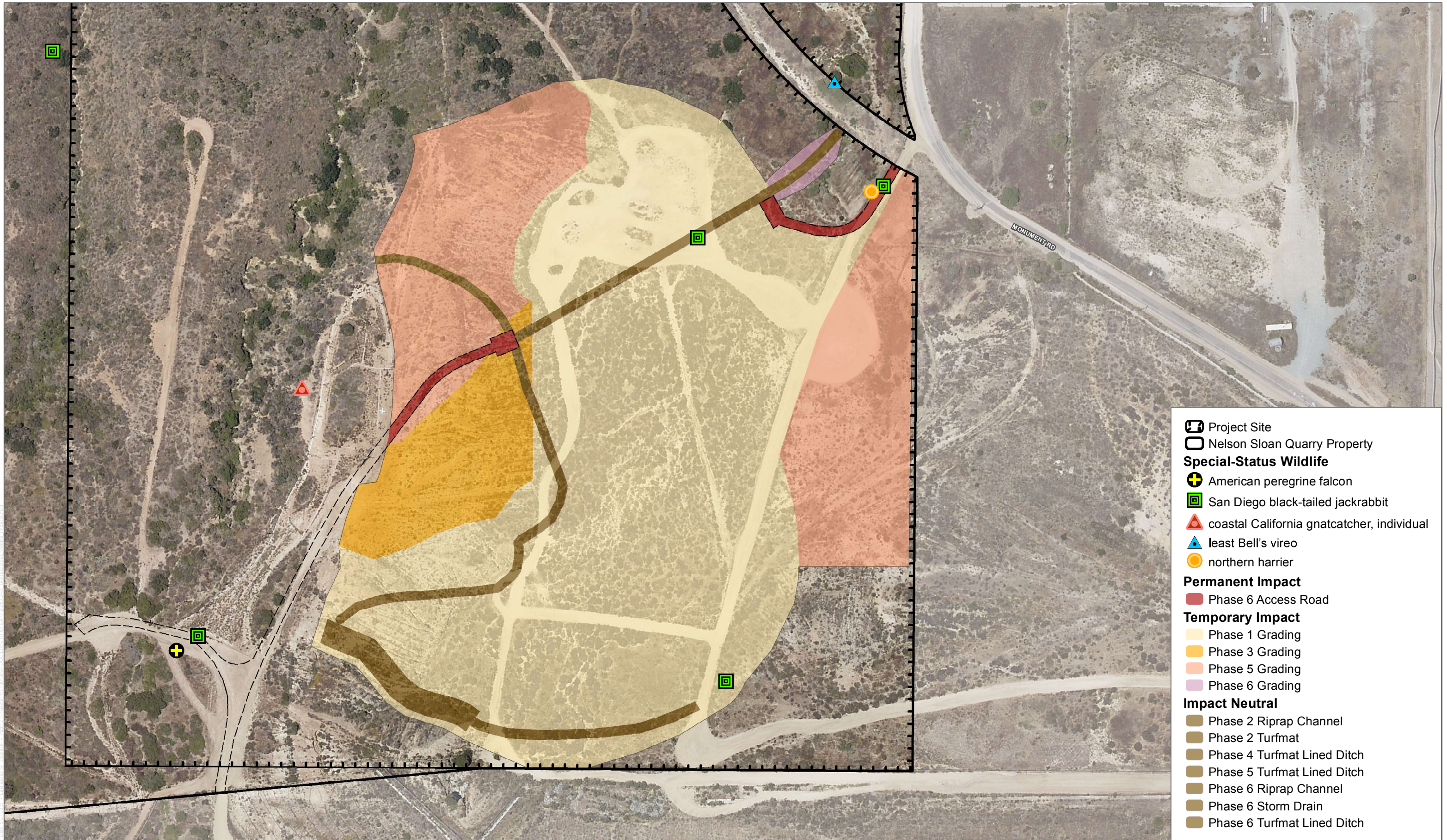


FIGURE 3.3-3b

Biological Resources and Proposed Phased Impacts - Special-Status Plants

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

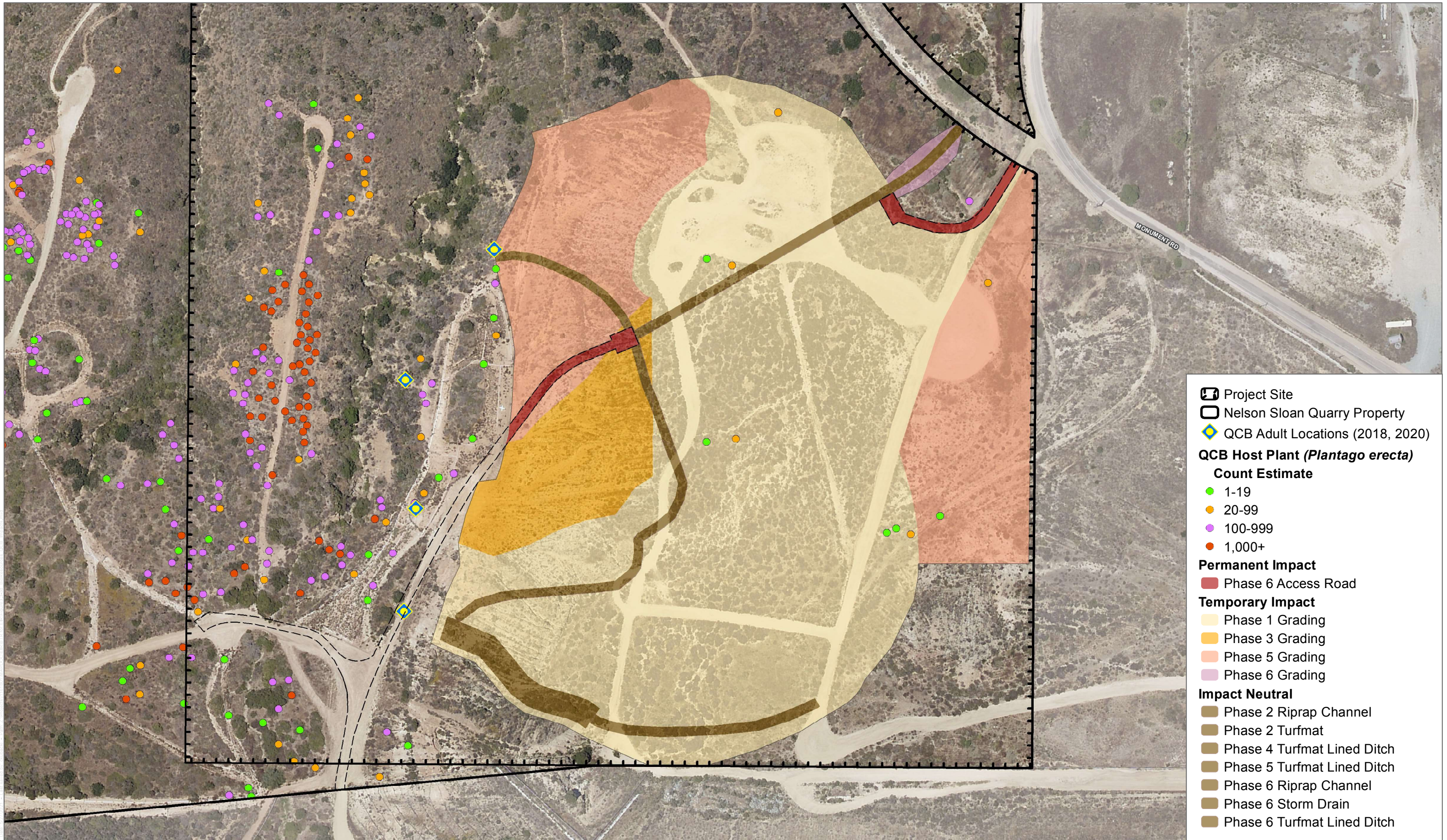


SOURCE: SANGIS 2017



FIGURE 3.3-3c
 Biological Resources and Proposed Phased Impacts - Special-Status Wildlife
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

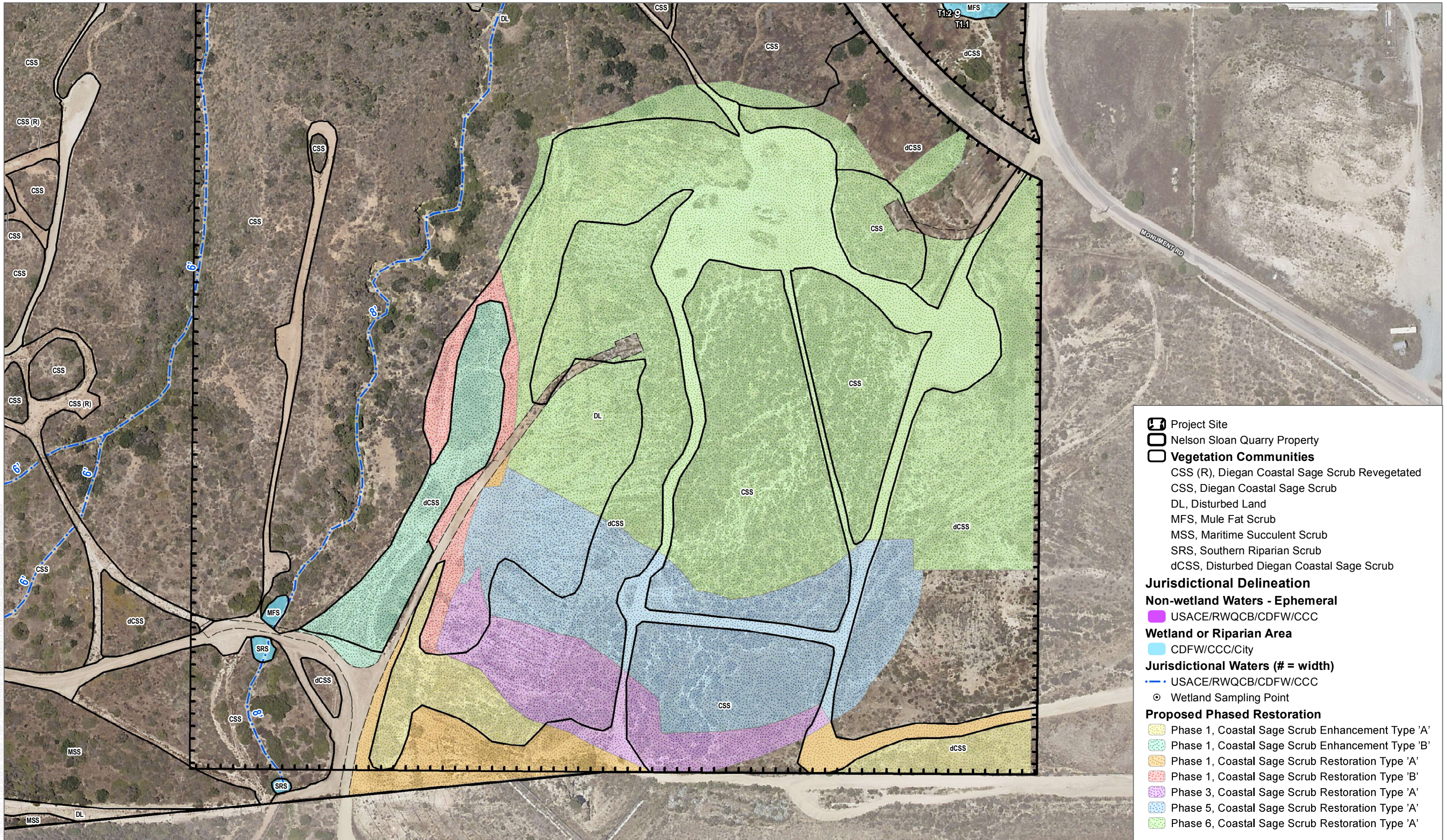


SOURCE: SANGIS 2017



FIGURE 3.3-3d
 Biological Resources and Proposed Phased Impacts - Quino Checkerspot Butterfly Adults and Host Plants
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

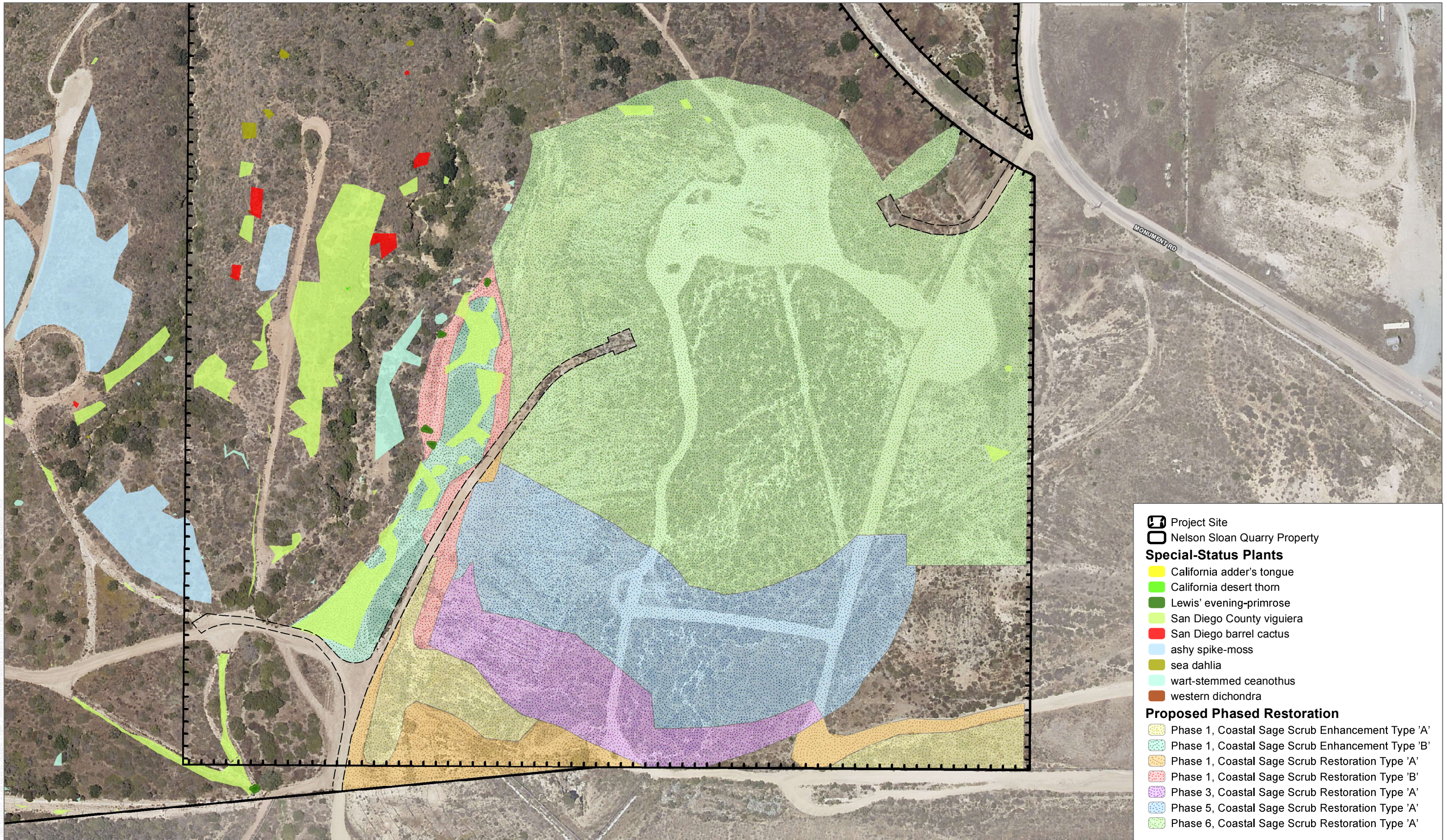


SOURCE: SANGIS 2017



FIGURE 3.3-4a
 Biological Resources and Proposed Phased Restoration - Vegetation Communities and Jurisdictional Delineation
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017



FIGURE 3.3-4b

Biological Resources and Proposed Phased Restoration - Special-Status Plants

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



Project Site
 Nelson Sloan Quarry Property
Special-Status Wildlife
 American peregrine falcon
 Cooper's hawk
 San Diego black-tailed jackrabbit
 coastal California gnatcatcher, individual
 coastal California gnatcatcher, pair
 least Bell's vireo
 northern harrier
Proposed Phased Restoration
 Phase 1, Coastal Sage Scrub Enhancement Type 'A'
 Phase 1, Coastal Sage Scrub Enhancement Type 'B'
 Phase 1, Coastal Sage Scrub Restoration Type 'A'
 Phase 1, Coastal Sage Scrub Restoration Type 'B'
 Phase 3, Coastal Sage Scrub Restoration Type 'A'
 Phase 5, Coastal Sage Scrub Restoration Type 'A'
 Phase 6, Coastal Sage Scrub Restoration Type 'A'

SOURCE: SANGIS 2017



FIGURE 3.3-4c
 Biological Resources and Proposed Phased Restoration - Special-Status Wildlife
 Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017



FIGURE 3.3-4d

Biological Resources and Proposed Phased Restoration - Quino Checkerspot Butterfly Adults and Host Plants

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

3.4 Archaeological, Historic, and Tribal Cultural Resources

This section describes the existing archaeological, historic, and tribal cultural resources conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity; identifies associated regulatory requirements; evaluates potential impacts to archaeological, historic, and tribal cultural resources that would result from the Project; and identifies mitigation measures related to implementation of the Project.

The information provided in this section is based on review of existing documentation, including applicable environmental plans, such as the City and County of San Diego General Plans, Municipal Code, Zoning Code, and the City's Tijuana River Valley Local Coastal Program Land Use Plan, and technical studies prepared for the Project, including the Cultural Resources Survey Letter Report and Built Environment Letter Report. Both reports were prepared by Petra Resource Management (PRM) in July 2019 and are included as Appendices C and D, respectively, to this Environmental Impact Report (EIR). Lastly, the content presented in this section is informed by government-to-government consultation between the California Department of Parks and Recreation (CDPR) and interested California Native American tribes pursuant to Assembly Bill (AB) 52.

3.4.1 Existing Conditions

Archaeological resources include prehistoric and historic locations or sites where human actions have resulted in detectable changes to the area. This can include changes in the soil and the presence of physical cultural remains. Archaeological resources can have a surface component, a subsurface component, or both. Historic archaeological resources are those originating after European contact. These resources may include subsurface features such as wells, cisterns, or privies. Other historic archaeological remains include artifact concentrations, building foundations, or remnants of structures.

As defined by the California Office of Historic Preservation, a historic resource is (1) associated with events that have made a significant contribution to the broad patterns of local or regional history of the cultural heritage of California or the United States; (2) associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values; or (4) has yielded, or has the potential to yield, information important to the history or prehistory of the local area, California, or the nation (OHC 2019).

A tribal cultural resource is defined as a site, feature, place, cultural landscape, sacred place, or object that is of cultural value to a Native American tribe and is either on or eligible for listing on the national, state, or local historic register, or which the lead agency, at its discretion, chooses to identify as a tribal cultural resource.

Natural Setting

The Project site is located in the southwestern portion of the County of San Diego (County) within the southeastern corner of Tijuana River Valley Regional Park. The Project site is generally flat in the eastern half, with a steep slope bisecting the westernmost portion of the site. Two steep canyons draining north toward the Tijuana River are located to the immediate west of the Project site. A review of historical aerial photographs indicate that a third canyon existed in the area of the former quarry, east of and parallel to the two existing canyons on site. The Project site encompasses two parcels (i.e., Assessor's Parcel Numbers 664-011-05-00 and 664-011-04-00) within which the area of potential effect (APE) (approximately 20 acres) occurs. The elevation of the Project APE ranges from approximately 250 feet above mean sea level in the western ridge portion and approximately 115 feet above mean sea level in the flat eastern portion.

From approximately 1982 to 2002, the Project site was used as a sand and gravel quarry. Quarry operations ceased in 2002 and the site has remained vacant since. The site was not reclaimed in accordance with the prior quarry project's Reclamation Plan.

Cultural Setting

Evidence for continuous human occupation in the San Diego region spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769). Native American aboriginal lifeways did not cease at European contact. The tribal cultural context spans all of the archaeologically based chronologies further described below.

Pre-Contact and Ethnohistory – Tribal Cultural Context

The Kumeyaay (also known as the Iipay/Tipay) have roots that extend thousands of years in what is now San Diego County and northern Baja California. The pre-contact cultural sequences are locally characterized by the material culture recovered during archaeological investigations as early as the 1920s and through early accounts of Native American life in the San Diego region, recorded as a means to salvage scientific knowledge of native lifeways. The best information of Native American lifeways, however, comes from the Kumeyaay themselves, from the stories and songs passed down through the generations, in their own words. According to ethnographies based on interviews with local tribal elders, there are hundreds of words that describe a given landform, showing a close connection with nature. There are also stories associated with the land. The San Diego area in general, including Old Town, the San Diego River Valley, and the City of San Diego (City) as it existed as late as the 1920s, was known as *qapai* (meaning uncertain). According to Kumeyaay elder Jane Dumas, some native speakers referred to what is now Interstate 8 as *oon-ya*, meaning trail or road, describing one of the main routes linking the interior of San Diego to the coast. The Kumeyaay are the identified Most Likely Descendants for all Native American human remains found in the City.

Prehistoric and Historic Archaeological Context

Paleoindian (pre-550 BC)

Evidence for Paleoindian occupation in coastal Southern California is tenuous, especially considering the fact that the oldest dated archaeological assemblages look nothing like the Paleoindian artifacts from the Great Basin. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from SDI-4669/W-12, in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 7640–7970 years BC (95.4% probability) (Hector 2007). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of groundstone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools. Prime examples of this pattern are sites that were studied by Davis (1978) on China Lake Naval Air Weapons Station near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679), a multicomponent fluted point site, and MNO-680, a single component

Great Basin stemmed point site (Basgall et al. 2002). At MNO-679 and MNO-680, groundstone tools were rare while finely made projectile points were common.

Turning back to coastal Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional notions of mobile hunter-gatherers traversing the landscape for highly valued prey. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (pre-5500 BC) that submerged as much as 1.8 kilometers (1.1 miles) of the San Diego coastline. If this were true, however, it would also be expected that such sites would be located on older landforms near the current coastline. Some sites, such as SDI-210 along Agua Hedionda Lagoon, contained stemmed points similar in form to Silver Lake and Lake Mojave projectile points (pre-6050 BC) that are commonly found at sites in California’s high desert (Basgall and Hall 1990). SDI-210 yielded one corrected radiocarbon date of 6570–7570 BC (Warren et al. 2004). However, sites of this nature are extremely rare and cannot be separated from large numbers of milling tools that intermingle with old projectile point forms.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004, p. 26). Termed San Dieguito (Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos’ interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, wherein hunting-related tools are replaced by processing tools during the early Holocene (Basgall and Hall 1993).

Archaic (8000 BC–AD 500)

The more than 1500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in the San Diego region. If San Dieguito is the only recognized Paleoindian component in the San Diego region, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004)

admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the San Diego region (Hale 2001, 2009).

The Archaic pattern is relatively easy to define with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the San Diego region, with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurs until the bow and arrow is adopted at around AD 500, as are ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remains low. After the bow is adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decrease in proportion relative to expedient, unshaped groundstone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complimented only by the addition of the bow and ceramics.

Late Prehistoric (AD 500–1769)

The period of time following the Archaic and prior to Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-AD 1450 period is called the San Luis Rey Complex (True 1980), while the same period in southern San Diego County is called the Cuyamaca Complex and is thought to extend from AD 500 until Ethnohistoric times (Meighan 1959). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics. Despite these regional complexes, each is defined by the addition of arrow points and ceramics and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of the San Luis Rey and Cuyamaca Complexes difficult. For this reason, the term Late Prehistoric is well suited to describe the last 1,500 years of prehistory in the San Diego region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric period are poorly understood. This is partly due to the fact that the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces; bowl mortars are rare in the San Diego region. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred prior to AD 1400. True (1980) argued that acorn processing and ceramic use in the northern San Diego region did not occur until the San Luis Rey pattern emerged after approximately AD 1450. For southern San Diego County, the picture is less clear. The Cuyamaca Complex is the southern counterpart to the San Luis Rey pattern, however, and is most recognizable after AD 1450 (Hector 1984). Similar to True (1980), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to Ethnohistoric times, and that when it did occur, a major shift in social organization followed.

Ethnohistoric (post-AD 1769)

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the San Diego region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the San Diego region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Laylander 2000). The principal intent of these researchers was to record the pre-contact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as “salvage ethnography,” was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his “memory culture” approach (Lightfoot 2005, p. 32) by recording languages and oral histories within the San Diego region. Kroeber’s (1925) assessment of the impacts of Spanish missionization on local Native American populations supported Kumeyaay traditional cultural continuity (Kroeber 1925, p. 711).

Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities. These accounts supported, and were supported by, previous governmental decisions which made San Diego County the location of more federally recognized tribes than anywhere else in the United States: 18 tribes on 18 reservations that cover more than 116,000 acres (CDPR 2009).

The traditional cultural boundaries between the Luiseño and Kumeyaay Native American tribal groups were defined by anthropologist Florence C. Shippek (Shippek 1993, as summarized in County of San Diego 2007, p. 6):

In 1769, the Kumeyaay national territory started at the coast about 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley.

In 1769, the Kumeyaay national territory started at the coast about 100 miles south of the Mexican border (below Santo Tomas) and stretched north to the coast at the drainage divide south of the San Luis Rey River, including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240-foot contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006, p. 34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007, p. 71). The Native American inhabitants of the San

Diego region would have likely spoken both the Ipai and Tipai language subgroups of the Yuman language group. Ipai and Tipai, spoken respectively by the northern and southern Kumeyaay communities, are mutually intelligible. For this reason, these two are often treated as dialects of a larger Kumeyaay tribal group rather than as distinctive languages, though this has been debated (Luomala 1978; Laylander 2010).

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative “time depth” of the speaking populations (Golla 2007, p. 80). A large amount of variation within the language of a group represents a greater time depth than a language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla has observed that the “absolute chronology of the internal diversification within a language family” can be correlated with archaeological dates (Golla 2007, p. 71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

Golla suggested that there are two language families associated with Native American groups who traditionally lived throughout the San Diego County region. The northern San Diego tribes have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007, p. 74). These groups include the Luiseño, Cupeño, and Cahuilla. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan circa 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking San Diego tribes, occurring approximately 1500 BC–AD 1000 (Laylander 2010).

The majority of Native American tribal groups in southern San Diego region have traditionally spoken Yuman languages, a subgroup of the Hokan Phylum. Golla has suggested that the time depth of Hokan is approximately 8,000 years (Golla 2007, p. 74). The Kumeyaay tribal communities share a common language group with the Cocopah, Quechan, Maricopa, Mojave, and others to the east and the Kiliwa to the south. The time depth for both Ipai (north of the San Diego River, from Escondido to Lake Henshaw) and Tipai (south of the San Diego River, the Laguna Mountains through Ensenada) is approximated to be 2,000 years at the most. Laylander has contended that previous research indicates a divergence between Ipai and Tipai to have occurred approximately AD 600–1200 (Laylander 1985). Despite the distinct linguistic differences between the Takic-speaking tribes to the north, the Ipai-speaking communities in central San Diego, and the Tipai southern Kumeyaay, attempts to illustrate the distinctions between these groups based solely on cultural material alone have had only limited success (Pignoli 2004; True 1966).

The Kumeyaay generally lived in smaller family subgroups that would inhabit two or more locations over the course of the year. While less common, there is sufficient evidence that there were also permanently occupied villages, and that some members may have remained at these locations throughout the year (Owen 1965; Shipek 1982; Shipek 1985; Spier 1923). Each autonomous tribelet was internally socially stratified, commonly including higher status individuals such as a tribal head (Kwaay Pay), a shaman (Kuseyaay), and general members with various responsibilities and skills (Shipek 1982). Higher-status individuals tended to have greater rights to land resources and owned more goods, such as shell money and beads, decorative items, and clothing. To some degree, titles were passed along family lines; however, tangible goods were generally ceremonially burned or destroyed following the deaths of their owners (Luomala 1978). Remains were cremated over a pyre and then relocated to a cremation ceramic vessel that was placed in a removed or hidden location. A broken metate was commonly placed at the location of the cremated remains, with the intent of providing aid and further use after death. At maturity, tribal members often left to other bands in order to find a partner. The families formed networks of communication and exchange around such partnerships.

Areas or regions, identified by known physical landmarks, could be recognized as band-specific territories that might be violently defended against use by other members of the Kumeyaay. Other areas or resources, such as water sources and other locations that were rich in natural resources, were generally understood as communal land to be shared amongst all the Kumeyaay (Luomala 1978). The coastal Kumeyaay exchanged a number of local goods, such as seafood, coastal plants, and various types of shell, for items including acorns, agave, mesquite beans, gourds, and other more interior plants of use (Luomala 1978). Shellfish would have been procured from three primary environments, including the sandy open coast, bay and lagoon, and rocky open coast. The availability of these marine resources changed with the rising sea levels, siltation of lagoon and bay environments, changing climatic conditions, and intensity of use by humans and animals (Gallegos and Kyle 1988; Pigniolo 2005; Warren 1964). Shellfish from sandy environments included *Donax*, *Saxidomus*, *Tivela*, and others. Rocky coast shellfish dietary contributions consisted of *Pseudochama*, *Megastraea*, *Saxidomus*, *Protothaca*, *Megathura*, *Mytilus*, and others. Lastly, the San Diego Bay environment would have provided *Argopecten*, *Chione*, *Ostrea*, *Neverita*, *Macoma*, *Tagelus*, and others. Although marine resources were obviously consumed, terrestrial animals and other resources likely provided a large portion of sustenance. Game animals consisted of rabbits, hares (*Leporidae*), birds, ground squirrels, woodrats (*Neotoma* sp.), deer, bears, mountain lions (*Puma concolor*), bobcats (*Lynx rufus*), coyotes (*Canis latrans*), and others. In lesser numbers, reptiles and amphibians may have been consumed.

A number of local plants were used for food and medicine. These were exploited seasonally, and were both traded between regional groups and gathered as a single tribelet moved between habitation areas. Some of the more common of these that might have been procured locally or as higher elevation varieties would have included buckwheat (*Eriogonum fasciculatum*), Agave, Yucca, lemonade sumac (*Rhus integrifolia*), sugarbush (*Rhus ovata*), sage scrub (*Artemisia californica*), yerba santa (*Eriodictyon* sp.), sage (*Salvia* sp.), Ephedra, prickly pear (*Opuntia* sp.), mulefat (*Baccharis salicifolia*), chamise (*Adenostoma fasciculatum*), elderberry (*Sambucus nigra*), oak (*Quercus* sp.), willow (*Salix* sp.), and *Juncus* grass among many others (Wilken 2012).

Historic Period (post-AD 1542)

San Diego history can be divided into the Spanish Period (1769–1821), Mexican Period (1821–1846), and American Period (1846–Present). European activity in the region began as early as AD 1542, when Juan Rodríguez Cabrillo landed in San Diego Bay. Sebastián Vizcaíno returned in 1602, and it is possible that there were subsequent contacts that went unrecorded. These brief encounters made the local native people aware of the existence of other cultures. Epidemic diseases may also have been introduced into the region at an early date, either by direct contacts with the infrequent European visitors or through waves of diffusion emanating from native peoples farther to the east or south (Preston 2002).

The Spanish colonization of Alta California began in 1769 with the founding of Mission San Diego de Alcalá by Father Junípero Serra. Concerns over Russian and English interests in California motivated the Spanish government to send an expedition of soldiers, settlers and missionaries to occupy and secure the northwestern borderlands of New Spain through the establishment of a presidio, mission, and pueblo. The Spanish explorers first camped on the shore of the San Diego Bay in the area that is now downtown San Diego. Lack of water at this location, however, led to moving the camp on May 14, 1769, to a small hill closer to the San Diego River and near the Kumeyaay village of *Kosti/Cosoy/Kosaii/Kosa'aay*. Father Junípero Serra arrived in July of the same year to find the Presidio serving mostly as a hospital. The Spanish built a primitive mission and presidio structure on the hill near the river.

Bad feelings soon developed between the native Kumeyaay and the soldiers, resulting in construction of a stockade that, by 1772, included barracks for the soldiers, a storehouse for supplies, a house for the missionaries, and the chapel, which had been improved. The log and brush huts were gradually replaced with buildings made of adobe

bricks. Flat earthen roofs were eventually replaced by pitched roofs with rounded roof tiles. Clay floors were eventually lined with fired brick.

In August 1774, the Spanish missionaries moved the Mission San Diego de Alcalá to its present location 6 miles up the San Diego River valley (modern Mission Valley) near the Kumeyaay village of *Nipaguay*. Begun as a thatched chapel and compound built of willow poles, logs, and tules, the new Mission was sacked and burned in the Kumeyaay uprising of November 5, 1775. The first adobe chapel was completed in October 1776 and the present church was begun the following year. A succession of building programs through 1813 resulted in the final rectilinear plan that included the church, bell tower, sacristy, courtyard, residential complex, workshops, corrals, gardens, and cemetery. Orchards, reservoirs, and other agricultural installations were built to the south on the lower San Diego River alluvial terrace and were irrigated by a dam and aqueduct system. The initial Spanish occupation and mission system brought about profound changes in the lives of the Kumeyaay people. Substantial numbers of the coastal Kumeyaay were forcibly brought into the mission or died from introduced diseases.

As early as 1791, presidio commandants in California were given the authority to grant small house lots and garden plots to soldiers and their families; sometime after 1800, soldiers and their families began to move down the hill near the San Diego River. Historian William Smythe noted that Don Blas Aguilar, who was born in 1811, remembered at least 15 such grants below Presidio Hill by 1821, of which only five of these grant lands within the boundaries of what would become Old Town had houses in 1821. These included the retired commandant Francisco Ruiz Adobe (now known as the Carrillo Adobe), another building later owned by Henry Fitch on Calhoun Street, the Ybanes and Serrano houses on Juan Street near Washington Street, and a small adobe house on the main plaza owned by Juan Jose Maria Marron.

In 1822 the political situation changed as Mexico won its independence from Spain and San Diego became part of the Mexican Republic. The Mexican Government opened California to foreign trade; began issuing private land grants in the early 1820s, creating the rancho system of large agricultural estates; secularized the Spanish missions in 1833; and oversaw the rise of the civilian pueblo. By 1827, as many as 30 homes existed around the central plaza and in 1835, Mexico granted San Diego official pueblo (town) status. At this time the town had a population of nearly 500 residents, later reaching a peak of roughly 600. By 1835 the presidio, once the center of life in Spanish San Diego, had been abandoned and lay in ruins. Mission San Diego de Alcalá fared little better. The town and the ship landing area at La Playa were now the centers of activity in Mexican San Diego. However, the new Pueblo of San Diego did not prosper as did some other California towns during the Mexican Period.

The secularization in San Diego County triggered increased Native American hostilities against the Californios during the late 1830s. The attacks on outlying ranchos, along with unstable political and economic factors, helped San Diego's population decline to around 150 permanent residents by 1840. San Diego's official Pueblo status was removed by 1838, and it was made a subprefecture of the Los Angeles Pueblo. When the Americans took over after 1846, the situation had stabilized somewhat, and the population had increased to roughly 350 non-Native American residents. The Native American population continued to decline, as Mexican occupation brought about continued displacement and acculturation of Native American populations.

The American Period began in 1846, when United States military forces occupied San Diego, and this period continues today. When United States military forces occupied San Diego in July 1846, the town's residents split on their course of action. Many of the town's leaders sided with the Americans, while other prominent families opposed the United States invasion. In December 1846, a group of Californios under Andres Pico engaged U.S. Army forces under General Stephen Kearney at the Battle of San Pasqual and inflicted many casualties. However, the Californio resistance was defeated in two small battles near Los Angeles and effectively ended by January 1847. The

Americans assumed formal control with the Treaty of Guadalupe-Hidalgo in 1848 and introduced Anglo culture and society, American political institutions, and especially American entrepreneurial commerce. In 1850, the Americanization of San Diego began to develop rapidly.

On February 18, 1850, the California State Legislature formally organized the County. The first elections were held at San Diego and La Playa on April 1, 1850, for County officers. San Diego grew slowly during the next decade. San Diegans attempted to develop the town's interests through a transcontinental railroad plan and the development of a new town closer to the San Diego Bay. The failure of these plans, added to a severe drought which crippled ranching and the onset of the Civil War, left San Diego as a remote frontier town. The troubles led to an actual drop in the town's population from 650 in 1850 to 539 in 1860. Not until land speculator and developer Alonzo Horton arrived in 1867 did San Diego begin to develop fully into an active American town.

Alonzo Horton's development of a New San Diego (modern downtown) in 1867 began to swing the community focus away from Old Town and began the urbanization of San Diego. Expansion of trade brought an increase in the availability of building materials. Wood buildings gradually replaced adobe structures. Some of the earliest buildings to be erected in the American Period were "pre-fab" houses that were built on the east coast of the United States and shipped in sections around Cape Horn and reassembled in San Diego. Development spread from downtown based on a variety of factors, including the availability of potable water and transportation corridors. Factors such as views and access to public facilities affected land values, which in turn affected the character of neighborhoods that developed. During the Victorian Era of the late 1800s and early 1900s, the areas of Golden Hill, Uptown, Banker's Hill, and Sherman Heights were developed. Examples of the Victorian Era architectural styles remain in these communities, as well as in Little Italy, which developed at the same time. At the time downtown was being built, there began to be summer cottage/retreat development in what are now the beach communities and La Jolla area. The early structures in these areas were not of substantial construction; they were primarily for temporary vacation housing.

Development also spread to the greater North Park and Mission Hills areas during the early 1900s. The neighborhoods were built as small lots, a single lot at a time; there was not large tract housing development of those neighborhoods. It provided affordable housing away from the downtown area, and development expanded as transportation improved. Barrio Logan began as a residential area, but because of proximity to rail freight and shipping freight docks, the area became more mixed with conversion to industrial uses. This area was more suitable to industrial uses because land values were not as high, topographically the area is more level, and it is not as interesting in terms of views as are the areas north of downtown. Various ethnic groups settled in the area because of the availability of land ownership.

San Ysidro began to be developed at about the turn of the twentieth century. The early settlers were followers of the Little Landers movement. There, the pattern of development was designed to accommodate small plots of land for each homeowner to farm as part of a farming-residential cooperative community. Nearby Otay Mesa-Nestor began to be developed by farmers of Germanic and Swiss background. Some of the prime citrus groves in California were in the Otay Mesa-Nestor area; in addition, there were grape growers of Italian heritage who settled in the Otay River Valley and tributary canyons and produced wine for commercial purposes.

San Diego State University was established as the State Normal School in the 1920s; development of the state college area began then and the development of the Navajo community was outgrowth from the college area and from the west. There was farming and ranching in Mission Valley until the middle portion of the twentieth century, when the uses were converted to commercial and residential. There were dairy farms and chicken ranches adjacent to the San Diego River where now there are motels, restaurants, office complexes, and regional shopping malls. There was little development north of the San Diego River until Linda Vista was developed as military housing in

the 1940s. The federal government improved public facilities and extended water and sewer pipelines to the area. From Linda Vista, development spread north of Mission Valley to the Clairemont Mesa and Kearny Mesa areas. Development in these communities was mixed use and residential on moderate-size lots.

Tierrasanta, previously owned by the U.S. Navy, was developed in the 1970s. It was one of the first planned unit developments with segregation of uses. Tierrasanta and many of the communities that have developed since, such as Rancho Peñasquitos and Rancho Bernardo, represent the typical development pattern in San Diego in the last 25 to 30 years: uses are well segregated, with commercial uses located along the main thoroughfares and the residential uses located in between. Industrial uses are located in planned industrial parks.

Examples of the Ethnohistoric and Historic periods and major architectural styles during these periods remain in the City. Among the recognized styles in San Diego are Spanish Colonial, Pre-Railroad New England, National Vernacular, Victorian Italianate, Stick, Queen Anne, Colonial Revival, Neoclassical, Shingle, Folk Victorian, Mission, Craftsman, Prairie, French Eclectic, Italian Renaissance, Spanish Eclectic, Egyptian Revival, Tudor Revival, Modernistic, and International. As stated previously, examples of the Victorian-era architectural style remain in the Golden Hill, Uptown, Banker's Hill, and Sherman Heights neighborhoods, as well as in Little Italy. The Spanish style is evident in local missions, including Mission San Luis Rey and Mission San Diego de Alcalá, and on the San Diego State University and University of San Diego campuses. Homes constructed in the Craftsman style can be found in the South Park, Mission Hills, and North Park.

Native American Heritage Commission Search and Tribal Correspondence

A search of the Native American Heritage Commission (NAHC) Sacred Lands File was conducted for the APE in February 2019. The NAHC Sacred Lands File search was positive and the NAHC recommended that the Kwaaymii Laguna Band of Mission Indians (Kwaaymii) be contacted for further information. Additionally, the NAHC response letter included a list of 20 Native American tribal representatives who should be contacted for information about the Project site and tribal cultural resources. No responses were received within 30 days of outreach letters sent in March 2019. In May 2019, the Jamul Indian Village (Jamul) requested to review the cultural resources letter report once completed. No other responses from tribal representatives in regard to the Project were received in either 2019 or 2020.

Due to the lack of response to the initial consultation, on January 7, 2021, CDPR sent an additional outreach letter to the 20 Native American tribal representatives identified by the NAHC (comprising 13 tribes) and followed up with both emails and phone calls. Eight tribes responded. One tribe responded that they had no questions, comments, or concerns for the record. The Barona Band of Mission Indians did wish to initiate AB 52 consultation, at least to the extent of receiving and reviewing the draft EIR. The Sycuan Band of the Kumeyaay Nation is also interested in reviewing the draft EIR. The San Pasqual Band of Diegueño Mission Indians requested that a San Pasqual Band Kumeyaay Cultural Monitor be present during all ground-disturbance activities. The Viejas Band of Kumeyaay Indians requested that a Kumeyaay Cultural Monitor be on site for ground-disturbing activities and to inform them of any new developments such as inadvertent discovery of cultural artifacts, cremation sites, or human remains. The Lipay Nation of Santa Ysabel also requested that a local Kumeyaay monitor be used and recommended an intensive survey with an archaeologist and Native American monitor, as well as a biological survey to see if there are endangered native plants on site such as the coastal agave (*Agave shawii*).

Native American Consultation

Under the California Environmental Quality Act (CEQA), the lead agency, CDPR, is responsible for formal government-to-government consultation with Native American tribes. Formal consultations were requested by three tribes. A

virtual, joint consultation was held on March 26, 2021, with Jamul and Kwaaymii followed by an on-site consultation on April 23, 2021. An on-site consultation was held on April 16, 2021, with the San Pasqual Band of Diegueño Mission Indians (San Pasqual).

All three tribes recommended having an experienced, qualified, and trained Native American monitor present during any ground disturbance. San Pasqual recommended giving the mesa top a Kumeyaay name and rededicating it once Project restoration is complete; this idea was supported by Jamul and Kwaaymii.

Kwaaymii recommended a Native American monitor for the pedestrian archaeological re-survey and suggested using forensic dogs during the survey to ensure that no human remains are present and to identify avoidance areas for the Project.

It was also recommended by San Pasqual that sediments from source locations that may contain cultural materials not be moved off site. Similarly, Jamul and Kwaaymii recommended that a monitor be present during all sediment sorting/screening processing. CDPR is continuing consultation with all three tribes to discuss this issue further. Non-confidential information concerning traditional cultural properties and resources obtained through consultation will be included in the Final EIR.

Cultural Resources and Built Environment

Cultural Resources

A records search for the Project site and a 1-mile radius area was conducted by the California Historical Resources Information System held at the South Coastal Information Center at San Diego State University. The records search was performed to identify previous cultural resource studies conducted in the local area surrounding the Project site and any previously recorded sites located within or near the Project. These records search results identified numerous resources surrounding the Project site, five of which overlap the Project property boundary (i.e., the boundary associated with the previous City conditional use permit) (P-37-011945, P-37-011946, P-37-017058, P-37-033843, and P-37-013486). These resources are listed in Table 3.4-1. Two of these sites (P-37-011945 and P-37-013486) are located within the direct Project APE and one, P-37-011946, is adjacent to the direct Project APE.

An intensive pedestrian survey of the Project site was conducted by PRM on May 17, 2019. The survey effort was conducted under the supervision of Senior Archaeologist Brian Williams, RPA. Native American monitor Gabe Kitchen from Red Tail Monitoring accompanied the field crew. The survey was conducted in 5-meter intervals along cleared dirt roads and pathways. Thick vegetation, over head height in some areas, restricted movement and limited visibility. The floodlights supported by wooden poles on the mesa top installed by U.S. Customs and Border Protection are still extant. No standing structures are located in the Project site. All five previously recorded sites (see Table 3.4-1) were relocated. Several diagnostic artifacts were recorded that reinforce existing site boundaries. The site boundary for P-37-013486 was expanded to the west into the Project APE. Site boundaries for P-37-011945, P-37-011946, and P-37-017058 were also expanded slightly.

Both of the sites within the Project area, P-37-011945 and P-37-013486, were recommended by PRM to be not eligible for the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR). A portion of P-37-011945 has been destroyed by past grading, and the remaining portion has been deflated and disturbed by erosion, grading, and vehicle activity. The newly recorded portion of P-37-013486 consisted of marine shell and fire-affected rock along a graded road surface. Past archaeological testing nearby showed disturbed context, indicating the portion of the site in and near the direct Project APE does not contribute to the site's eligibility.

Table 3.4-1. Cultural Resources within the Project Property

| Label | Intersects APE | Era | Description | Evaluation Status |
|-------------|----------------------|-----|--------------------|--------------------------|
| P-37-011945 | Yes | P | Lithic Scatter | Not Recommended Eligible |
| P-37-011946 | West of Project | P | Lithic Scatter | Recommended Eligible |
| P-37-033843 | West of Project | P | Metavolcanic Flake | Not Evaluated |
| P-37-017058 | Southwest of Project | P | Lithic Scatter | Not Recommended Eligible |
| P-37-013486 | Yes | P | Shell scatter | Not Recommended Eligible |

Note: APE = area of potential effect; P= Prehistoric.

A detailed discussion of the five resources listed in Table 3.4-1 is provided in Appendix C.

Built Environment

An intensive pedestrian survey of the Project site was conducted by PRM archaeologists Christine Lambert and Stephen Rochester on May 17, 2019. The archaeologists did not note the presence of any built environment resources while conducting their survey. Additionally, Shannon Davis, director of architectural history for ASM Affiliates, a subconsultant to PRM, reviewed photographs from the survey and historic aerial photographs and maps of the Project site. There are no built environment resources present in the Project site.

3.4.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans, policies, or ordinances specific to archaeological, historical, and tribal cultural resources that are particularly relevant to the Project.

State

California Environmental Quality Act

As described further below, the following CEQA statute and Guidelines sections are relevant to the analysis of archaeological and historic resources:

- California Public Resources Code, Section 21083.2(g): Defines “unique archaeological resource.”
- California Public Resources Code, Section 21084.1, and CEQA Guidelines Section 15064.5(a): Defines cultural resources. In addition, CEQA Guidelines Section 15064.5(b) defines the phrase “substantial adverse change” in the significance of a cultural resource. It also defines the circumstances when a project would materially impair the significance of a cultural resource.
- California Public Resources Code, Section 21074(a): defines “Tribal cultural resources” and Section 21074(b): defines a “cultural landscape.”
- California Public Resources Code, Section 5097.98, and CEQA Guidelines Section 15064.5(e): These statutes set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.

- California Public Resources Code, Sections 21083.2(b)–21083.2(c), and CEQA Guidelines Section 15126.4: These statutes and regulations provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; identifies preservation-in-place as the preferred manner of mitigating impacts to significant archaeological sites.

Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an [sic] cultural resource” (California Public Resources Code Section 21084.1; 14 CCR 15064.5[b]). A “cultural resource” is any site listed or eligible for listing in the CRHR. The CRHR listing criteria are intended to examine whether the resource in question: (a) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; (b) is associated with the lives of persons important in our past; (c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (d) has yielded, or may be likely to yield, information important in pre-history or history.

The term “cultural resource” also includes any site described in a local register of historic resources, or identified as significant in a cultural resources survey (meeting the requirements of California Public Resources Code Section 5024.1[q]).

CEQA also applies to “unique archaeological resources.” California Public Resources Code, Section 21083.2(g), defines a “unique archaeological resource” as any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In 2014, CEQA was amended through AB 52 to apply to “tribal culture resources” as well. Specifically, California Public Resources Code, Section 21074, provides guidance for defining tribal cultural resources as either of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Cultural Resources. (B) Included in a local register of cultural resources as defined in subdivision (k) of §5020.1.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of §5024.1. In applying the criteria set forth in subdivision (c) of §5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe. (b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

All cultural resources and unique archaeological resources – as defined by statute – are presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code, Section 21084.1; 14 CCR 15064.5[a]). The lead agency is not precluded from determining that a resource is a cultural resource even if it does not fall within this presumption (California Public Resources Code, Section 21084.1; 14 CCR 15064.5[a]). A site or resource that does not meet the definition of “cultural resource” or “unique archaeological resource” is not

considered significant under CEQA and need not be analyzed further (California Public Resources Code, Section 21083.2[a]; 14 CCR 15064.5[c][4]).

Under CEQA a significant cultural impact results from a “substantial adverse change in the significance of an [sic] cultural resource [including a unique archaeological resource]” due to the “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a cultural resource would be materially impaired” (14 CCR 15064.5[b][1]; California Public Resources Code, Section 5020.1[q]). In turn, the significance of a cultural resource is materially impaired when a project (14 CCR 15064.5[b][2]):

- Demolishes or materially alters in an adverse manner those physical characteristics of a cultural resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of cultural resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an cultural resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a cultural resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, CEQA first evaluates evaluating whether a project site contains any “cultural resources,” then assesses whether that project will cause a substantial adverse change in the significance of a cultural resource such that the resource’s historical significance is materially impaired.

When a project significantly affects a unique archaeological resource, CEQA imposes special mitigation requirements. Specifically (California Public Resources Code, Sections 21083.2[b][1]–21083.2[b][4]):

[I]f it can be demonstrated that a project will cause damage to a unique archeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

1. Planning construction to avoid archeological sites.
2. Deeding archeological sites into permanent conservation easements.
3. Capping or covering archeological sites with a layer of soil before building on the sites.
4. Planning parks, greenspace, or other open space to incorporate archeological sites.

If these “preservation in place” options are not feasible, mitigation may be accomplished through data recovery (California Public Resources Code, Section 21083.2[d]; 14 CCR 15126.4[b][3][C]). California Public Resources Code, Section 21083.2(d), states that:

[e]xcavation as mitigation shall be restricted to those parts of the unique archeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archeological resource if the lead agency determines that testing or studies already

completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report.

These same requirements are set forth in slightly greater detail in CEQA Guidelines Section 15126.4(b)(3), as follows:

- A. Preservation in place is the preferred manner of mitigating impacts to archeological sites. Preservation in place maintains the relationship between artifacts and the archeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
- B. Preservation in place may be accomplished by, but is not limited to, the following:
 - 1. Planning construction to avoid archeological sites;
 - 2. Incorporation of sites within parks, greenspace, or other open space;
 - 3. Covering the archeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site[; and]
 - 4. Deeding the site into a permanent conservation easement.
- C. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the cultural resource, shall be prepared and adopted prior to any excavation being undertaken.

Note that, when conducting data recovery, “[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation” (14 CCR 15126.4[b][3]). However, “[d]ata recovery shall not be required for a cultural resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Cultural Resources Regional Information Center” (14 CCR 15126.4[b][3][D]).

Finally, CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are set forth in California Public Resources Code, Section 5097.98.

California Public Resources Code, Section 5097 et seq.

The Native American Historic Resources Protection Act (California Public Resources Code, Section 5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resources Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The act also provides a process for the identification and repatriation of these items to the appropriate tribes.

Assembly Bill 52

AB 52 requires that the lead agency begin consultation with a California native tribe that is traditionally and culturally affiliated with the geographic area of a proposed project within 14 days of determining that an application for the project is complete if the project may have a substantial adverse change in the significance of a tribal cultural resource. The lead agency is only required to notify tribes per AB 52 if the tribe has previously requested that the lead agency send it AB 52 notifications for CEQA projects. AB 52 applies to Notices of Preparation filed on or after July 1, 2015. It is the practice of the CDPR to conduct all tribal consultations consistent with the government-to-government consultation specified in AB 52.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5b). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code Section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

California Register of Historical Resources

In California, the term “cultural resource” includes “any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (California Public Resources Code, Section 5020.1[j]). In 1992, the California legislature established the CRHR “to be used by state and local agencies, private groups, and citizens to identify the state’s cultural resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (California Public Resources Code, Section 5024.1[a]). A resource is eligible for listing in the CRHR if the State Cultural Resources Commission determines that it is a significant resource and that it meets any of the following NRHP criteria (California Public Resources Code, Section 5024.1[c]):

1. Associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. Associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years old generally are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (14 CCR 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local cultural resource surveys. The State Historic Preservation Office maintains the CRHR.

Local

City of San Diego Historical Resource Regulations

The City's Historical Resources Guidelines outlines its purpose as follows (City of San Diego 1999):

To provide property owners, the development community, consultants and the general public with explicit guidelines for the management of cultural resources located within the jurisdiction of the City of San Diego. These guidelines are designed to implement the City's Historical Resources Regulations contained in the City's Municipal Code (Chapter 14, Article 3, Division 2,) in compliance with the applicable local, state, and federal policies and mandates.

The City's Historical Resources Guidelines observes that (City of San Diego 1999):

Historical resources include all properties (historic, archaeological, landscapes, traditional, etc.) eligible or potentially eligible for the National Register of Historic Places, as well as those that may be significant pursuant to state and local laws and registration programs such as the California Register of Historical Resources or the City of San Diego Historical Resources Register. "Historical resource" means site improvements, buildings, structures, historic districts, signs, features (including significant trees or other landscaping), places, place names, interior elements and fixtures designated in conjunction with a property, or other objects of historical, archaeological, scientific, educational, cultural, architectural, aesthetic, or traditional significance to the citizens of the City. They include buildings, structures, objects, archaeological sites, districts or landscapes possessing physical evidence of human activities that are typically over 45 years old, regardless of whether they have been altered or continue to be used. Historical resources also include traditional cultural properties. The following definitions are based, for the most part, on California's Office of Historic Preservation's (OHP's) Instructions for Recording Historical Resources and are used to categorize different types of historical resources when they are recorded.

The purpose and intent of the Historical Resource Regulation of the Land Development Code (Chapter 14, Article 3) is outlined as follows (City of San Diego 1997):

To protect, preserve and, where, damaged, restore the cultural resources of San Diego. The regulations apply to all development within the City of San Diego when cultural resources are present within the premises regardless of the requirement to obtain Neighborhood Development Permit or Site Development Permit.

The City's General Plan EIR states the following (City of San Diego 2008a):

- The Historical Resources Regulations require that designated cultural resources and traditional cultural properties be preserved unless deviation findings can be made by the decision maker as part of a discretionary permit. Minor alterations consistent with the U.S. Secretary of the Interior's Standards are

exempt from the requirement to obtain a separate permit but must comply with the regulations and associated cultural resources guidelines. Limited development may encroach into important archaeological sites if adequate mitigation measures are provided as a condition of approval.

- Historical Resources Guidelines, located in the Land Development Manual, provide property owners, the development community, consultants and the general public explicit guidance for the management of cultural resources located within the City's jurisdiction. These guidelines are designed to implement the cultural resources regulations and guide the development review process from the need for a survey and how impacts are assessed to available mitigation strategies and report requirements and include appropriate methodologies for treating cultural resources located in the City.

In general, the City's historical resources regulations build on federal and state cultural resources laws and guidelines in an attempt to streamline the process of considering impacts to cultural resources within the City's jurisdiction, while maintaining that some resources not significant under federal or state law may be considered historical under the City's guidelines. To apply the criteria and determine the significance of potential impacts to a cultural resource, the APE of a project must be defined for both direct impacts and indirect impacts. Indirect impacts can include increased public access to an archaeological site, or visual impairment of a historically significant viewshed related to a historic building or structure.

City of San Diego Historical Resource Board

The Historical Resources Board is established by the City Council as an advisory board to identify, designate, and preserve the historical resources of the City; to review and make a recommendation to the appropriate decision-making authority on applications for permits and other matters relating to the demolition, destruction, substantial alteration, removal or relocation of designated historical resources; to establish criteria and provide for a Historical Resources Inventory of properties within the boundaries of the City; and to recommend to the City Council and Planning Commission procedures to facilitate the use of the Historical Resources Inventory results in the City's planning process in accordance with Section 111.0206 of the Land Development Code.

City of San Diego Historical Resources Board Design Criteria

The Historical Resources Guidelines of the City's Land Development Manual (City of San Diego 2001) identifies the criteria under which a resource may be historically designated. It states that any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or object may be designated a historical resource by the City Historical Resources Board if it meets one or more of the following designation criteria:

- A. Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;
- B. Is identified with persons or events significant in local, state or national history;
- C. Embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- D. Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist or craftsman;
- E. Is listed or has been determined eligible by National Park Service for listing on the National Register of Historic Places or is listed or has been determined eligible by the State Historical Preservation Office for listing on the State Register of Historical Resources; or

- F. Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

City of San Diego Comprehensive Historic Preservation Plan

The Comprehensive Historic Preservation Plan was prepared by the Historical Site Board and the San Diego Planning Department to direct and focus the City's efforts to deal with increasingly complex historic preservation issues. There are four elements to this plan: the Inventory Element, the Incentives Element, the Education Element, and the Draft Historic Resource Board Ordinance. The first three elements were adopted by the City Council in February 1992; the final element was incorporated into Chapter 14, Article 3, Division 2 of the Land Development Code.

City of San Diego General Plan

The Historic Preservation Element of the City of San Diego General Plan was adopted in 2008. The relevant goals of the Historic Preservation Element are as follows (City of San Diego 2008b):

- A.1 Strengthen historic preservation planning.
- A.2 Fully integrate the consideration of historical and cultural resources in the larger land use planning process.
- A.3 Foster government-to-government relationships with the Kumeyaay/Diegueño tribes of San Diego.
- A.4 Actively pursue a program to identify, document and evaluate the historical and cultural resources in the City of San Diego.
- A.5 Designate and preserve significant historical and cultural resources for current and future generations.

County of San Diego Resources Protection Ordinance

The County of San Diego's Resources Protection Ordinance (RPO) protects significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

1. Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
 - (a) Formally determined eligible or listed in the National Register of Historic Places by the Keeper of the National Register; or
 - (b) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or
2. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
3. Any location of past or current sacred religious or ceremonial observances which is either: (a) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or, (b) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

3.4.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to archaeological, historical, and tribal cultural resources are based on the combined significance thresholds of the County and City, as well as Appendix G of the CEQA Guidelines. According to the combined guidelines, a significant impact related to archaeological, historic, and tribal cultural resources would occur if the Project would:

1. Result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a historic building (including an architecturally significant building), structure, or object or site (City of San Diego).
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory (County of San Diego).
3. Result in the disturbance of any human remains, including those interred outside of formal cemeteries (City of San Diego).
4. Have any impact to existing religious or sacred uses within the potential impact area (City of San Diego).
5. Propose activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources (County of San Diego).
6. As designed, cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC, Section 11074, as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC, Section 5020.1(k), or
 - b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC, Section 5024.1(c). In applying the criteria set forth in PRC, Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.
7. Cause a substantial adverse change in the significance of a tribal cultural resource. This shall include the destruction or disturbance of a tribal cultural resource that is important to local tribal communities.

The significance criteria used to evaluate the Project impacts to tribal cultural resources are based on Appendix G of the CEQA Guidelines.

3.4.4 Impacts Analysis

Historic and Archaeological Resources

1. ***Would the Project result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a historic building (including an architecturally significant building), structure, or object or site.***

As defined by the California Office of Historic Preservation, a historic resource is (1) associated with events that have made a significant contribution to the broad patterns of local or regional history of the cultural heritage of California or the United States; (2) associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region or

method of construction or represents the work of a master or possesses high artistic values; or (4) has yielded, or has the potential to yield, information important to the history or prehistory of the local area, California, or the nation (OHP 2007).

Preliminary research and aerial photo review of the Project site did not observe any historic or built environments. Additional field research conducted by PRM identified no historic resources on site. The lack of known historic value of the site, as well as extensive research and field review, indicated no historic resources that would be potentially altered by the Project. Therefore, the impact would be **less than significant**.

2. ***Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines? This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.***

Two previously recorded resources (P-37-011945 and P-37-013486) were noted in the direct Project APE during the archaeological survey in 2019. Both resources were recommended by PRM as not eligible for the NRHP or CRHR. A portion of P-37-011945 has been destroyed by past grading, and the remaining portion has been deflated and disturbed by erosion, grading, and vehicle activity. The newly recorded portion of P-37-013486 consisted of marine shell and fire-affected rock along a graded road surface. Past archaeological testing nearby showed disturbed context, indicating the portion of the site in and near the direct Project APE likely does not contribute to the site's eligibility. See Appendix C for more information.

Although the records search and the evidence observed during Project fieldwork conducted by PRM indicated that the two resources present in the APE do not represent important archaeological sites, there is still the possibility that previously unknown significant cultural deposits associated with either P-37-011945 or P-37-013486 may underlie the area. If proposed Project work includes significant ground disturbance within the newly recorded portion of P-37-013486, PRM recommends additional CRHR evaluation in that specific area. Erosion may act to expose previously unrecorded resources prior to the start of Project work. Also, due to limited visibility and high potential for the presence of cultural resources based on the distribution of known cultural resources in the surrounding area, there is potential for the presence of currently unknown and unrecorded cultural resources on the Project site. As such, future site preparation and grading activities have the potential to disturb unknown and unrecorded archaeological resources. Therefore, Project impacts to unknown and unrecorded archaeological resources would be **potentially significant**.

3. ***Would the Project disturb any human remains, including those interred outside of formal cemeteries?***

The Project site includes areas of previous ground disturbance associated with operation of the Nelson Sloan Quarry. There has been no previous indication of any human remains being found on site and human remains were not observed during fieldwork conducted by PRM. However, Project construction would involve grading, multiphase sediment processing, placement, compaction, and revegetation. Given the previous disturbance of the Project site (and specifically, the Project APE), human remains are not anticipated to be encountered during ground-disturbing activities. However, because ground-disturbing activities have the potential to impact previously unknown, undisturbed human remains that may underlie the Project APE, impacts would be **potentially significant**.

4. *Would the Project have any impact to existing religious or sacred uses within the potential impact area?*

The records search conducted by Dudek, Project fieldwork conducted by PRM, and Native American consultation for the Project did not identify any existing religious or sacred uses within the Project site.

The results of a Sacred Lands File search with the NAHC in 2019 were positive for the general area. However, during Native American consultation, the group identified by the NAHC as being associated with the Sacred Lands File indicated that the sacred site was located outside of the Project property. During consultation, the Project site was not identified as the location of any religious or sacred use.

Further, the Project APE was subject to ground disturbance associated with previous quarry activities. Therefore, based on the results of the records search, fieldwork, consultation with tribal representatives, and previous disturbance, **no impacts** to existing religious or sacred uses within the Project APE are anticipated.

5. *Would the Project propose activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources?*

The records search and Project fieldwork conducted by PRM did not identify cultural resources within the footprint of the Project APE that qualify for protection under the RPO. While there is potential for the presence of currently unknown and unrecorded cultural resources on the Project site, these resources would not be considered significant in accordance with the definition of Significant Prehistoric or Historic Sites in the County's RPO. As such, impacts to significant cultural resources as defined by the RPO would be **less than significant**.

Tribal Cultural Resources

6. *Would the Project, as designed, cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC, Section 11074, as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*

- a. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC, Section 5020.1(k), or***
- b. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC, Section 5024.1(c). In applying the criteria set forth in PRC, Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.***

7. *Would the Project cause a substantial adverse change in the significance of a tribal cultural resource? This shall include the destruction or disturbance of a tribal cultural resource that is important to local tribal communities.*

In compliance with AB 52, which requires the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project, CDPR sent letters to 20 tribes included on the NAHC response letter that requested notification and followed up with emails and phone calls. During consultation, the Project site was not identified as a Tribal Cultural Property or the location of any religious or sacred use. The Kwaaymii Laguna Band of Mission Indians indicated that the sacred site identified by the NAHC was located outside of the Project property. However, there are known tribal archaeological resources within the Project area, and although they do not rise to the level of significance based on current knowledge, there is potential for previously unknown, significant tribal cultural resources to be present.

Therefore, because ground-disturbing activities have the potential to impact previously unknown, significant tribal cultural resources that may underlie the Project APE, impacts would be **potentially significant**.

3.4.5 Cumulative Impacts

A total of 24 projects have been identified near the Project site for the cumulative impact analysis. These include projects that have been recently completed, are being constructed, or are proposed for construction in the near future. The 24 projects are identified in Table 2-11 of this EIR. Similar to the Project, proposed and developed projects identified in the study area would require cultural resources investigations to determine the likelihood of impacts. Those projects proposing ground disturbance would likely be subject to similar standard mitigation measures as the Project, which may result in avoidance and/or redesign of project components. Because the Project would implement mitigation measures and entails (primarily) a sediment placement and restoration project, the impacts of the Project would **not be cumulatively considerable**.

3.4.6 Mitigation Measures

MM-ARCH-1 An archaeological survey of the direct Project area of potential effects shall be conducted to update the recordation of current site conditions prior to the start of any future ground-exposing or ground-disturbing activities.

MM-ARCH-2 An archaeological and Native American monitor shall be present on site for any Project-related future ground-exposing or ground-disturbing activities (e.g., brushing/grubbing of vegetation or grading of road surfaces) outside of the previously mined footprint, such as brushing/grubbing of vegetation or grading of road surfaces. Should any archaeological resources be discovered on site that are unable to be avoided, a formal evaluation for listing on the California Register of Historical Resources should be conducted prior to construction activities.

MM-ARCH-3 Pursuant to Section 7050.5 of the California Health and Safety Code, if human remains are discovered during Project operations, no further work shall occur in the immediate vicinity of the discovered remains until the County Medical Examiner has made the necessary findings as to the origin of the remains. If the remains are determined to be Native American in origin, the County Medical Examiner shall contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the person or persons it believes to be the Most Likely Descendant/s (MLD) of the deceased. As provided in California Public Resources Code, Section 5097.98, the MLD may make recommendation for treatment or disposition with appropriate dignity of the human remains and any associated grave goods. The remains shall be left in place and free from disturbance until recommendations for treatment have been made.

3.4.7 Level of Significance After Mitigation

Implementation of MM-ARCH-1 would reduce Impact 2 to a level below significance by recording and assessing any previously unknown resources that may be exposed by erosion on the ground surface within the Project area prior to construction. MM-ARCH-2 would reduce Impact 2 and Impact 3 to less-than-significant levels by requiring the presence of qualified archaeological and Native American monitors during ground-exposing or ground-disturbing activities outside of the previously mined footprint, in order to identify any previously unknown subsurface archaeological resources and/or human remains. Additionally, MM-ARCH-2 establishes procedures for handling an accidental discovery of archaeological resources during ground-disturbing activities, should they be encountered, to ensure

avoidance of significant impacts to any significant resources. MM-ARCH-3 details appropriate procedures to be followed if any human remains are found in the Project APE, reducing potential Impact 3 to a level less than significant.

Implementation of MM-ARCH-2 would also reduce Impacts 6 and 7 to less-than-significant levels by requiring archaeological and Native American monitors to be present during ground-exposing or ground-disturbing activities outside of the previously mined footprint. Any additional information concerning traditional cultural properties (including mitigation measures) identified through ongoing consultation will be included in the Final EIR.

With implementation of mitigation, Project impacts to archaeological, historic, and tribal cultural resources would be reduced to a less than significant level.

3.4.8 References

Basgall, M.E., and M. Hall. 1990. "Adaptive Variation in the North-Central Mojave Desert." Paper presented at the 55th Annual Meeting of the Society for American Archaeology, Las Vegas, Nevada.

Basgall, M.E., L. Johnson, and M.J. Hale. 2002. "An Evaluation of Four Archaeological Sites in the Lead Mountain Training Area, Marine Corps Air Ground Combat Center, Twentynine Palms, California." Submitted to U.S. Army Corps of Engineers, Fort Worth, Texas.

Bean, L.J., and F.C. Shipek. 1978. "Luiseño." In *Handbook of North American Indians*, Vol. 8, California, edited by R.F. Heizer, 550–563. Washington, D.C.: Smithsonian Institution.

Boscana, G. 1846. "Chinigchinich: A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of St. Juan Capistrano, Alta California." In *Life in California*, edited by A. Robinson, 227–341. New York, New York: Wiley & Putnam.

Byrd, B.F., and S.N. Reddy. 2002. "Late Holocene Adaptations along the Northern San Diego Coastline: New Perspectives on Old Paradigms." In *Cultural Complexity on the California Coast: Late Holocene Archaeological and Environmental Records*, edited by J.M. Erlandson and T.L. Jones, 41–62. Los Angeles, California: University of California–Los Angeles Press.

CDPR (California Department of Parks and Recreation). 2009. "Preservation Matters." The Newsletter of the California Office of Historic Preservation 2(3): 3–21.

City of San Diego. 1997. San Diego Municipal Code Chapter 14: General Regulations. Article 3 Supplemental Development Regulations Division 2 Historical Resources Regulations.

City of San Diego. 1999. San Diego Municipal Code Land Development Code. Historical Resources Guidelines. Adopted September 28, 1999.

City of San Diego. 2008a. City of San Diego General Plan Environmental Impact Report. Accessed 2020. <https://www.sandiego.gov/planning/genplan/documents/peir>.

City of San Diego. 2008b. "Historic Preservation Element." In *City of San Diego General Plan*. March 2008. <https://www.sandiego.gov/sites/default/files/legacy//planning/genplan/pdf/generalplan/adoptedhpelem.pdf>.

County of San Diego. 2007. Ordinance No. 9890 (N/S). County of San Diego Board of Supervisors. San Diego, California.

- Davis, E.L. 1978. *The Ancient Californians: Rancholabrean Hunters of the Mojave Lakes Country*. Los Angeles, California: Natural History Museum of Los Angeles County.
- Fages, P. 1937. *A Historical, Political, and Natural Description of California (1775)*. Translated by H.I. Priestly. Berkeley, California: University of California Press.
- Gallegos, D.R. 1987. "San Dieguito-La Jolla: Chronology and Controversy." San Diego County Archaeological Society, Research Paper No. 1.
- Gallegos, D., and C. Kyle. 1988. "Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDI-48 (W-164), San Diego, California." San Diego, California: WESTEC Services.
- Geiger, M., and C.W. Meighan. 1976. *As The Padres Saw Them: California Indian Life and Customs as Reported by the Franciscan Missionaries, 1813-1815*. Santa Barbara, California: Santa Barbara Mission Archive Library.
- Golla, V. 2007. "Linguistic Prehistory." In *California Prehistory: Colonization, Culture, and Complexity*, edited by T.L. Jones and K.A. Klar, 71-82. New York, New York: Altamira Press.
- Griset, S. 1996. "Southern California Brown Ware." Unpublished PhD dissertation; University of California, Riverside.
- Hale, M.J. 2001. "Technological Organization of the Millingstone Pattern in Southern California." Master's thesis; California State University, Sacramento.
- Hale, M.J. 2009. "San Diego and Santa Barbara: Socioeconomic Divergence in Southern California." PhD dissertation; University of California, Davis.
- Harrington, J.P. 1934. "A New Original Version of Boscana's Historical Account of the San Juan Capistrano Indians of Southern California." *Smithsonian Miscellaneous Collections* 92(4).
- Hector, S.M. 1984. "Late Prehistoric Hunter-Gatherer Activities in Southern San Diego County." PhD dissertation; University of California, Los Angeles.
- Hector, S.M. 2007. "Archaeological Investigations at University House Meeting Center and Chancellor Residence, CA-SDI-4669 (SDM-W-12), University of California at San Diego, La Jolla, California." ASM Affiliates.
- Johnson, J.R., and J.G. Lorenz. 2006. "Genetics, Linguistics, and Prehistoric Migrations: An Analysis of California Indian Mitochondrial DNA Lineages." *Journal of California and Great Basin Anthropology* 26:33-64.
- Kroeber, A. 1925. *Handbook of the Indians of California*. Washington D.C.: Smithsonian Institution
- Laylander, D. 1985. "Some Linguistic Approaches to Southern California's Prehistory." *San Diego State University Cultural Resource Management Center Casual Papers* 2(1): 14-58.
- Laylander, D. 2000. *Early Ethnography of the Californias, 1533-1825*. Salinas, California: Coyote Press Archives of California Prehistory.
- Laylander, D. 2010. "Linguistic Prehistory." Research Issues in San Diego Prehistory. Accessed August 30, 2021. <http://www.sandiegoarchaeology.org/Laylander/Issues/index.htm>.

- Lightfoot, K.J. 2005. "Indians, Missionaries, and Merchants." Berkeley, California: University of California Press.
- Luomala, K. 1978. "Tipai and Ipai." In *California*, edited by Robert F. Heizer, 592–609. Handbook of the North American Indians, Vol. 8, William C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution.
- Meighan, C.W. 1959. "California Cultures and the Concept of an Archaic Stage." *American Antiquity* 24:289–305.
- OHP (Office of Historic Preservation). 2007. CEQA and Historical Resources. Presentation from Workshop sponsored by California Preservation Foundation. January 25, 2007.
- Owen, R.C. 1965. "The Patrilineal Band: A Linguistically and Culturally Hybrid Social Unit." *American Anthropologist* 67:675–690.
- Pignoli, A.R. 2004. "Points, Patterns, and People: Distribution of the Desert Side-Notched Point in San Diego." *Proceedings of the Society for California Archaeology* 14:27–39.
- Pignoli, A.R. 2005. "Subsistence, Settlement, and Environmental Change at San Diego Bay." *Proceedings of the Society for California Archaeology* 18:255–259.
- Preston, W.L. 2002. "Portents of Plague from California's Protohistoric Period." *Ethnohistory* 49:69–121.
- Rogers, M.J. 1929. "The Stone Art of the San Dieguito Plateau." *American Anthropologist* 31:454–467.
- Rogers, M.J. 1945. "An Outline of Yuman Prehistory." *Southwestern Journal of Anthropology* 1:167–198.
- Shipek, F.C. 1982. "Kumeyaay Socio-Political Structure." *Journal of California and Great Basin Anthropology* 4:296–303.
- Shipek, F.C. 1985. "Kuuchamaa: The Kumeyaay Sacred Mountain." *Journal of California and Great Basin Anthropology* 7(1): 67–74.
- Spier, L. 1923. "Southern Diegueño Customs." *University of California Publications in American Archaeology and Ethnology* 20:295–358.
- True, D.L. 1966. "Archaeological Differentiation of Shoshonean and Yuman Speaking Groups in Southern California." PhD dissertation; University of California, Los Angeles.
- True, D.L. 1980. "The Pauma Complex in Northern San Diego County: 1978." *Journal of New World Archaeology* 3(4): 1–39.
- Wallace, W.J. 1955. "A Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology* 11:214–230.
- Warren, C.N. 1964. "Cultural Change and Continuity on the San Diego Coast." PhD dissertation; University of California, Los Angeles.
- Warren, C.N. 1968. "Cultural Tradition and Ecological Adaptation on the Southern California Coast." In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, 1–14. Portales, New Mexico: Eastern New Mexico University Contributions in Anthropology.

Warren, C.N., G. Siegler, and F. Dittmer. 2004. "Paleoindian and Early Archaic Periods." In Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study. Prepared for the Metropolitan Wastewater Department, City of San Diego. Encinitas, California: ASM Affiliates.

Wilken, M.A. 2012. "An Ethnobotany of Baja California's Kumeyaay Indians." Master's thesis; San Diego State University.

INTENTIONALLY LEFT BLANK

3.5 Geology and Soils

This section describes the existing geological conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the Project. The analysis of the Project impacts related to geology and soils is partly based on information provided in the following technical reports:

- Preliminary Geotechnical Evaluation and Geologic Field Reconnaissance Report, Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project, prepared by Haley & Aldrich (Appendix E-1)
- 80% Grading Plans for the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project, prepared by Dudek, dated January 2021 (see Figures 2-5a through 2-5f in Chapter 2, Project Description, of this Environmental Impact Report [EIR])
- 80% Restoration Plans for the Nelson Sloan Quarry and Beneficial Reuse of Sediment Project, prepared by Dudek, dated February 2021 (see Figures 2-7a through 2-7h in Chapter 2 of this EIR)
- Paleontological Resources Review – Nelson Sloan Quarry Restoration Project, prepared by Dudek, dated April 11, 2019 (Appendix E-3)

3.5.1 Existing Conditions

Topography

The Project site is located along the eastern boundary of the Nelson Sloan Quarry Property, near the U.S./Mexico international border. The Project site encompasses two parcels (i.e., Assessor's Parcel Nos. 664-011-05-00 and 664-011-04-00), within which the Project Impact Area (approximately 20 acres) occurs. The westernmost portion of the Project site consists of a north- and east-sloping hillside. Surface conditions along the slope consist of moderately steep to steep inclines, approximately 120 feet high, with inclinations varying from approximately 2:1 (horizontal to vertical) to near vertical. On-site slopes are generally vegetated with brush at varying densities. Further south toward the international border, topographical surfaces are highly eroded and less vegetated. Evidence of extensive erosion, including riling and sloughing, was observed in this area, while evidence of surface erosion, debris (both natural material and trash), and slopewash was observed throughout the Project site. On-site elevations are approximately 250 feet above mean sea level in the western portion and approximately 100 feet above mean sea level at the eastern boundary of the Project Impact Area. The eastern half of the Project site is generally flat, with a steep east-facing cut slope that traverses the westernmost portion of the Project site that extends from the Border Highlands area to the south to Monument Road.

Adjacent land uses include open space and agricultural operations. U.S. Customs and Border Protection (CBP) uses all open areas throughout the site to patrol the border. In addition, the City of San Diego (City) South Bay International Wastewater Treatment Plant and the International Boundary and Water Commission South Bay International Wastewater Treatment Plant are located to northeast and east of the Project site.

Regional Geologic Setting

The Project site is located within the Peninsular Ranges Geomorphic Province, a group of mountain ranges that stretch approximately 930 miles from Southern California to the southern tip of the Baja California Peninsula. The province is comprised of three distinct geographic regions, including the low-lying Coastal Plain, the mountainous Peninsular Range, and the Salton Trough (City of San Diego 2007a; County of San Diego 2011).

During the formation of the Peninsular Ranges Geomorphic Province, regional tilting and uplifting resulted in a series of large faults, including the Elsinore and San Jacinto Faults, along the edge of the province. The eastern block of the region dropped, forming the Salton Trough-Gulf of California. The depressed Salton Trough Province became an area of deposition for drainages in the Peninsular Ranges. Occasionally, the Salton Trough was inundated with marine waters from the Gulf of California, adding marine deposits to the sediment (City of San Diego 2007a).

The Project site is located within the Coastal Plain region, which extends from the western edge of the Peninsular Ranges to the Pacific Coast and is oriented roughly parallel to the coastline. The region is composed of dissected (eroded), mesa-like terraces that graduate inland into rolling hills. The terrain is underlain by sedimentary rocks comprised mainly of sandstone, shale, and conglomerate beds, reflecting the erosion of the Peninsular Ranges to the east (City of San Diego 2007a).

Surficial Soils

According to the U.S. Department of Agriculture National Resource Conservation Service, surficial soils underlying the Project site include Huerhuero loam and Olivenhain cobbly loam. Huerhuero loam is present in the southwest section of the Project site, has a slope gradient of 5% to 9%, is moderately well-drained, and has a very high runoff potential. The remainder of the site is underlain by Olivenhain cobbly loam, which has a slope gradient of 2% to 50%, is well-drained, and has a very high runoff potential (USDA NRCS 2020).

Subsurface Units

Regional geologic mapping by Kennedy and Tan (2008) suggests that most of the near-surface material, prior to quarrying operations, was comprised of Quaternary-age old and very old paralic¹ deposits (formerly known as Lindavista Formation). These deposits consist primarily of dense, granular material (sand and some gravel), cross-bedded sandstone, and some siltstone. The paralic deposits are underlain by Tertiary-age deposits of the San Diego Formation (fine to medium-grained sandstone and cobble conglomerate) that are mapped at the base of the slope. This formation provided the primary materials that were quarried from the site. The northeastern edge of the site is mapped as Quaternary-age old paralic deposits (formerly known as the Bay Point Formation). These beach, estuarine, and colluvial deposits are characterized by interbedded siltstone, sandstone, and conglomerates (Appendix E-1) (Figure 3.5-1, Local Geology).

Seismicity and Faulting

Southern California is considered one of the most seismically active regions in the United States, with numerous active faults and a history of destructive earthquakes. Regional faults in the area are shown on Figure 3.5-2, Regional Faulting. The San Diego region, and Southern California in general, lies within the broad margins of the San Andreas Fault System, which marks the boundary between the North American and Pacific plates. San Diego is located approximately 100 miles west of the San Andreas Fault, the predominant earthquake hazard in the state, but is also close to several other large active faults capable of producing severe ground shaking. Faults influencing local seismicity include Elsinore, San Jacinto, Coronado Bank, San Diego Trough, San Clemente, and La Nacion. In addition, the downtown area of San Diego is underlain by the active Rose Canyon Fault Zone (City of San Diego 2018). In comparison to other Southern California areas, San Diego County (County) has sparse seismicity. However, since 1984, earthquake activity in the County has doubled over that of the preceding 50 years. The Project site could experience relatively strong ground shaking due to the presence of these nearby and distant faults (San Diego County OES 2017).

¹ Interfingering marine and continental sediments.

The California Geological Survey (CGS) (formerly known as the California Division of Mines and Geology) classifies faults as (CGS 2018):

- Holocene-active faults: faults that have had surface displacement during the past approximately 11,700 years (i.e., Holocene time). These faults exhibit signs of geologically recent movement, are most likely to experience movement in the near future, and are capable of surface rupture. These faults are considered “active faults.” In addition, Holocene-active faults that have had surface displacement in the last 200 years can be further classified as “historic faults.”
- Pre-Holocene faults: faults that have not had surface displacement in the past 11,700 years (Holocene) but have moved during the past 130,000 years (late Quaternary) or 1.6 million years (Quaternary undifferentiated). These faults are considered “potentially active faults” and may be capable of surface rupture but are less likely than Holocene-active faults to cause surface rupture. These faults are also capable of generating future earthquakes.
- Age-undetermined faults: faults where the recency of fault movement has not been determined. These faults are considered “inactive faults.”

Most of the Holocene-active faults in California are manifested as fault zones. Fault zones are defined as a region, varying in width from yards to miles, that is bounded by major faults within which subordinate faults may be arranged variably or systematically. For example, the San Andreas Fault Zone is a region of crushed and broken rock varying in width from a few hundred feet to a mile wide. Many smaller faults branch from and join the San Andreas Fault Zone (USGS 2016). Not all segments of an active fault zone are included in Alquist-Priolo Fault Zones (see the discussion under the following “Surface Rupture” subheading for more information on Alquist-Priolo Fault Zones). Rather, Alquist-Priolo Fault Zones consist of fault segments that are well defined and present sufficient evidence for geologists to conclude that the faults are active.

Major active faults in the Project region are listed in Table 3.5-1 and are described below. Distances from the Project site to individual faults represent the distance to the nearest fault segment within the respective fault zones.

Table 3.5.1. Regional Faulting

| Regional Fault Zone | Approximate Closest Distance to Project Site (miles) | Fault Age | Probable Magnitude (Mw) |
|-----------------------------|--|-----------------|-------------------------|
| La Nacion Fault Zone | 2 | Pre-Holocene | Undetermined |
| Rose Canyon Fault Zone | 4 | Holocene-active | 6.0–7.0 |
| Coronado Bank Fault Zone | 12 | Holocene-active | Undetermined |
| San Diego Trough Fault Zone | 26 | Holocene-active | Undetermined |
| Elsinore Fault Zone | 71 | Holocene-active | 6.5–7.3 |
| San Jacinto Fault Zone | 81 | Holocene-active | 7.5–7.8 |
| San Andreas Fault Zone | 96 | Holocene-active | 6.8-8.0 |

Sources: CGS 2010; City of San Diego 2007a; SCEDC 2013.

Note: Mw = moment magnitude.

San Andreas Fault Zone

The San Andreas Fault Zone, extending approximately 650 miles from Baja California to the north of San Francisco, is a Holocene-active, right-lateral fault, located approximately 96 miles northeast of the Project site. The San

Andreas Fault Zone has the potential to result in a moment magnitude (Mw) 6.8 to 8.0 earthquake (CGS 2010; City of San Diego 2007a; County of San Diego 2011; SCEDC 2013).

San Jacinto Fault Zone

The Holocene-active, right-lateral San Jacinto Fault Zone is a complex fault system that is approximately 6 miles wide and 155 miles long, extending from its junction with the San Andreas Fault Zone in the San Gabriel Mountains to the northern edge of the Gulf of California. At the closest point, the San Jacinto Fault Zone is approximately 81 miles northeast of the Project site. This fault zone is characterized by its straightness, continuity, and high seismicity and is considered the most active fault in Southern California. Since 1890, 10 earthquakes of Mw 6.0 or greater have occurred on the San Jacinto Fault Zone. The maximum probable earthquake expected to occur along the San Jacinto Fault Zone is a Mw 7.5 to 7.8. This fault zone trends from the northwest to the southeast across the northeastern corner of San Diego County and includes the Coyote Creek, Clark, San Felipe Hills, and Borrego Mountain Faults, as well as many other smaller, unnamed Quaternary faults (CGS 2010; County of San Diego 2011; SCEDC 2013; USGS 2021).

Elsinore Fault Zone

The Holocene-active, right-lateral Elsinore Fault Zone transects the eastern part of San Diego County and extends 124 miles, from the Mexican border to the northern end of the Santa Ana Mountains in Los Angeles County. At the closest point, the Elsinore Fault Zone is approximately 71 miles east of the Project site. In Riverside County, the Elsinore Fault Zone splits into the Whittier and Chino Faults. The maximum probable earthquake for the Elsinore Fault Zone is estimated to be Mw 6.5 to 7.3, with a recurrence interval of 60 years. However, the largest historical earthquake on record on the Elsinore Fault Zone is a Mw 6.0, which occurred in 1910 (CGS 2010; County of San Diego 2011; SCEDC 2013).

Rose Canyon Fault Zone

The Holocene-active, right-lateral Rose Canyon Fault Zone is an active offshore/onshore fault zone capable of generating a Mw 6.2 to 7.0 earthquake. The fault zone is located partially offshore as part of the Newport-Inglewood Fault Zone and parallels the San Diego County coastline for approximately 2 to 6 miles before coming ashore near La Jolla Shores. The onshore segment trends through Rose Canyon and Old Town San Diego and appears to terminate in San Diego Bay. Evidence of faulting in San Diego Bay is thought to be associated with this fault zone. At the closest point, the Rose Canyon Fault Zone is approximately 4 miles west of the Project site. The Rose Canyon Fault Zone is composed of several fault segments, including the Rose Canyon, Silver Strand, Mount Soledad, and Country Club Faults (CGS 2010; City of San Diego 2007a; SCEDC 2013).

Local Faults

Locally, several undifferentiated Quaternary faults, or pre-Holocene faults, are in the vicinity of the Project site, including one northwest-trending fault that traverses the central portion of the Project site and one north-trending fault in the southeast portion of the site (Figure 3.5-1) (Appendix E-1). Based on the age of these faults, surface fault rupture is unlikely at the site.

Ground Shaking

Ground shaking results in most of the damage during an earthquake. Several factors control how ground motion interacts with structures, making the hazard of ground shaking difficult to predict. Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic

waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, the fault's rupture mechanism, the distance from the earthquake source (or epicenter) to an affected site, and the path and material through which the waves are moving (County of San Diego 2007).

The Uniform Building Code (UBC), which has now been superseded by the California Building Code (CBC), was the primary means for authorizing and enforcing procedures and mechanisms to ensure safe building standards. The UBC used a classification system to determine what protective measures are required to protect human health and property. According to this classification system, most of Southern California, including all of San Diego County, is located within Seismic Zone 4, which is the highest Seismic Zone classification (County of San Diego 2007).

In 1997, the UBC incorporated near-source zones for calculating base shear, which accounts for high ground motion and damage that has been observed within a few miles of historic earthquake ruptures. These near-source zones were developed by the Strong Ground Motion Ad-Hoc Subcommittee of the Seismology Committee of the Structural Engineers Association of California (County of San Diego 2007).

Near-Source Shaking Zones have been defined predominantly along the Elsinore and San Jacinto Fault Zones in the eastern portions of the unincorporated portion of San Diego County. According to the County of San Diego Guidelines for Determining Significance, Figure 3, Near Source Ground Shaking Zones, the Project site is not located within a seismic shaking buffer zone. The closest such zone is located approximately 9 miles to the northwest (County of San Diego 2007).

Surface Rupture

Surface rupture involves the displacement and cracking of the ground surface along a fault trace. Surface ruptures are visible instances of horizontal or vertical displacement, or a combination of the two, typically confined to a narrow zone along the fault. Surface rupture is more likely to occur in conjunction with active fault segments where earthquakes are large, or where the location of the movement (earthquake hypocenter) is shallow.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates development near Holocene-active faults to mitigate the hazard of surface fault rupture. This act requires the state geologist to establish regulatory zones (known as Alquist-Priolo Special Study Fault Zones) around the surface traces of Holocene-active faults and to issue appropriate maps. Local agencies must regulate most development projects within the zones. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed developments would not be constructed across active faults. A licensed geologist must prepare an evaluation and written report for a specific site. If a Holocene-active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault.

The Alquist-Priolo Earthquake Fault Zoning Act also allows for cities or counties to establish more restrictive policies than those established as Alquist-Priolo Special Study Fault Zones, if desired. Special Study Zones have been established by San Diego County for pre-Holocene, late Quaternary faults (movement during the past 700,000 years), as mapped by the CGS. Late-Quaternary faults were mapped based on geomorphic evidence like Holocene faults, except that tectonic features are less distinct. As indicated by the CGS, these faults may be younger, but the lack of younger overlying deposits precludes more accurate age classification. The County treats traces of faults within the Special Study Zones as active unless a fault investigation can prove otherwise (County of San Diego 2007).

According to the CGS Earthquake Zones of Required Investigation, the Project site is not located within an Alquist Priolo Fault Zone. The closest Alquist-Priolo Fault Zone is located along the Silver Strand Fault, approximately 9 miles northwest of the Project site (CGS 2016). In addition, according to Figure 2, Alquist-Priolo and County Special

Study Fault Zones, of the County of San Diego Guidelines for Determining Significance, Geologic Hazards, the Project site is not located in a County Special Study Zone. The closest such zone is located approximately 60 miles to the northeast (County of San Diego 2007).

Liquefaction

Liquefaction occurs primarily in saturated, loosely consolidated, fine- to medium-grained sandy soils in areas where the groundwater table is generally 50 feet or less below the surface and is subject to vibration. Other important factors contributing to liquefaction include the magnitude of the earthquake and the duration of the shaking. In general, three types of lateral ground displacement are generated from liquefaction: (1) flow failure, which generally occurs on steeper slopes; (2) lateral spread, which generally occurs on gentle slopes; and (3) ground oscillation, which occurs on relatively flat ground. In addition, surface improvements on liquefiable areas may be prone to settlement and related damage in the event of a large earthquake on a regionally active fault. The primary factors that control the type of failure that is induced by liquefaction (if any) include slope and the density, continuity, and depth of the liquefiable layer (County of San Diego 2011).

Adverse effects of liquefaction include:

- Loss of bearing strength of soils
- Lateral spreading of soils along a buried liquefied layer
- Sand boils of sand-laden water can be ejected from a buried liquefied layer and erupt at the surface. The surrounding ground often fractures and settles
- Ground oscillation so that the surface layer, riding on a buried liquefied layer, is thrown back and forth by the shaking and can be severely deformed
- Settlement when liquefied ground re-consolidates following an earthquake (County of San Diego 2011)

Liquefaction is not known to have occurred historically in San Diego County. Previous seismic shaking levels within the County have not been sufficient to trigger liquefaction. However, there may be a potential for liquefaction to occur in areas with steep slopes or alluvial deposit soils combined with a shallow groundwater table (County of San Diego 2011, 2017).

Groundwater levels underlying the Project site are estimated to be more than 20 feet below ground surface near the base of the slope. However, groundwater levels become shallower toward the Tijuana River to the north, where the depth to groundwater ranges from 10 feet below ground surface to just below the ground surface (Appendix E-1).

The Project site is within the U.S. Geological Survey (USGS) 7.5-Minute Imperial Beach Quadrangle (topographic map). The CGS has not evaluated the liquefaction potential for the Imperial Beach Quadrangle (CGS 2016). However, according to Figure 3.3.6, Liquefaction, of the County of San Diego Multi-Jurisdictional Hazard Mitigation Plan, the Project site is in a high liquefaction risk zone (County of San Diego 2017). As such, given the variability in underlying sediment composition and groundwater levels (greater than 20 feet below ground surface to just below ground surface), the Project site could be susceptible to liquefaction.

Slope Instability/Landslides

Landslides occur when masses of rock, earth, or debris move down a slope, including rock falls, deep failure of slopes, and shallow debris flows. Frequently, landslides are triggered by other hazards, such as floods and earthquakes. Landslides result from one or more distinct failure surfaces at rates that vary from a few centimeters

per day to tens of meters of instantaneous movement. In contrast, creep is the imperceptibly slow, steady, downward movement of slope-forming soil or rock. Creep can occur seasonally, where movement is within the depth of soil affected by seasonal changes in soil moisture and soil temperature or can be continuous or progressive. Rockfalls or topples are usually sudden and occur on steep slopes. In a rockfall, rocks may fall, bounce, or roll down the slope. A topple occurs when part of a steep slope breaks loose and rotates forward (County of San Diego 2007).

The likelihood of a landslide depends on the geologic formations of an area, topography, ground-shaking potential, and human-made influences. Improper or excessive grading can increase the probability of a landslide. Land alterations such as excavation, filling, removing of vegetative cover, and introducing the concentration of water from drainage, irrigation, or septic systems may contribute to the instability of a slope and increase the likelihood of a landslide. Undercutting support at the base of a slope, or adding too much weight to the slope, can also produce a landslide (County of San Diego 2011).

Landslides in the San Diego region generally occur in sedimentary rocks such as sandstone, siltstone, mudstone, and claystone. When these fine-grained rocks are exposed to the erosional actions of air and water, they often turn into clay. Seams of saturated clays can be responsible for landslides, even on gentle slopes (City of San Diego 2007a).

The CGS has not evaluated the seismically induced landslide potential for the Imperial Beach Quadrangle (CGS 2016). However, according to both the CGS Landslide Hazards in the Southern Part of San Diego Metropolitan Area, San Diego County, California (CGS 1995), and Figure 3.3.5, Rain-Landslides, of the County of San Diego Multi-Jurisdictional Hazard Mitigation Plan (County of San Diego 2017), on-site slopes are steep to oversteep, unstable, and susceptible to landsliding. In addition, a large Quaternary landslide is located west of the Project site (see Figure 3.5-1). As such, the Project site could be susceptible to non-seismic (e.g., soil erosion and heavy rainfall) and seismically induced landslides.

Expansive Soils

Expansive soils tend to swell with seasonal increases in soil moisture in the winter months and shrink as soils become drier in the summer months. Repeated shrinking and swelling of the soil can lead to stress and damage of structures, foundations, and fill slopes and can cause overlying concrete to crack and settle. Soils with a high clay content typically have high shrink/swell characteristics.

As previously discussed, the Project site is predominantly underlain by deposits of dense granular material, sandstone, siltstone, and conglomerates, which typically contain little to no clay content. As a result, soils underlying the Project site are unlikely to be susceptible to soil expansion.

Subsidence

Subsidence is the permanent collapse of the pore space within a soil or rock and downward settling of the earth's surface relative to its surrounding area. Subsidence is typically experienced on a regional scale and can result from the extraction of water or oil, the addition of water to the land surface—a condition called “hydrocompaction”—or peat loss. The compaction of subsurface sediment caused by the withdrawal or addition of fluids can cause subsidence. Land subsidence can disrupt surface drainage, reduce aquifer storage, cause earth fissures, damage structures, and damage wells, roads, and utility infrastructure.

According to the USGS Areas of Land Subsidence in California Map, the Project site is not located in an area of recorded subsidence because of groundwater or oil extraction and peat loss. However, according to the City of San

Diego General Plan EIR Figure 3.4-1, Geotechnical and Relative Risk Areas, the Project site is located in a zone with a low to moderate potential for geologic hazards, including subsidence potential (City of San Diego 2007a).

Paleontological Resources

Paleontological resources, or fossils, are the remains of once living plants and/or animals and their traces (e.g., burrows and tracks) preserved in earth's crust, and are generally considered to be greater than 5,000 years old or prior to recorded human history per the Society of Vertebrate Paleontology guidelines (SVP 2010). Except for fossils found in low-grade metasedimentary rocks, significant paleontological resources are found in sedimentary rock units that are old enough to preserve the remains or traces of plants and animals.

3.5.2 Relevant Plans, Policies, and Ordinances

Federal

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. The act accomplished this goal by establishing the National Earthquake Hazards Reduction Program. This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program Act, which refined the description of agency responsibilities, program goals, and objectives.

The mission of the National Earthquake Hazards Reduction Program includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land-use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The Reduction Program Act designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other Reduction Program Act agencies include the National Institute of Standards and Technology, the National Science Foundation, and the USGS.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Act (California Public Resources Code, Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The primary purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code, Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board administers regulations promulgated by the U.S. Environmental Protection Agency (Title 55 Code of Federal Regulations Section 47990), requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the State Water Resources Control Board's jurisdiction is administered through nine Regional Water Quality Control Boards. Under these federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. The general permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is the preparation of a stormwater pollution prevention plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction.

California Building Standards Code

The state regulations protecting structures from geo-seismic hazards are contained in the CBC (24 CCR, Part 2), which is updated on a triennial basis. These regulations apply to public and private buildings in the state. Until January 1, 2008, the CBC was based on the then-current UBC and contained additions, amendments, and repeals specific to building conditions and structural requirements of the State of California. The 2019 CBC, effective January 1, 2020, is based on the current International Building Code and enhances the sections dealing with existing structures. Seismic-resistant construction design is required to meet more stringent technical standards than those set by previous versions of the CBC.

Chapters 16 and 16A of the 2019 CBC include structural design requirements governing seismically resistant construction, including (but not limited to) factors and coefficients used to establish seismic site class and seismic occupancy category for the soil/rock at the building location and the proposed building design. Chapters 18 and 18A include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A). Chapter 33 of the 2019 CBC includes (but is not limited to) requirements for safeguards at worksites to ensure stable excavations and cut or fill slopes (Section 3304).

California Environmental Quality Act

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations. This report satisfies project requirements in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.) and

California Public Resources Code, Section 5097.5. This analysis also complies with guidelines and significance criteria specified by the Society of Vertebrate Paleontology (SVP 2010).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the Environmental Checklist Form, which addresses the potential for adverse impacts to “unique paleontological resource[s] or site[s] or . . . unique geological feature[s]” (14 CCR 15000 et seq.). This provision covers fossils of signal importance—remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group—as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that, generally, a resource shall be considered “historically significant” if it has yielded or may be likely to yield information important in prehistory (14 CCR 15064.5[a][3][D]). Paleontological resources would fall within this category. California Public Resources Code, Chapter 1.7, Sections 5097.5 and 30244, also regulate removal of paleontological resources from state lands, define unauthorized removal of fossil resources as a misdemeanor, and require mitigation of disturbed sites.

Local

County of San Diego Guidelines for Determining Significance, Geologic Hazards

The County of San Diego Guidelines for Determining Significance, Geologic Hazards, is used by County staff for the review of discretionary projects and environmental documents pursuant to CEQA. These guidelines present a range of quantitative, qualitative, and performance levels for environmental effects. Normally (in the absence of substantial evidence to the contrary), non-compliance with a particular standard stated in these guidelines would result in a significant impact. In contrast, compliance would typically mean the impact would be determined to be less than significant.

City of San Diego General Plan

The Public Facilities, Services, and Safety Element of the City of San Diego General Plan, in part, summarizes mitigation goals and specific policies related to seismic hazards. Goals and policies related to seismic hazard and landslide include the following (City of San Diego 2018):

- **PF-Q.1** Protect public health and safety through the application of effective seismic, geologic, and structural considerations.
 - a. Ensure that current and future community planning and other specific land use planning studies continue to include consideration of seismic and other geologic hazards. This information should be disclosed, when applicable, in the CEQA document accompanying a discretionary action.
 - b. Maintain updated citywide maps showing faults, geologic hazards, and land use capabilities, and related studies used to determine suitable land uses.
 - c. Require the submission of geologic and seismic reports, as well as soil engineering reports, in relation to applications for land development permits whenever seismic or geologic problems are suspected.
 - e. Coordinate with other jurisdictions to establish and maintain a geologic “data bank” for the San Diego area.
 - f. Regularly review local lifeline utility systems to ascertain their vulnerability to the disruption caused by seismic or geologic hazards and implement measures to reduce any vulnerability.
 - g. Adhere to state laws pertaining to seismic and geologic hazards

- **PF-Q.2** Maintain or improve the integrity of structures to protect residents and preserve communities.
 - a. Continue to consult with qualified geologists and seismologists to review geologic and seismic studies submitted to the City as project requirements.

The City of San Diego General Plan identifies the occurrence of important paleontological resources within the City (City of San Diego 2007b). The section on Environmental Analysis addresses paleontological resources directly. Thresholds for significance were updated by the City in 2016 (City of San Diego 2016).

3.5.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to geology, soils, and paleontology are based on the combined significance thresholds of the County and City, as well as Appendix G of the CEQA Guidelines. According to the combined guidelines, a significant impact related to geology and soils would occur if the Project would:

1. Propose any building or structure to be used for human occupancy over or within 50 feet of the trace of an Alquist-Priolo fault or County Special Study Zone fault (County of San Diego).
2. Propose the following uses within an Alquist-Priolo Zone, which are prohibited by the County (County of San Diego):
 - i. Uses containing structures with a capacity of 300 people or more. Any use having the capacity to serve, house, entertain, or otherwise accommodate 300 or more persons at any one time.
 - ii. Uses with the potential to severely damage the environment or cause major loss of life. Any use having the potential to severely damage the environment or cause major loss of life if destroyed, such as dams, reservoirs, petroleum storage facilities, and electrical power plants powered by nuclear reactors.
 - iii. Specific civic uses. Police and fire stations, schools, hospitals, rest homes, nursing homes, and emergency communication facilities.
3. Be located within a County Near-Source Shaking Zone or within Seismic Zone 4, and the project does not conform to the Uniform Building Code (UBC) (County of San Diego).
4. Have the potential to expose people or structures to substantial adverse effects because (County of San Diego):
 - i. The project site has potentially liquefiable soils;
 - ii. The potentially liquefiable soils are saturated or have the potential to become saturated; and
 - iii. In-situ soil densities are not sufficiently high to preclude liquefaction.
5. Expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving landslides (County of San Diego).
6. Lie directly below or on a known area subject to rockfall, which could result in the collapse of structures.
7. Result in a substantial increase in wind or water erosion of soils, either on or off the site (City of San Diego).
8. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (City of San Diego).
9. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), and not conform with the Uniform Building Code.
10. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
11. Require over 1,000 cubic yards of excavation in a high resource potential geologic deposit/formation/rock unit (City of San Diego).
12. Require over 2,000 cubic yards of excavation in a moderate resource potential geologic deposit/formation/rock unit (City of San Diego).

Methodology

The analysis of impacts to geology, soils, and paleontological resources is assessed by comparing existing conditions to changes that could occur with the implementation of the proposed Project. The analysis evaluates if the Project would directly or indirectly cause or exacerbate soil, geologic, or seismic hazards. Both the County and City have adopted significance guidelines to assist staff, project proponents, and the public in determining whether a project may have a significant impact. These guidelines are used in conjunction with Appendix G of the CEQA Guidelines to provide technical guidance in evaluating the potential significance of a project's environmental impact and to provide a consistent and objective basis for determining the level of impact. The most stringent thresholds of both the County and City guidelines were compiled to create threshold guidelines that would satisfy the requirements of each party (City and County).

A preliminary geotechnical investigation by Haley & Aldrich (Appendix E-1) and grading and revegetation plans prepared by Dudek were used when evaluating geologic hazards, in combination with publicly available soils-, geologic-, and seismic hazards-related documents, with respect to the thresholds of significance listed below. To determine the paleontological sensitivity of individual rock units present within the Project site, a paleontological records search was requested from the San Diego Natural History Museum on March 26, 2019, and a desktop paleontological resources review was conducted (see Appendix E-3).

3.5.4 Impacts Analysis

1. *Would the Project propose any building or structure to be used for human occupancy over or within 50 feet of the trace of an Alquist-Priolo fault or County Special Study Zone fault?*

The Project is not located over or within 50 feet of an Alquist-Priolo Earthquake Fault Zone or County Special Study Fault Zone. The closest Alquist-Priolo Earthquake Fault Zone is the Silver Strand Fault, approximately 9 miles northwest of the Project site. In addition, the closest County Special Study Zone is located approximately 60 miles to the northeast. Although two unnamed, pre-Holocene faults have been mapped within the Project site (Figure 3.5-1), based on the age of these faults, earthquakes and surface rupture are not anticipated along these faults. The Project would not result in the construction of any buildings or structures for human occupancy. Furthermore, the Project would not directly or indirectly cause existing Alquist-Priolo faults or County Special Study Zone faults to rupture. As a result, **no impacts** related to Alquist-Priolo faults or County Special Study Zone faults would occur.

2. *Would the Project propose the following uses within an Alquist-Priolo Fault Zone, which are prohibited by the County:*

i. Use containing structures with a capacity of 300 people or more? Any use having the capacity to serve, house, entertain, or otherwise accommodate 300 or more persons at any one time?

As previously discussed, the Project would not be located within an Alquist-Priolo Fault Zone. The Project would involve the reclamation and remediation of an abandoned sand and gravel quarry to natural landform. Except for existing floodlights, there are no structures located within the Project site. In addition, no structures for human occupancy would be constructed, including structures to house, entertain, or otherwise accommodate any number of persons, because of Project development. As such, **no impacts** related to creating or containing structures within an Alquist-Priolo Fault Zone would occur within the Project site.

- ii. Uses with the potential to severely damage the environment or cause major loss of life? Any use having the potential to severely damage the environment or cause major loss of life if destroyed, such as dams, reservoirs, petroleum storage facilities, and electrical power plants powered by nuclear reactors?*

The Project would be located within a minimally developed portion of the Tijuana River Valley Regional Park. No dams, reservoirs, petroleum storage facilities, or electrical power plants powered by nuclear reactors would be located within or near the Project site. In addition, no proposed structures for human occupancy would be developed within the Project site. Once restored, oversteepened and potentially unstable slopes would be graded to context-appropriate topography, then revegetated with native species. This process would increase on-site soil and slope cohesiveness, reducing ground failure potential. As the Project is not located within an Alquist-Priolo Fault Zone and would not severely damage the environment or cause major loss of life, **no impacts** would occur.

- iii. Have specific civic uses, such as police and fire stations, schools, hospitals, rest homes, nursing homes, and emergency communication facilities?*

The Project would be located within a minimally developed portion of the Tijuana River Valley Regional Park. No civic facilities would be located within the Project site. The closest civic facility is the South Bay Water Reclamation Plant, located approximately 500 feet northeast of the Project site. Once restored, previously unstable slopes would be graded and vegetated, reducing on-site seismically induced ground failure potential. As the Project is not located within an Alquist-Priolo Fault Zone, would not have any specific civic uses, and would not result in damage to existing civic centers, **no impacts** would occur.

- 3. *Would the Project be located within a County Near-Source Shaking Zone or within Seismic Zone 4, and not conform to the Uniform Building Code (UBC)?***

According to Figure 3, Near Source Ground Shaking Zones, of the County Guidelines for Determining Significance, the Project site is not located within a seismic shaking buffer zone. However, according to the UBC, all of San Diego County, including the Project site, is located within Seismic Zone 4. Numerous regional faults (e.g., San Andreas, San Jacinto, Elsinore, Rose Canyon) can produce moderate to large earthquakes that could affect the Project site. Regardless, Project development would be completed in accordance with the current City of San Diego Whitebook and Greenbook (i.e., standard specifications for public works construction), as well as the Project's Preliminary Geotechnical Evaluation and Geologic Reconnaissance (Appendix E-1), revegetation monitoring and management plan (Appendix E-2), and 80% grading plans. These plans include general guidelines for grading activities within the Project site. Recommendations, in part, include the compaction of on-site fill materials, slope construction specifications, incorporation of geotechnical specifications if required, and revegetation specifications. Collectively, these recommendations would ensure that on-site slopes are stabilized and resistant to seismic ground failure compared to existing conditions.

As with all construction with the City, development within the Project site would be required to comply with the relevant seismic safety requirements of the CBC, which has superseded the UBC with more stringent seismic requirements, and the City seismic safety requirements. The CBC provides procedures for earthquake-resistant development design. As such, with compliance with state and local building standards, as well as site-specific grading and restoration recommendations, the Project would have **less-than-significant impacts** related to strong seismic ground shaking.

4. *Would the Project have the potential to expose people or structures to substantial adverse effects because:*
i. The Project site has potentially liquefiable soils?

According to the County of San Diego Multi-Jurisdictional Hazard Mitigation Plan Figure 3.3.6, the Project site is in a high liquefaction risk zone. Hazards associated with soil liquefaction and seismic-related ground failure include temporary loss of soil bearing capacity, lateral spreading, differential compaction, and slope instability. However, no structures would be built as part of the Project.

Grading activities would be conducted in accordance with the site-specific grading plans. These recommendations include the compaction of on-site fill materials, slope construction specifications, incorporation of geotechnical specifications, and the revegetation of graded slopes to ensure that on-site slopes are resistant to seismic ground failure during and after construction activities. In addition, as with all development within the City, the Project would be required to comply with the CBC and the City of San Diego Building Code, which includes requirements to ensure that new development would not cause or exacerbate geological and soil hazards, including seismic ground shaking and seismically related ground failure. Measures to minimize the risk of loss, injury, and death from construction activities are additionally included in the City Building Code. Although the Project could be subject to liquefaction, the Project would not expose people or structures to substantial adverse effects relating to liquefiable soils. As such, impacts would be **less than significant**.

ii. The potentially liquefiable soils are saturated or have the potential to become saturated?

On-site groundwater depths vary from just below the surface to more than 20 feet below ground surface. Such shallow groundwater could increase the potential for liquefaction and ground failure to occur in the event of an earthquake. Appendix E-1 includes recommendations for slope stabilization techniques to ensure that on-site graded slopes are resistant to seismic ground failure during and after construction activities. The slope stabilization techniques have been incorporated in the Project grading plans. Once developed, on-site soil saturation levels (i.e., shallow groundwater) would not increase compared to existing conditions, and the Project would not expose people or structures to substantial adverse effects relating to potentially liquefiable soils. As such, impacts would be **less than significant**.

iii. In-situ soil densities are not sufficiently high to preclude liquefaction?

Prior to quarrying, on-site geologic units were predominantly comprised of dense, granular sediments that are typically not conducive to liquefaction. However, looser fine to medium grain sediments may be present on site that, when coupled with shallow groundwater levels, could be susceptible to seismically induced ground failure. Regardless, proposed grading activities would be completed in accordance with the site-specific grading plans, as well as the City of San Diego Whitebook and Greenbook. Collectively, these plans would ensure that the Project would not exacerbate or increase the exposure of people or structures to liquefaction. As a result, impacts would be **less than significant**.

5. *Would the Project expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

According to CGS and the County, the Tijuana River Valley has been identified as a region with unstable and oversteepened slopes. In addition, a large landslide is present west of the Project site (Figure 3.5-1). Project implementation would include grading and revegetation of oversteepened and potentially unstable slopes

to less steep topography over six phases. Phase 1 would reduce the grade of the oversteepened slope to approximately 2:1 (see Figure 2-4a). The slope would be graded, and sediment would be placed on the slope to achieve the desired grade. Approximately 6,500 cubic yards of sediment would be placed on the slope during Phase 1. Subsequent phases would include placement of fill material to further reduce the slope steepness.

Preparation of areas to receive sediment would be performed in accordance with applicable standards of the City of San Diego Whitebook and the Greenbook and Project grading plans. During interim grading activities, temporary slope stabilization BMPs would be used, including the preservation of existing vegetation, straw swales, hydroseeding, and mulching. After grading, revegetation would be implemented in accordance with the Project's Revegetation Monitoring and Management Plan (Appendix E-2) and revegetation plans.

In areas where the slope is 5:1 or steeper, benching would be required to key the sediment/fill into the slope face. Benching would be constructed into firm soils, free of loose or disturbed soils, such that a minimum of 3 feet of vertical face height is exposed into firm soil unless otherwise specified by a geotechnical engineer. The horizontal surface of each bench would be scarified to a depth of at least 6 inches prior to the first placement of fill. Fill slopes would be constructed at inclinations no steeper than 2:1 and would be keyed and benched into competent material to the maximum extent practicable. Keying and benching would be observed by a geotechnical professional supervised by a California-registered Geotechnical Engineer. The bench width would be at least 1.5 times the width of the compaction equipment and not less than 4 feet, or as recommended by the Geotechnical Engineer per on-site conditions observed during construction.

Aside from temporary and permanent drainage features, no structures would be developed because of Project implementation. In addition, on-site structures (i.e., CBP floodlights) are generally located on the upper ridge platform within the Project Impact Area and are unlikely to be affected by landslides. As the Project would reduce on-site landslide potential and would not expose people or structures to substantial adverse effects of landslides, Project impacts would be **less than significant**.

6. *Would the Project lie directly below or on a known area subject to rockfall, which could result in the collapse of structures?*

Cobble and boulder-sized sediments may be present within on-site near-vertical to vertical slopes. In the event of seismic or non-seismic ground failure, cobble and boulder-sized sediments could become detached, resulting in a rockfall. However, as previously discussed, the Project would reduce on- and off-site landslide potential, including the potential for rockfalls, compared to existing conditions. In addition, aside from temporary and permanent drainage features, no structures would be developed because of the proposed Project, and existing floodlights are located on the ridge, away from slopes and potential detached debris zones. As a result, the Project would have **less-than-significant impacts**.

7. *Would the Project result in a substantial increase in wind or water erosion of soils, either on or off the site?*

Construction

Implementation of the Project would result in the grading and restoration of oversteepened and potentially unstable slopes to less steep topography over six north-northeasterly advancing phases (Phases 1 through 6).

Initial site preparation would, in part, involve the construction of a temporary sediment processing station that

would include a sediment trap and stockpile site. The processing plant would be used to screen rock, cobbles, tires, trash, and other debris, as well as to process sediment into piping sand, fill, and waste stockpiles.

Restoration activities would include the placement of processed sediment, excavated as part of ongoing, annual, permitted channel and basin maintenance activities in the Tijuana River Valley on graded slopes. According to Table 3.5-2, approximately 1,040,000 cubic yards of sediment would be required for restoration over an approximate 14-year period, or approximately 75,000 cubic yards of sediment per year. Once final landform topography has been established, each phase (excluding Phase 1) would be revegetated with interim native erosion control seed mix, consisting of a mix of low growing herbs, grasses, and wildflowers that germinate quickly and provide vegetative cover.

Table 3.5-2. Restoration Phasing and Estimated Sediment Volumes

| Phase | Sediment Volume Required (Cubic Yards) | Years to Complete ¹ |
|--------------|--|--------------------------------|
| 1 | 6,500 | 0.08 |
| 2 | 108,500 | 1.45 |
| 3 | 165,000 | 2.2 |
| 4 | 240,000 | 3.2 |
| 5 | 230,000 | 3.1 |
| 6 | 290,000 | 3.8 |
| Total | 1,040,000 | 14 |

Note:

¹ Years to complete are based on an average available sediment volume of 75,000 cubic yards per year.

Proposed grading and restoration activities could result in temporary, short-term impacts related to wind and water erosion and possible off-site sedimentation of nearby drainage areas. State and federal NPDES requirements include the preparation and implementation of a SWPPP for projects with cumulative ground disturbance more than 1 acre. In compliance with Construction General Permit requirements, a SWPPP would establish erosion and sediment control BMPs for construction activities.

BMPs would be installed as necessary throughout the different phases (at the beginning, during, and at the end of each year's construction season) of the Project and during the 5-year monitoring period following the completion of each phase. The intermediate graded slopes between phases and final slopes are designed to mitigate possible stormwater runoff impacts in accordance with City and County regulations and the NPDES permit. Construction BMPs (straw wattles, silt socks/fiber rolls, etc.) identified in the NPDES permit would be utilized on and around the grading operations as specified in a SWPPP to stabilize graded slopes. BMPs would include installation of non-invasive, non-habitat forming erosion control seed mix (to be defined in the grading plans and specifications), silt fencing, fiber rolls, and gravel bags where soil erosion and runoff is expected. A sediment trap would be maintained throughout each phase. Unless otherwise noted in grading plans, runoff would be directed to the sediment basin by sheet flow and temporary drainage features that would be removed prior to subsequent phases. Sediment from the trap would either be used on site, reused elsewhere, or disposed of at an appropriate regional landfill.

Excavated sediment would arrive on site and be placed on native soil. When stockpiles are not being actively generated, the screened sediment would be covered with 8-millimeter plastic sheeting that is appropriately restrained by either gravel filled bags roped together and spaced not more than 6 feet apart,

or wooden lath with dimensions of 2 inches by 4 inches by 8 feet and made of fir or pine, with anchor restrainers made of steel reinforcing bars spaced not more than 3 feet apart along the wooden lath. Coverings are required for dust suppression and compliance with a SWPPP that would be prepared prior to construction. BMPs consisting of a linear sediment barrier around the base of each stockpile would also be placed and appropriately anchored. Examples of linear sediment barriers include a silt fence, fiber rolls, gravel bag berms, and straw bale barriers. This sediment barrier would prevent run-on and concentrated stormwater flows from contacting the stockpile. The plastic sheeting covers would be maintained and replaced as necessary. Linear sediment barriers would be repaired or replaced as needed to keep them functioning properly.

During work and whenever stockpiles are uncovered, they would be treated using water or other dust suppressant, though no runoff would be allowed. Stockpiles would be placed on site such that they do not come into contact with surface run-on or runoff, and they would be located no less than 50 feet away from concentrated flows of stormwater, drainage courses, and inlets. Each stockpile would have adequate spacing between one another to allow access for vehicles and materials handling. Areas between stockpiles would be kept free from obstruction and allow easy movement of emergency vehicles.

In addition, grading activities would be completed in accordance with City of San Diego Whitebook and Greenbook, Revegetation Monitoring and Management Plan (Appendix E-2), and 80% grading plans to minimize soil erosion. The grading and reclamation plans would include appropriate measures for the revegetation of on-site disturbed areas to reduce on- and off-site erosion potential. As a result, compliance with the required SWPPP that would be prepared prior to construction, grading and reclamation plans, and the City of San Diego Greenbook and Whitebook would ensure that soil erosion impacts would be minimized. As such, construction related impacts would be **less than significant**.

Operations

Long-term operation of the Project would not result in an increase of soil erosion compared to existing conditions, as unstable slopes would be graded to less steep topography and stabilized with native vegetation. According to the Project grading plans and preliminary hydraulic and hydrology calculations (these calculations are reflected in the grading plans and sizing of drainage features), restoration of the Project site would improve existing drainage conditions by creating gentler slopes by filling in the former quarry and implementing reinforced drainage courses where necessary. These improvements would minimize on- and off-site erosion potential by decreasing stormwater runoff velocities and distributing flows over a wider area, reducing stormwater flow erosion potential. In addition, on-site soils would not be exposed to additional wind flows compared to existing conditions. Lastly, the Project would minimize the long-term maintenance needs of created slopes once final vegetation is established. As such, with the implementation of proposed BMPs and additional measures/practices to be identified in the SWPPP (prepared prior to construction), operational impacts related to wind and water erosion would be **less than significant**.

8. *Would the Project be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

As previously described for significance thresholds 4 (i, ii, iii), 5, 6, and 7, the Project would not increase the potential for landslides, liquefaction, and lateral spreading to occur. Therefore, the potential impacts associated with these spreading hazards would be **less than significant**.

Subsidence

According to USGS, the Tijuana River Valley is not located in an area of recorded subsidence as a result of groundwater or oil extraction and peat loss. However, the City has determined that the Project site is in a zone with a low to moderate potential for geologic hazards, including subsidence. Aside from minor water usage associated with a short-term irrigation plan, Project operation would not require water usage. Therefore, the potential impacts associated with subsidence would be **less than significant**.

Collapsible Soils

Prior to quarrying operations, on-site materials were predominantly comprised of dense, granular materials. However, looser, fine- to medium-grain sediments may be present on site and prone to collapse. In addition, processed sandy fill material would be used during the grading of on-site slopes. These materials may be prone to collapse and may collapse because of grading within the Project site. Grading in such areas typically consists of over-excavation of loose, unconsolidated materials until such a depth that competent material is encountered. The excavated area would then typically be backfilled with compacted soil until the finished grade is achieved. Fills and on-site soils would then be tested to determine if soil amending would be necessary. If determined to be necessary, soil amendments would be coordinated with a geotechnical engineer in consultation with a Project biologist.

In addition, the proposed development would be constructed in compliance with the City of San Diego Whitebook and Greenbook, as well as the future Project Operations and Maintenance Plan, Revegetation Monitoring and Management Plan (Appendix E-2), and grading plans. Therefore, the potential impacts associated with collapsible soils would be **less than significant**.

9. *Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), and not conform with the Uniform Building Code?*

Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. The Project would involve the restoration and reclamation of oversteepened slopes to less steep topography. In addition, through phased sediment placement and restoration, the Project would return the site to historical (i.e., pre-mining operations) topography and vegetation. No structures are proposed to be developed because of the implementation of the Project. In addition, existing light poles located on the ridge and managed by CBP would be unaffected by on-site grading and habitat restoration activities. As such, impacts associated with expansive soils would be **less than significant**.

10. *Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The Project would involve the restoration and reclamation of oversteepened slopes to less steep topography. In addition, through phased sediment placement and restoration, the Project would return the site to historical (i.e., pre-mining operations) topography and vegetation; once on-site activities are complete, the site would be managed as open space. No septic tanks or alternative wastewater disposal systems would be used or installed; therefore, implementation of the Project would result in **no impact**.

11. *Would the Project require over 1,000 cubic yards of excavation in a high resource potential geologic deposit/formation/rock unit?*

Dudek prepared a Paleontological Resources Review Memorandum for the Project (see Appendix E-3). As stated in Appendix E-3, the Project site is underlain by the following geological units (listed from youngest to oldest):

- Quaternary landslide deposits
- Bay Point Formation
- Lindavista Formation
- San Diego Formation

According to the County guidelines for paleontology (City of San Diego 2016; Deméré and Walsh 1993) and the records search results received from the San Diego Natural History Museum on April 1, 2019, the Pleistocene-age Bay Point Formation and the Pliocene- and Pleistocene-age San Diego Formation have high potential to yield paleontological resources (i.e., high resource importance), whereas the Pleistocene-age Lindavista Formation has moderate potential to yield paleontological resources. Quaternary landslide deposits have low potential to yield paleontological resources.

The mapped paleontological resource sensitivity of geological units underlying the Project site is displayed on Figure 3.5-3, Paleontological Sensitivity. As shown on the figure, the eastern extent of the Project site (i.e., where Project activities would occur) is underlain by geological units with moderate to high sensitivity. For the Project, most of the grading would occur on the steep, eroded slope generally located along the shared boundary of the easternmost parcels (Assessor's Parcel Nos. 664-011-0500 and 664-011-0400). This area is primarily underlain by geological units of moderate sensitivity; however, the northern extent of the slope extends into an area underlain by geological units of high sensitivity (see Figure 3.5-3). Because ground disturbance associated with the Project, including back-cuts to develop benches for the initial placement of fill (sediment would ultimately be modified to achieve a naturalistic slope look), would include over 1,000 cubic yards of excavation into native geologic units with moderate to high resource potential for paleontological resources, impacts are **potentially significant**.

12. *Would the Project require over 2,000 cubic yards of excavation in a moderate resource potential geologic deposit/formation/rock unit?*

See analysis under threshold 11. Most of the excavation work associated with the Project would occur on the steep eroded slope generally located along the eastern boundary of the Project site that is primarily underlain by geological units of moderate sensitivity. Ground-disturbing work associated with the Project for the placement and compaction of managed and processed sediments would include over 2,000 cubic yards of excavation into native geologic units with moderate resource potential for paleontological resources; therefore, impacts are **potentially significant**.

3.5.5 Cumulative Impacts

Geology and soils impacts related to cumulative projects involve hazards related to site-specific soil conditions, erosion, and ground shaking during earthquakes. As listed in Table 2-11, 24 related projects are located within proximity to the Project site. With the exception of soil erosion, which is addressed cumulatively through implementation of site-specific NPDES permits, the geology and soils impacts on each site are specific to that site

and its users and would not be in common or contribute to (or be shared with, in an additive sense) the geology or soils impacts on other sites. In addition, development on each site is subject to uniform site development and construction standards, including those contained in the CBC and City and County building codes, which are designed to protect public safety. Like the proposed Project, these standards include requirements for completion of site-specific geotechnical reports, which would address potential geologic hazards, such as seismically induced ground shaking, surface fault rupture, liquefaction, collapsible soils, and seismically induced settlement. Each geotechnical investigation would include recommendations that would mitigate any potential effects related to geologic hazards in accordance with the CBC and City and County building codes. Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on geology and soils would be **less than significant**.

Potential cumulative impacts to paleontological resources would result from projects that combine to create an environment where exposed fossils are at risk of destruction by construction equipment, looting by the public, and natural causes such as weathering and erosion. Most impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. For example, Project impacts to paleontological resources would be avoided and/or mitigated with implementation of a paleontological mitigation program during excavations into paleontologically sensitive geological units, and any paleontological resources recovered during Project excavations would be sufficiently analyzed and recovered by the on-site paleontological monitor under the supervision of the qualified Paleontological Principal Investigator designated for the Project. Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on paleontological resources would be **less than significant**, and no further mitigation measures are required.

3.5.6 Mitigation Measures

Prior to the issuance of grading permits, the Project applicant shall provide written confirmation to the City that a qualified paleontologist has been retained to carry out an appropriate mitigation program, as outlined below.

MM-PAL-1 Prior to Permit Issuance or Bid Opening/Bid Award.

A. Entitlements Plan Check

Prior to issuance of any construction permits, including, but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, or a Notice to Proceed for Subdivisions, but prior to the first preconstruction meeting, whichever is applicable, the City Engineer and/or Building Inspector (BI) shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

1. The applicant shall submit a letter of verification to Resident Engineer and/or BI identifying the qualified Principal Investigator (PI) for the Project and the names of all persons involved in the paleontological monitoring program. A qualified PI is defined as a person with a PhD or MS or equivalent in paleontology or closely related field (e.g., sedimentary or stratigraphic geology, evolutionary biology, etc.) with demonstrated knowledge of Southern California paleontology and geology, and documented experience in professional paleontological procedures and techniques.

MM-PAL-2 Prior to Start of Construction.

A. Verification of Records Search

1. The Principal Investigator (PI) shall provide verification to Resident Engineer (RE) and/or Building Inspector (BI) that a site-specific records search has been completed. Verification includes but is not limited to a copy of a confirmation letter from the San Diego Natural History Museum or another relevant institution that maintains paleontological collections recovered from sites within the City of San Diego.
 2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
- B. PI Shall Attend Preconstruction Meetings
1. Prior to beginning any work that requires monitoring, the applicant shall arrange a Preconstruction Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, RE, and BI, as appropriate. The qualified paleontologist (PI) shall attend any grading/excavation related Preconstruction Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the CM and/or Grading Contractor.
 - a. If the PI is unable to attend the Preconstruction Meeting, the applicant shall schedule a focused Preconstruction Meeting with the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
 2. Identify Areas to be Monitored

Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11 × 17) to RE and/or BI identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site-specific records search and information regarding existing known geologic conditions (e.g., geologic deposits as listed in the Paleontological Determination Matrix below).
 3. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to the RE and/or BI indicating when and where monitoring will occur.
 - b. The PI may submit a detailed letter to RE and/or BI prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents and geotechnical reports that indicate conditions such as depth of excavation and/or thickness of artificial fill overlying bedrock, presence or absence of fossils, etc., which may reduce or increase the potential for resources to be present.

MM-PAL-3 During Construction.

- A. Monitor Shall be Present During Grading/Excavation/Trenching
 - 1. The paleontological monitor shall be present full-time during grading/excavation/trenching activities as identified on the Paleontological Monitoring Exhibit (PME) that could result in impacts to formations with high and moderate resource sensitivity. The Construction Manager (CM) is responsible for notifying the Principal Investigator (PI), Resident Engineer (RE), and/or Building Inspector (BI) of changes to any construction activities, such as in the case of a potential safety concern within the area being monitored. In certain circumstances, Occupational Safety and Health Administration safety requirements may necessitate modification of the PME.
 - 2. The PI may submit a detailed letter to the RE and/or BI during construction requesting a modification to the monitoring program after the occurrence of a field condition, such as trenching activities that do not encounter previously undisturbed and paleontologically sensitive geologic deposits as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
 - 3. The paleontological monitor shall document field activity via the Consultant Site Visit Record (CSV). The CSVs shall be emailed by the CM to the RE and/or BI the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of any discoveries.
- B. Discovery Notification Process
 - 1. In the event of a discovery, the paleontological monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and notify the RE and/or BI. The contractor shall also process a construction change for administrative purposes to formalize the documentation and recovery program, including modification to Mitigation Monitoring and Compliance (MMC).
 - 2. The paleontological monitor shall notify the PI (unless paleontological monitor is the PI) of the discovery.
 - 3. The PI shall immediately notify MMC of the discovery, and shall submit documentation to MMC within 24 hours by email with photos of the resource in context.
- C. Recovery of Fossils

If a paleontological resource is encountered:

 - 1. The paleontological monitor shall salvage unearthed fossil remains, including simple excavation of exposed specimens or, if necessary, as determined by the PI, plaster-jacketing of large and/or fragile specimens or more elaborate quarry excavations of richly fossiliferous deposits.
 - 2. The paleontological monitor shall record stratigraphic and geologic data to provide a context for the recovered fossil remains, including a detailed description of all paleontological localities within the Project site, as well as the lithology of fossil-bearing strata within the measured stratigraphic section, and photographic documentation of the geologic setting.

MM-PAL-4 Post Construction.

- A. Preparation and Submittal of Draft Paleontological Monitoring Report
 - 1. The Principal Investigator (PI) shall submit two copies of the Draft Monitoring Report (even if negative), prepared to the satisfaction of the Development Services Department. The Draft Paleontological Monitoring Report shall describe the methods, results, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to Mitigation

Monitoring and Compliance (MMC) for review and approval within 90 days following the completion of monitoring.

- a. For significant or potentially significant paleontological resources encountered during monitoring, as identified by the PI, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
 - b. The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines (revised November 2017), and submittal of such forms to the San Diego Natural History Museum and MMC with the Draft Paleontological Monitoring Report.
2. MMC shall return the Draft Paleontological Monitoring Report to the PI for revision or for preparation of the Final Report.
 3. The PI shall submit revised Draft Paleontological Monitoring Report to MMC for approval.
 4. MMC shall provide written verification to the PI of the approved Draft Paleontological Monitoring Report.
 5. MMC shall notify the Resident Engineer (RE) and/or Building Inspector (BI) of receipt of all Draft Paleontological Monitoring Report submittals and approvals.
- B. Handling of Fossil Remains
1. The PI shall ensure that all fossil collected are cleaned to the point of curation (e.g., removal of extraneous sediment, repair of broken specimens, and consolidation of fragile/brittle specimens) and catalogued as part of the Paleontological Monitoring Program.
 2. The PI shall ensure that all fossils are analyzed to identify stratigraphic provenance, geochronology, and taphonomic context of the source geologic deposit; that faunal material is taxonomically identified; and that curation has been completed, as appropriate.
- C. Curation of Fossil Remains: Deed of Gift and Acceptance Verification
1. The PI shall be responsible for ensuring that all fossils associated with the paleontological monitoring program for this Project are permanently curated with an accredited institution that maintains paleontological collections (such as the San Diego Natural History Museum).
 2. The PI shall include an acceptance verification from the curation institution in the Final Paleontological Monitoring Report submitted to the RE and/or BI, and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
 2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC that includes the Acceptance Verification from the curation institution.

3.5.7 Level of Significance After Mitigation

Except for potentially significant impacts to paleontological resources, Project impacts to geology and soil resources are **less than significant** or would have **no impact**. With implementation of Mitigation Measure (MM) PAL-1 through MM-PAL-4, which consists of monitoring of ground disturbance in native geological units with high and moderate resource sensitivity, a discovery notification process, and preparation of a draft paleontological monitoring report, potentially significant impacts to paleontological resources (i.e., Impacts 11 and 12) would be reduced to a **less-than-significant level**.

3.5.8 References

- CGS (California Geological Survey). 1995. *Landslide Hazards in the Southern Part of the San Diego Metropolitan Area, San Diego County*. Accessed on March 29, 2020. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_95-03/.
- CGS. 2010. "Fault Activity Map of California." Accessed on March 24, 2020. <https://maps.conservation.ca.gov/cgs/fam/>.
- CGS. 2016. "Earthquake Zone of Required Investigation." Accessed on March 24, 2020. <https://maps.conservation.ca.gov/cgs/EQZApp/>.
- CGS. 2018. *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California. Special Publication 42, Revised 2018*. Accessed on March 24, 2020. https://www.conservation.ca.gov/cgs/Documents/SP_042.pdf.
- City of San Diego. 2007a. *City of San Diego's Draft General Plan, Program Environmental Impact Report, Chapter 3.4 Geologic Conditions*. Accessed on March 20, 2020. <https://www.sandiego.gov/sites/default/files/legacy//planning/genplan/pdf/peir/eir3p4geologicfinal.pdf>.
- City of San Diego. 2007b. *City of San Diego's Draft General Plan, Program Environmental Impact Report, Chapter 3.11 Paleontological Resources*. Accessed on May 27, 2020. <https://www.sandiego.gov/sites/default/files/legacy//planning/genplan/pdf/peir/paleontological.pdf>.
- City of San Diego. 2016. *California Environmental Quality Act, Significance Determination Thresholds*. Development Services Department.
- City of San Diego. 2018. "Public Facilities, Services & Safety Element." In *City of San Diego General Plan*. June 2018. https://www.sandiego.gov/sites/default/files/pf_2018-_final.pdf.
- County of San Diego. 2007. *Guidelines for Determining Significance, Geologic Hazards*. Accessed on March 26, 2020. https://www.sandiegocounty.gov/dplu/docs/Geologic_Hazards_Guidelines.pdf.
- County of San Diego. 2011. *San Diego County General Plan Update, Final Environmental Impact Report, Chapter 2: Environmental Effects of the Proposed Project, 2.6 Geology and Soils*. https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/BOS_Aug2011/EIR/FEIR_2.06_-_Geology_2011.pdf.
- County of San Diego. 2017. *Multi-Jurisdiction Hazard Mitigation Plan*. Accessed on March 26, 2020. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/HazMit/2018/2018percent20Hazardpercent20Mitigationpercent20Plan.pdf.
- Deméré, T.A., and S.L. Walsh. 1993. *Paleontological Resources, County of San Diego*: Prepared for the Department of Public Works, County of San Diego.
- Kennedy, M.P. and S.S. Tan. 2008. *Geologic map of the San Diego 30' X 60' Quadrangle, California*. California Geological Survey, Regional Geologic Map Series, Map No. 3.
- San Diego County OES (Office of Emergency Services). 2017. *Earthquake Facts and Preparedness*.

SCEDC (Southern California Earthquake Data Center). 2013. "Significant Earthquake and Faults." Accessed on March 24, 2020. <https://scedc.caltech.edu/significant/fault-index.html#a>.

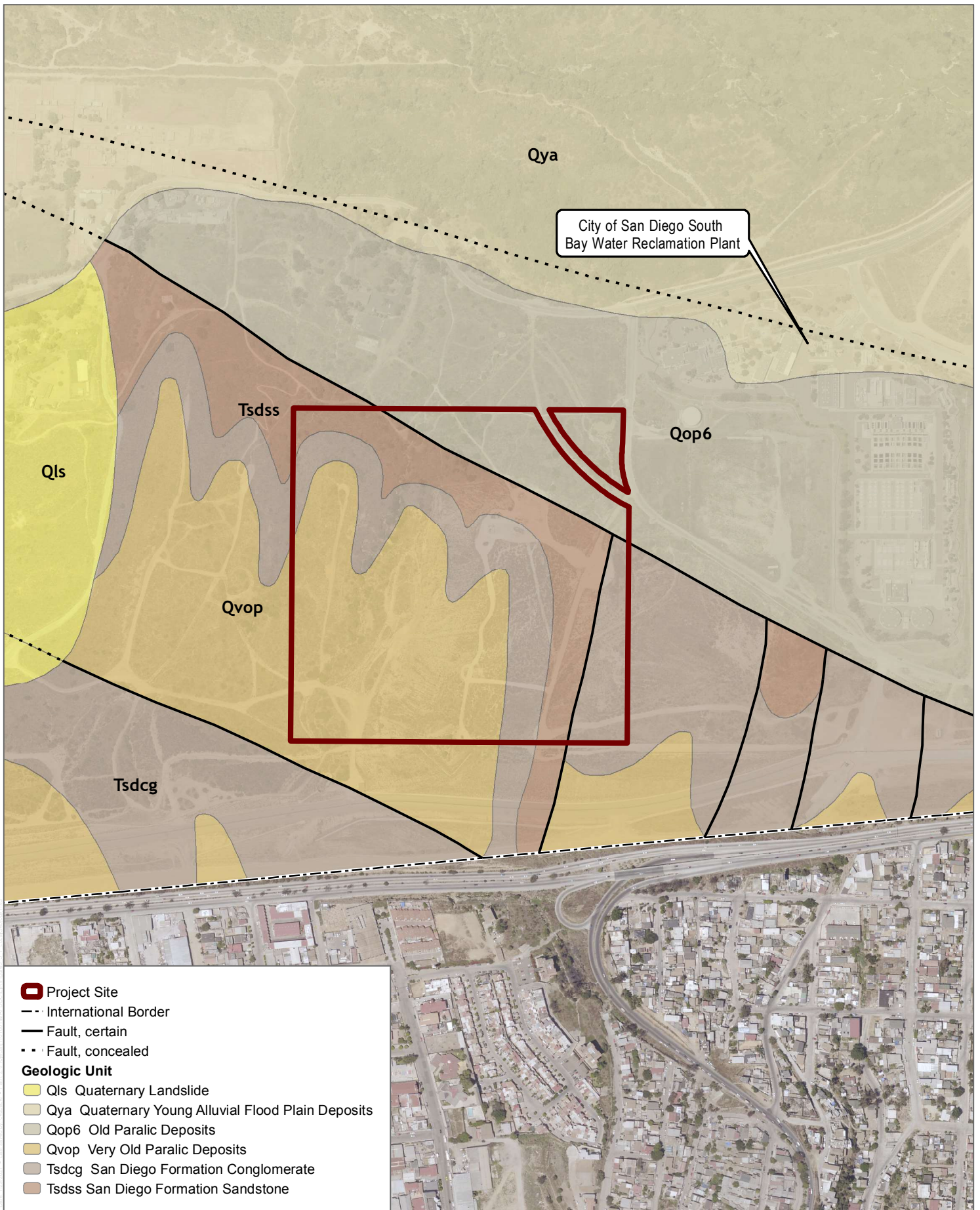
SVP (Society of Vertebrate Paleontology). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. <http://vertpaleo.org/PDFS/68/68c554bb-86f1-442f-a0dc-25299762d36c.pdf>.

USDA NRCS (U.S. Department of Agriculture National Resources Conservation Service). 2020. "Web Soil Survey." Accessed on March 23, 2020. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

USGS (U.S. Geological Survey). 2016. "The San Andreas Fault." Prepared by S.S. Schulz and R.E. Wallace. Online edition: <https://pubs.usgs.gov/gip/earthq3/safaultgip.html>.

USGS. 2021. "U.S. Quaternary Faults." Accessed January 30, 2021. <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>.

INTENTIONALLY LEFT BLANK

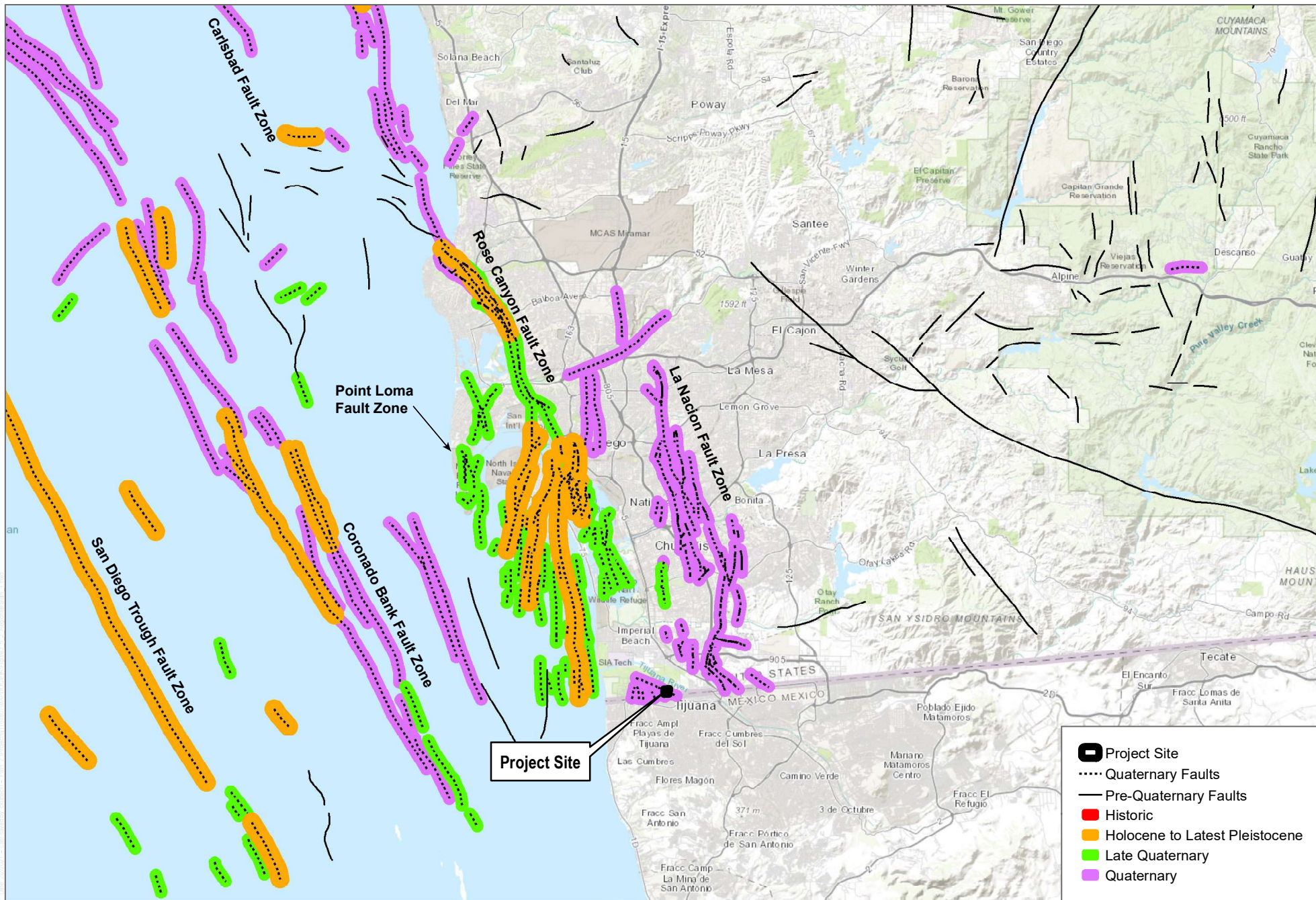


SOURCE: SANGIS 2017; Kennedy and Tan 2008

FIGURE 3.5-1

Local Geology

INTENTIONALLY LEFT BLANK

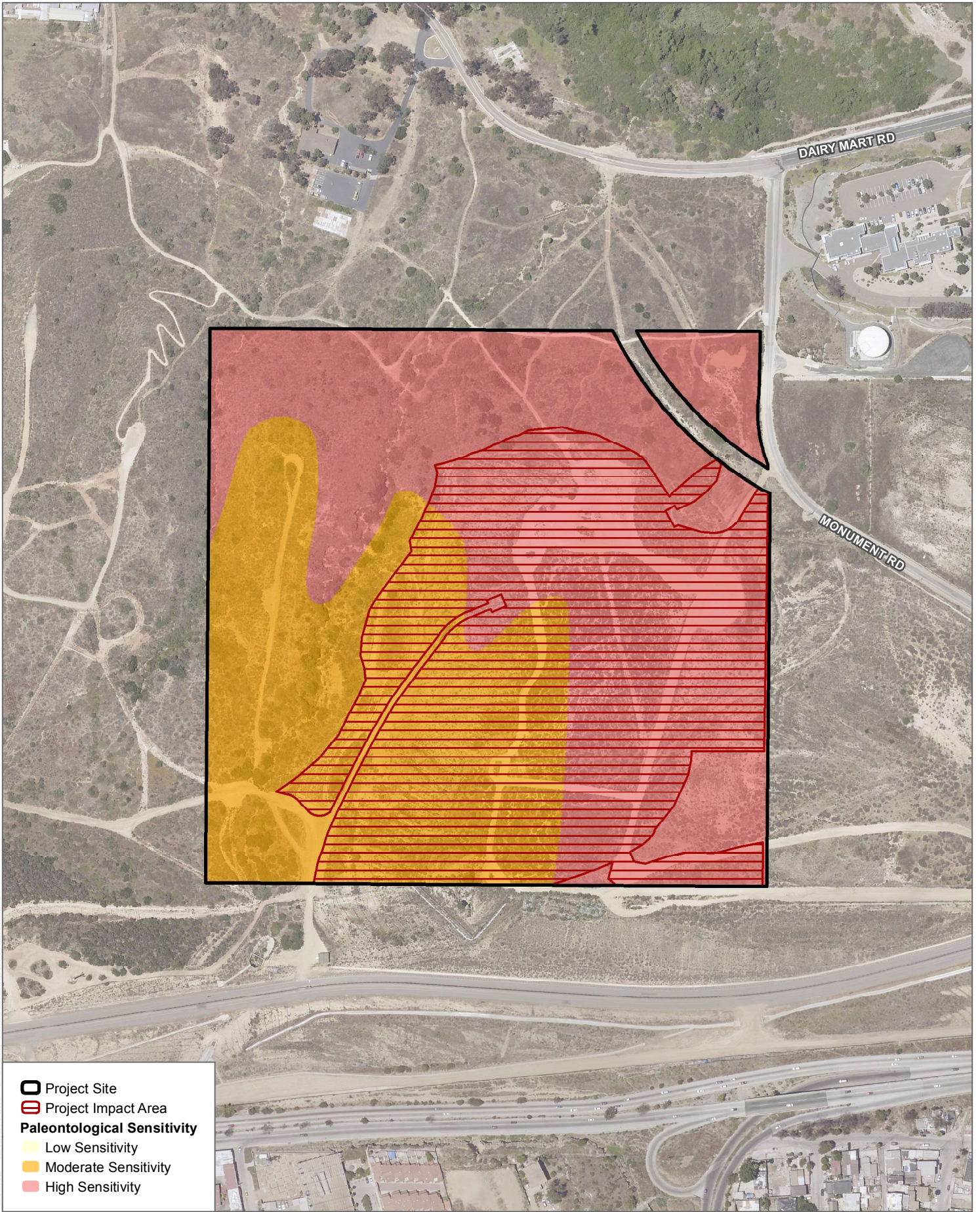


SOURCE: ESRI 2019; CA Geological Survey 2007; USGS 2021

FIGURE 3.5-2

Regional Faulting

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017; CA Geological Survey 2007

FIGURE 3.5-3

Paleontological Sensitivity

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

3.6 Hazards and Hazardous Materials

This section describes the existing hazardous materials conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project. The assessment of existing conditions and analysis of the Project impacts related to hazards and hazardous materials is partly based on information provided in the following technical report:

- Phase I: Environmental Site Assessment (ESA), Nelson Sloan Quarry Restoration Project, prepared by Kroner Environmental and dated July 23, 2019 (Appendix H)

As a supplement to the review of databases presented in the Phase I ESA, Dudek conducted an updated hazardous materials site databases review in August 2020. The updated database review is incorporated directly into this section (see Section 3.6.1, Existing Conditions, specifically the Environmental Database Records discussion). In addition, previous sediment characterization assessments prepared for sediment basins and stockpiles in Border Field State Park (and the Tijuana River Valley) were reviewed to assist in the establishment of the environmental baseline and to disclose potential contaminants that may be present in sediments utilized for the placement on the Project site. Additional informational resources are cited herein.

3.6.1 Existing Conditions

The Project site encompasses two parcels (i.e., Assessor's Parcel Nos. 664-011-05-00 and 664-011-04-00) that together comprise approximately 40 acres. The area of disturbance within the Project site (i.e., the Project Impact Area) is approximately 20 acres in size and primarily encompasses Assessor's Parcel No. 664-011-05-00, which is located within the southeastern corner of Tijuana River Valley Regional Park. The Project site abuts Monument Road and the City of San Diego (City) South Bay Water Reclamation Plant on the east. U.S. International Boundary and Water Commission's South Bay International Wastewater Treatment Plant is located approximately 0.25 miles east of the Project site.

Potential Hazardous Materials Associated with Historical Land Uses

Historical land uses and conditions may have resulted in adverse impacts to the Project site, representing potential hazards to humans and the environment. As part of the Phase I ESA (see Appendix H), a history of the site was compiled based on the review of historical aerial photographs and topographic maps, agency records, city directory listings, and site owner/representative interviews. Based on a review of available sources, the site remained mostly undisturbed, other than a network of unpaved paths, through 1970. A 1979 aerial photograph shows visible land disturbance in the southeastern portion of the subject site, ostensibly related to the sand and gravel extraction operation that occurred on site from 1982 to 2002. As indicated in the Phase I ESA, previous sand and gravel quarry operations present a low potential for hazardous concern and there is no indication of hazardous substances or petroleum products released during quarry operation (see Appendix H for additional detail). Further, the previous sand and gravel quarry operation is not expected to have required significant use of either hazardous substances or petroleum products beyond limited volumes used for equipment operation.

Existing Uses

Currently, the Project site is vacant and a portion of the central, ridge landform is used by U.S. Customs and Border Protection to patrol the surrounding area. Several dirt roads and trails traverse the Project site and are used by U.S. Customs and Border Protection and the County of San Diego Department of Parks and Recreation. As previously stated, the Project site is located within the boundary of Tijuana River Valley Regional Park, which is managed by the County of San Diego (County).

Environmental Database Records

As a component of the Phase I ESA (see Appendix H), regulatory database searches were conducted per ASTM Standard E1527-13, which includes Cortese List databases per Government Code 65962.5. The database search was conducted by Environmental Data Resources and is included in the Phase I ESA.

The Project site was listed in one state regulatory database searched, California Mines (MINES), because of the previous sand and gravel quarry operations that occurred on site. No indication of hazardous materials or petroleum products release was included in the MINES database. Four sites listed on various local and federal regulatory databases were identified within 1 mile of the Project site, two of which indicate a release of hazardous materials. Each of these sites underwent remediation and received closure by the overseeing regulatory agency. The Phase I ESA did not identify any potential impacts associate with these listings.

The Phase I ESA was prepared in July 2019; therefore, it is outside of the 180-day reliance period as defined by ASTM 1527-13. An updated review of hazardous materials site databases was conducted on August 12, 2020. The database search included the Cortese List sites, as defined in Government Code 65962.5, and non-Cortese List sites, such as voluntary cleanup sites. The databases reviewed included the following:

- GeoTracker, the State Water Resources Control Board's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater (GeoTracker 2020)
- EnviroStor, the Department of Toxic Substances Control (DTSC) data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known or suspected contamination. EnviroStor also identifies military cleanup sites in California (EnviroStor 2020)

The Project site was not identified on these hazardous material site databases. Two voluntary cleanup sites were identified within 1 mile of the Project site, both of which were previously identified in the Phase I ESA. One Cortese List site was identified within 1 mile of the Project site, the South Bay International Water Treatment Plant, which received a cease and desist order for municipal wastewater discharge. The order states the water treatment plant "continues to discharge inadequately treated wastewater . . . to the Pacific Ocean through the South Bay Ocean Outfall" (SDRWQCB 2000). Effluent exceedances included total suspended solids, 5-day biochemical oxygen demand, acute toxicity, chronic toxicity, ammonia, and total chlorinated dibenzodioxins and chlorinated dibenzofurans. While a documented release has occurred above permit limits from the water treatment plant, the discharge point is at the Pacific Ocean, which is more than 2.5 miles west of the Project site. Therefore, this cease and desist order does not likely impact the Project site.

In addition to hazardous material sites databases, a search was conducted for other features that could result in a hazardous material impact to the Project site, including the following:

- National Pipeline Mapping System public map viewer, the web-based mapping application that shows information related to gas transmission and hazardous liquid pipelines, liquefied natural gas plants, breakout tanks, and associated accidents and incidents under Department of Transportation Pipeline and Hazardous Materials Safety Administration jurisdiction (NPMS 2020)
- CalGEM Well Finder, the California Department of Conservation Geologic Energy Management Division online mapping application for the oil and gas industry (CalGEM 2020)
- SWIS Facility/Site Search, the California Department of Resources Recycling and Recovery Solid Waste Information System database for solid waste facilities, operations, and disposal sites within the State of California (SWIS 2020)

There are no gas or hazardous liquid transmission pipelines, oil and gas wells, or solid waste facilities on or within 1 mile of the Project site.

Previous Sediment Characterization Assessments/Investigations

As discussed in Section 2.4.4, Sediment Sampling and Characterization, multiple investigations have been conducted on source sediment locations for the Project. Results of these investigations have provided a baseline list of contaminants of potential concern (COPCs) for the sampling and analysis plan (SAP). Further details of each investigation are discussed below.

For the purposes of this Project, sediment analytical results would be compared to Environmental Screening Levels (ESLs), which, as discussed in Section 3.6.2, Relevant Plans, Policies, and Ordinances, are guideline screening levels for multiple chemicals designed to be conservatively protective of human health and the environment. ESLs are not enforced by regulation, but are used statewide as conservative screening values based on the exposure scenario and regulator decision. Additionally, the ESLs evaluate multiple exposure factors, including potential leaching to groundwater (both drinking and non-drinking water), odor nuisance, and terrestrial habitats, where other screening levels (U.S. Environmental Protection Agency [EPA] or DTSC screening levels) generally only evaluate risk to human exposure in a residential or commercial/industrial environment. Therefore, they can be considered more scientifically pertinent to the Project. Where ESLs are not available for specific COPCs, DTSC screening levels and EPA regional screening levels (RSLs) would be used as secondary screening levels.

Goat Canyon Retention Basins Phase II and III Source Material Soil Characterization Report Tijuana Estuary Sediment Fate and Transport Study

In 2008, stockpiled soils in the Goat Canyon Retention Basins were sampled and analyzed for chemical, physical, and bacteriological characteristics (Nautilus 2008). This phase of sampling was completed to determine if the sediments could be placed on the beach as part of the Tijuana Estuary Sediment Fate and Transport Study. Sediments were analyzed for metals, bacteria (coliforms and enterococcus), petroleum hydrocarbons, pesticides, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, phthalates, and phenols. Metals, petroleum hydrocarbons, and phthalates were detected in Goat Canyon sediments; detected metals were all below the Effects Range-Low values, which were the screening levels applicable to the Tijuana Estuary Project. The phthalate concentrations were above applicable screening levels, but were attributed to a piece of plastic which got into the sample and caused an elevated concentration during analysis. The Tijuana Estuary Project would screen out plastics; therefore, it was determined the high phthalates would not likely have a negative impact.

Based on the information obtained during this investigation, COPCs in the Goat Canyon Retention Basins are metals, phthalates, and petroleum hydrocarbons.

Letter Report, Border Field Site Removal Assessment; Imperial Beach, San Diego County California

In 2012, EPA conducted sediment sampling activities within the Goat Canyon Sediment Basins and associated stockpiles located to the northwest and southeast and the International Boundary and Water Commission stockpile. The purpose of the sampling was to assess chemical concentrations, physical properties, and plastic content of the sediment within and recently removed from the Goat Canyon Retention Basins, stockpiles, and background locations. EPA then tasked Ecology and Environmental Inc. to develop and implement a SAP (the letter report describes sampling activities conducted under the SAP and presents laboratory and analytical results) (Ecology and Environmental Inc. 2014). The evaluation revealed plastic content in the sediments above background sediment samples, and the plastic fraction of samples contained higher levels of chemical contaminants (surfactants, organochlorine pesticides, polychlorinated biphenyls [PCBs], and polybrominated diphenyl ethers). Soil and plastic samples, except background, each had at least one exceedance of the applicable screening levels (National Oceanic and Atmospheric Administration Screening Quick Reference Table Effects Range Low), which are preliminary screening levels designed to evaluate possible impacts to coastal resources and habitats.

Based on the information obtained during this investigation, COPCs at Goat Canyon Retention Basins, associated stockpiles, and International boundary and Water Commission stockpile are petroleum hydrocarbons, surfactants, organochlorine pesticides, PCBs, and polybrominated diphenyl ethers.¹

Draft Goat Canyon Deposition Material Sampling and Analysis Program

A SAP was developed in 2020 for the Goat Canyon Sediment Basin to evaluate COPCs in the sediments at this location, background concentrations of similar COPCs, and grain size distribution of the sediments (CDPR 2020). The SAP utilizes the National Oceanic and Atmospheric Administration Screening Quick Reference Table values, EPA RSLs (both residential and industrial), Total Threshold Limit Concentrations, and Toxicity Characteristic Leaching Procedure and Soluble Threshold Limit Concentration (generally used for disposal characterization). COPCs identified in this SAP include petroleum hydrocarbons, metals, polycyclic aromatic hydrocarbons, PCBs, pyrethroids, semi-volatile and volatile organic compounds, herbicides, organophosphorus pesticides, pyrethroid pesticides, polybrominated diphenyl ethers, and various organic parameters (e.g., total organic carbon).

Public Airports

There are no public airports within 2 miles of the Project site, nor is the site located within a public airport land use area (Airnav.com 2020; SDC ALUC 2010). The nearest public airport is Brown Field Municipal Airport at 1424 Continental Street, San Diego, California, which is located approximately 5 miles northeast of the Project site. Tijuana International Airport, located in Mexico, is located approximately 5 miles east of the Project site.

Private Airports

Imperial Beach Naval Outlying Field (Ream Field) Airport, 1498 13th Street, is located 2.5 miles northwest of the Project site. Ream Field is a U.S. Navy helicopter facility that handles the overflow of helicopter squadron traffic from Naval Air Station North Island (Cnic.navy.mil 2020).

¹ California screening levels may not be available for all COPCs. The Project SAP will include decision criteria for COPCs that do not have an established screening level.

Schools

There are no schools located within 0.25 miles of the Project site.

Emergency Preparedness

The San Diego Office of Homeland Security (SD-OHS) oversees the City's Preparedness Grant, Emergency Preparedness, Emergency Operations Center (EOC), and Public and Disaster Assistance programs. The collective purpose of these four programs and the mission of the SD-OHS is to promote a secure and resilient City with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk. These risks include events such as natural disasters, disease pandemics, chemical spills and other human-caused hazards, terrorist attacks, and cyber-attacks (County of San Diego 2017).

The Emergency Preparedness Program enhances and supports the City's preparedness for major emergencies and disasters. This program leads the development and review of City-level emergency plans; facilitates the integration of the City's emergency plans both internally and externally; coordinates and collaborates with county, state, and federal jurisdictions and agencies; manages and supports the City's readiness and utilization of the regional Community Emergency Notification System (i.e., Alert San Diego); facilitates the provision of information to the public and the business community to assist in emergency preparations and response; and coordinates and oversees relevant Citywide emergency training and exercises (County of San Diego 2017).

During major emergencies and disasters, the City's EOC may be activated to support and coordinate the City's overall, multidepartment emergency response and recovery operations. Under the EOC Program, SD-OHS maintains the operational readiness of the City's primary and alternate EOCs. This program develops and updates EOC protocols and processes; manages the assignment, training, and readiness of EOC staff members; maintains and enhances EOC facilities, equipment, and information management systems; and develops and updates protocols and resources to support the SD-OHS Duty Officer. The SD-OHS Duty Officer is a rotating, 2-week, 24/7 assignment that serves as an emergency point of contact and resource for City officials and regional partners (County of San Diego 2017).

3.6.2 Relevant Plans, Policies, and Ordinances

Federal

U.S. Environmental Protection Agency

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter I, Parts 260–265 – Solid Waste Disposal Act/Federal Resource Conservation and Recovery Act of 1976

The Solid Waste Disposal Act, as amended and revised by the Resource Conservation and Recovery Act, establishes requirements for the management of solid wastes (including hazardous wastes), landfills, underground storage tanks (USTs), and certain medical wastes. The statute also addresses program administration; implementation and delegation to the states; enforcement provisions and responsibilities; and research, training, and grant funding. Provisions are established for the generation, storage, treatment, and disposal of hazardous waste, including requirements addressing generator record keeping, labeling, shipping paper management, placarding, emergency response information, training, and security plans.

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter I, Part 273 – Universal Waste

This regulation governs the collection and management of widely generated waste, including batteries, pesticides, mercury-containing equipment, and bulbs. This regulation streamlines the hazardous waste management standards and ensures that such waste is diverted to the appropriate treatment or recycling facility.

Title 40 U.S. Code of Federal Regulations, Chapter 1, Subchapter D, Part 112 – Oil Pollution Prevention

Oil Pollution Prevention regulations require the preparation of a spill prevention, control, and countermeasure plan if oil is stored in excess of 1,320 gallons in aboveground storage (or if there is a buried capacity of 42,000 gallons). Spill prevention, control, and countermeasure regulations place restrictions on the management of petroleum materials and, therefore, have some bearing on hazardous materials management.

Title 42 U.S. Code of Federal Regulations, Chapter 116 – Emergency Planning and Community Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act provides for public access to information about chemical hazards. This law and its regulations, included in Title 40 U.S. Code of Federal Regulations, Parts 350–372, establish four types of reporting obligations for facilities storing or managing specified chemicals: emergency planning, emergency release notification, hazardous chemical storage reporting requirements, and toxic chemical release inventory. EPA maintains a database, termed the Toxic Release Inventory, which includes information on reportable releases to the environment.

Title 15 U.S. Code of Federal Regulations, Chapter 53, Subchapter I, Section 2601 et seq. – Toxic Substances Control Act of 1976

The Toxic Substances Control Act of 1976 empowers EPA to require reporting, record keeping, and testing, as well as to place restrictions on the use and handling of chemical substances and mixtures. This regulation phased out the use of asbestos-containing material (ACM) in new building materials and set requirements for the use, handling, and disposal of ACM and lead-based paint (LBP) waste. As discussed above, EPA has also established the National Emission Standards for Hazardous Air Pollutants, which govern the use, removal, and disposal of ACM as a hazardous air pollutant, mandate the removal of friable ACM before a building is demolished, and require notification before demolition. In addition to ACM and LBP requirements, this regulation also banned the manufacturing of PCBs and set standards for the use and disposal of existing PCB-containing equipment or materials.

Regional Screening Levels

EPA provides RSLs for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). RSLs are available on EPA's website and provide a screening level calculation tool to assist risk assessors, remediation project managers, and others involved with risk assessment and decision making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, DTSC HERO incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment Note 3, which incorporates HERO recommendations and DTSC-modified screening levels based on review of the EPA RSLs. The DTSC-modified screening level should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

For the purposes of this Project, EPA RSLs would not be used. Instead, sediments will be evaluated using the ESLs, as described in the Environmental Screening Levels subsection below. Where ESLs are not available for specific COPCs, DTSC screening levels and EPA RSLs would be used as secondary screening levels.

U.S. Department of Labor, Occupational Safety and Health Administration

Title 29 U.S. Code of Federal Regulations, Part 1926 et seq. – Safety and Health Regulations for Construction

These standards require employee training; personal protective equipment; safety equipment; and written procedures, programs, and plans for ensuring worker safety when working with hazardous materials or in hazardous work environments during construction activities, including renovations and demolition projects and the handling, storage, and use of explosives. These standards also provide rules for the removal and disposal of acrylonitrile butadiene styrene (a plastic), lead, lead based paint (LBP), and other lead materials. Although intended primarily to protect worker health and safety, these requirements also guide general facility safety. This regulation also requires that an engineering survey is prepared prior to demolition.

Title 29 U.S. Code of Federal Regulations, Part 1910 et seq. – Occupational Safety and Health Standards

Under this regulation, facilities that use, store, manufacture, handle, process, or move hazardous materials are required to conduct employee safety training, inventory safety equipment relevant to potential hazards, have knowledge on safety equipment use, prepare an illness prevention program, provide hazardous substance exposure warnings, prepare an emergency response plan, and prepare a fire prevention plan.

U.S. Department of Transportation

Title 49 U.S. Code of Federal Regulations, Part 172, Subchapter C – Shipping Papers

The U.S. Department of Transportation established standards for the transport of hazardous materials and hazardous wastes. The standards include requirements for labeling, packaging, and shipping hazardous materials and hazardous wastes, as well as training requirements for personnel completing shipping papers and manifests.

Federal Response Plan

The Federal Response Plan of 1999, as amended in 2003 (FEMA 2003) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency, (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act and individual agency statutory authorities, and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what measures are required to protect against structural fires. These measures may include

construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

State

California Unified Program for Management of Hazardous Waste and Materials

California Health and Safety Code, Division 20, Chapter 6.11, Sections 25404 – 25403.6 – Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

Under the California Environmental Protection Agency, the DTSC, Governor’s Office of Emergency Services, Cal Fire Office of the State Marshal, and State Water Resources Control Board provide technical assistance and are involved with California’s Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level (California EPA 2021). Certified Unified Program Agencies (CUPAs) implement the hazardous waste and materials standards. This program was established under the amendments to the California Health and Safety Code made by Senate Bill 1082 in 1994. The following programs make up the Unified Program:

- Aboveground Petroleum Storage Act Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (Hazardous Materials Business Plans [HMBPs])
- Hazardous Material Management Plans and Hazardous Material Inventory Statements
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (Tiered Permitting) Program
- Underground Storage Tank Program

The CUPA for the City is the County of San Diego Department of Environmental Health (DEH), Hazardous Materials Division.

Title 19 California Code of Regulations, Chapter 2, Subchapter 3, Sections 2729 – 2734/California Health and Safety Code, Division 20, Chapter 6.95, Sections 25500 – 25520

This regulation requires the preparation of an HMBP by facility operators. The HMBP identifies the hazards, storage locations, and storage quantities for each hazardous chemical stored on site. The HMBP is submitted to the CUPA for emergency planning purposes.

Hazardous Waste Management

Title 22 California Code of Regulations, Division 4.5 – Environmental Health Standards for the Management of Hazardous Waste

In the State of California, DTSC regulates hazardous wastes. These regulations establish requirements for the management and disposal of hazardous waste in accordance with the provisions of the California Hazardous Waste Control Act and federal Resource Conservation and Recovery Act. As with federal requirements, waste generators must determine if their wastes are hazardous according to specified characteristics or lists of wastes. Hazardous waste generators must obtain identification numbers; prepare manifests before transporting waste off site; and use only permitted treatment, storage, and disposal facilities. Standards also include requirements for record

keeping, reporting, packaging, and labeling. Additionally, while not a federal requirement, California requires that hazardous waste be transported by registered hazardous waste transporters.

Title 22 California Health and Safety Code, Division 20, Chapter 6.5 – California Hazardous Waste Control Act of 1972

This legislation created the framework under which hazardous wastes must be managed in California. It provides for the development of a state hazardous waste program (regulated by DTSC) that administers and implements the provisions of the federal Resource Conservation and Recovery Act program. It also provides for the designation of California-only hazardous wastes and development of standards that are equal to, or in some cases more stringent than, federal requirements. The CUPA is responsible for implementing some elements of the law at the local level.

Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels

Human Health Risk Assessment Note 3 presents recommended screening levels (derived from the EPA RSLs using DTSC-modified exposure and toxicity factors) for constituents in soil, tap water, and ambient air. The EPA RSLs are discussed in the Regional Screening Levels subsection above. The DTSC-modified screening level should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

For the purposes of this Project, DTSC-modified screening levels would not be used. Instead, sediments will be evaluated using the ESLs, as described in the Environmental Screening Levels subsection below. In addition, EPA RSLs would not be used. Please see discussion of Regional Screening Levels above.

Aboveground and Underground Petroleum Storage Tanks

Title 22 California Health and Safety Code, Division 20, Chapter 6.67, Sections 25270 to 25270.13 – Aboveground Petroleum Storage Act

This law applies if a facility is subject to spill prevention, control, and countermeasure regulations under Title 40 U.S. Code of Federal Regulations, Part 112, or if the facility has 10,000 gallons or more of petroleum in any or combination of aboveground storage tanks and connecting pipes. If a facility exceeds these criteria, it must prepare a spill prevention, control, and countermeasure plan.

Low-Threat Underground Storage Tank Case Closure Policy

This policy applies to petroleum UST sites subject to Chapter 6.7 of the California Health and Safety Code. This policy establishes both general and media-specific criteria. If both the general and applicable media-specific criteria are satisfied, then the leaking UST case is generally considered to present a low threat to human health, safety, and the environment. This policy recognizes, however, that even if all of the specified criteria in the policy are met, there may be unique attributes of the case or site-specific conditions that increase the risk associated with the residual petroleum constituents. In these cases, the regulatory agency overseeing corrective action at the site must identify the conditions that make case closure under the policy inappropriate.

Regional water boards and local agencies have been directed to review all cases in the petroleum UST cleanup program using the framework provided in this policy. These case reviews shall, at a minimum, include the following for each UST case:

1. Determination of whether or not each UST case meets the criteria in this policy or is otherwise appropriate for closure based on a site-specific analysis.
2. If the case does not satisfy the criteria in this policy or does not present a low-risk based upon a site-specific analysis, impediments to closure shall be identified.
3. Each case review shall be made publicly available on the State Water Resources Control Board's GeoTracker web site in a format acceptable to the Executive Director.

Environmental Cleanup Levels

Environmental Screening Levels

ESLs provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. The ESLs are prepared by the staff of the San Francisco Bay Regional Water Quality Control Board (RWQCB). While ESLs are not intended to establish policy or regulation, they can be used as a conservative screening level for sites with contamination. Other agencies in California may elect to use the ESLs; in general, the ESLs could be used at any site in the State of California, provided all stakeholders agree (SFBRWQCB 2019). Dudek's recent experience indicates that regulatory agencies in the San Diego region use ESLs as regulatory cleanup levels. Additionally, the ESLs evaluate multiple exposure factors, including potential leaching to groundwater (both drinking and non-drinking water), odor nuisance, and terrestrial habitats, where other screening levels (EPA and DTSC screening levels) generally only evaluate for human exposure in a residential or commercial/industrial environment. The ESLs are not generally used at sites where the contamination is solely related to a leaking UST; those sites are instead subject to the Low-Threat Underground Storage Tank Closure Policy.

For the purposes of this Project, ESLs will be used to screen COPCs in sediments prior to use on the Project site.

California Department of Transportation/California Highway Patrol

Title 13 California Code of Regulations, Division 2, Chapter 6

California regulates the transportation of hazardous waste originating or passing through the state. The California Highway Patrol (CHP) and the California Department of Transportation have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakages and spills of material in transit and provides detailed information to cleanup crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of CHP. CHP conducts regular inspections of licensed transporters to ensure regulatory compliance. The California Department of Transportation has emergency chemical spill identification teams at locations throughout the state. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

Occupational Safety and Health

Title 8 California Code of Regulations – Safety Orders

Under the California Occupational Safety and Health Act of 1973, the California Occupational Safety and Health Administration (CalOSHA) is responsible for ensuring safe and healthful working conditions for California workers. CalOSHA assumes primary responsibility for developing and enforcing workplace safety regulations in Title 8 of the California Code of Regulations. CalOSHA hazardous substances regulations include requirements for safety training, availability of safety equipment, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. CalOSHA also enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances. The hazard communication program also requires that safety data sheets be available to employees and that employee information and training programs be documented.

In Division 1, Chapter 4, Subchapter 4, Construction Safety Orders, construction safety orders are listed and include rules for demolition, excavation, explosives work, working around fumes and vapors, pile driving, vehicle and traffic control, crane operation, scaffolding, fall protection, and fire protection and prevention, among others.

CalOSHA Asbestos and Carcinogen Unit enforces asbestos standards in construction, shipyards, and general industry. This includes identification and removal requirements of asbestos in buildings, as well as health and safety requirements of employees performing work under the Asbestos-In-Construction regulations (8 CCR 1529). Only a CalOSHA-Certified Asbestos Consultant can provide asbestos consulting (as defined by the Business and Professions Code, 7180–7189.7, and triggered by the same size and concentration triggers as for registered contractors). These services include building inspection, abatement project design, contract administration, supervision of site surveillance technicians, sample collection, preparation of asbestos management plans, and clearance air monitoring.

California Building Standards Commission

Title 24 California Code of Regulations – California Building Standards Code

The California Building Standards Code is a compilation of three types of building standards from three different sources:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns

Among other rules, the California Building Standards Code contains requirements regarding the storage and handling of hazardous materials. The chief building official at the local government level (i.e., the City) must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

California Building Code – Chapter 7A

This chapter of the California Building Standards Code establishes minimum standards for buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area to resist the intrusion of flames or burning embers projected by a vegetation fire.

California Forestry and Fire Protection

2010 Strategic Fire Plan for California

California Public Resources Code, Sections 4114 and 4130, authorize the State Board of Forestry to establish a fire plan that establishes the levels of statewide fire protection services for State Responsibility Area lands. These levels of service recognize other fire protection resources at the federal and local level that collectively provide a regional and statewide emergency response capability. In addition, California's integrated mutual aid fire protection system provides fire protection services through automatic and mutual aid agreements for fire incidents across all ownerships. The California fire plan is the state's road map for reducing the risk of wildfire through planning and prevention to reduce firefighting costs and property losses, increase firefighter safety, and contribute to ecosystem health.

California State Fire Marshal

California Emergency Services Act

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including EPA, CHP, RWQCBs, air quality management districts, and county disaster response offices.

California Accidental Release Prevention Program

Similar to the EPA Risk Management Program, the CalARP Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. Under the regulations, industrial facilities that handle hazardous materials above threshold quantities are required to prepare and submit an HMBP to the local CUPA via the California Environmental Reporting System. As part of the HMBP, a facility is further required to specify applicability of other state regulatory programs. The overall purpose of CalARP is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act amendments.

Local

San Diego County Area Plan

The County DEH, Hazardous Materials Division, established the San Diego County Area Plan (Area Plan) based on requirements of Chapter 6.95 of the California Health and Safety Code, Title 19 of the CCR, and EPA SARA Title III for emergency response to a release or threatened release of a hazardous material within San Diego County. County DEH, Hazardous Materials Division, acts as the CUPA for the Project site. The Hazardous Materials Program and

Response Plan contained in the Area Plan serves the majority of the cities in the County, including the City of San Diego. The Area Plan includes implementation and enforcement of the CalARP program, HMBPs, USTs, septic systems, water wells, and vector control.

For the purposes of this Project, the County DEH, Hazardous Materials Division, would provide permits, inspections, and oversight for storage of reportable quantities of hazardous materials (if any), USTs and aboveground storage tanks (if any), and vector control, if required.

San Diego County, Site Assessment and Mitigation Program

The County DEH maintains the Site Assessment and Mitigation list of contaminated sites that have previously or are currently undergoing environmental investigations and/or remedial actions. The County Site Assessment and Mitigation Program, within the Land and Water Quality Division of the DEH, has a primary purpose to protect human health, water resources, and the environment within the County by providing oversight of assessments and cleanups in accordance with the California Health and Safety Code and California Code of Regulations. The Site Assessment and Mitigation's Voluntary Assistance Program also provides staff consultation, project oversight, and technical or environmental report evaluation and concurrence (when appropriate) on projects, including properties contaminated with hazardous substances.

The County's Site Assessment and Mitigation list was reviewed during preparation of the Project's Phase I ESA (see Appendix H). Two sites within 0.2 miles of the Project site (i.e., 200 Monument Road and 2721 Monument Road) are included on the list. According to the Phase I ESA, the listed properties represent a low potential for impact/concern (de minimis per the Phase I ESA) at the Project site.

San Diego County Emergency Services

2018 Unified San Diego County Emergency Services Organization and County of San Diego Emergency Operations Plan

The Emergency Operations Plan includes a comprehensive emergency management system that provides planned response in disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. The plan also describes tasks and overall responsibilities for protecting life and property and identifies sources of outside support. The plan is for use by the County and its cities to respond to major emergencies and disasters (Unified San Diego County Emergency Services Organization and County of San Diego 2018).

City of San Diego Urban Development and Safety

City of San Diego General Plan

The Public Facilities, Services, and Safety Element of the City of San Diego General Plan includes goals and policies related to the City's disaster preparedness program, which focuses on the prevention of, response to, and recovery from natural, technological, and human-made disasters (City of San Diego 2018). The City's disaster preparedness efforts include oversight of the City's EOC, and the City participates in the County's Multi-Jurisdictional Hazard Mitigation Plan, which identifies risks posed by both natural and human-made disasters. Specific policies relating to the Project site include the following (City of San Diego 2018):

- PF-D.1 through PF-D.6 establish policies to continue providing fire response capabilities that meet the needs of the community.

- PF-D.12 through PF-D.20 establish wildfire policies to protect communities from wildland fires, including brush management, fire apparatus access, fire safe designs, and local coordination, training, and education.
- PF-P.1 through PF-P.10 establish policies that continue operational readiness and the ability to respond to emergencies throughout the City, including cooperative programs with state and local jurisdictions.

2015 City of San Diego Land Development Manual, Project Submittal Requirements, Section 3 – Construction Permits – Grading and Public Right-of-Way

This section of the City’s Land Development Manual applies to construction permit applications for grading on private property, as well as to the construction, reconstruction, or repair of improvements within the public right-of-way. City guidelines for obtaining grading permits and public right-of-way permits are incorporated into the Land Development Manual, and, depending on the characteristics of the Project and Project site, the permittee may be required to provide a grading plan, construction plan, geotechnical study, drainage study, water quality study, traffic control plan, and structural calculations. In general, this review is a ministerial process whereby approval is granted if the regulations are met.

San Diego Municipal Code, Chapter 5: Public Safety, Morals, and Welfare, Article 5: Fire Protection and Prevention

Chapter 5, Article 5 of the City of San Diego Municipal Code (referred to as the Fire Code) includes portions of the California Fire Code and IFC. The current iteration of Article 5, Fire Protection and Prevention, of the San Diego Municipal Code adopted portions of the 2016 California Fire Code. The current adopted version of the California Fire Code (2019) includes amendments associated with the International Fire Code 2018 (the 2019 California Fire Code has yet to be adopted into the San Diego Municipal Code).

3.6.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this Environmental Impact Report, a hybridized approach concerning Appendix G of the California Environmental Quality Act (CEQA) Guidelines and City and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. As further described below, all relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, and the most stringent County and City guidelines, a significant impact related to hazards and hazardous material would occur if the Project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on or within one-quarter mile from a site identified in one of the regulatory databases compiled pursuant to Government Code Section 65962.5 or is otherwise known to have been the subject of a release

of hazardous substances, and as a result the project may result in a significant hazard to the public or the environment (County of San Diego).

5. Proposes structure(s) for human occupancy and/or significant linear excavation within 1,000 feet of an open, abandoned, or closed landfill (excluding burnsites) and as a result, the project would create a significant hazard to the public or the environment (County of San Diego).
6. Be proposed on or within 250 feet of the boundary of a parcel identified as containing burn ash (from the historic burning of trash); and as a result, the project would create a significant hazard to the public or the environment (County of San Diego).
7. Be proposed on or within 1,000 feet of a FUDS and it has been determined that it is probable that munitions or other hazards are located on site that could represent a significant hazard to the public or the environment (County of San Diego).
8. Result in human or environmental exposure to soils or groundwater that exceed EPA Region 9 PRG's, Cal/EPA CHHSL's, or Primary State or Federal Maximum Contaminant Levels (MCLs) for applicable contaminants and the exposure would represent a hazard to the public or the environment (County of San Diego).
9. Involve the demolition of commercial, industrial or residential structures that may contain ACM, LBP and/or other hazardous materials and as a result, the project would represent a significant hazard to the public or the environment (County of San Diego).
10. Result in a safety hazard for people residing or working in a designated airport influence area (City of San Diego).
11. Result in a safety hazard for people residing or working within two miles of a private airstrip or a private airport or heliport facility that is not covered by an adopted Airport Land Use Compatibility Plan (City of San Diego).
12. Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan (City of San Diego).

Note that existing wildfire conditions and potential impacts concerning wildland fires are addressed wholly in Section 3.10, Wildfire. As such, wildfire is not further addressed or assessed in this section.

3.6.4 Impacts Analysis

1. *Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Reclamation and restoration activities would involve the transport of commonly used hazardous substances such as gasoline, diesel fuels, lubricating oil, grease, and solvents. These materials would be used and stored in designated construction staging areas within the boundaries of the Project site, and once reclamation activities are completed, any remaining materials would be transported off site. Numerous federal, state, and local regulations exist that require strict adherence to specific guidelines regarding the use, transportation, and disposal of hazardous materials. These regulations, which are discussed in Section 3.6.2, include but are not limited to the Federal Toxic Substances Control Act of 1976, the Resource Conservation and Recovery Act of 1976, and the California Hazardous Waste Control Law. Stakeholders and contractors on the Project site during the reclamation phase would comply with all applicable regulations governing the use of hazardous substances during construction. Additionally, use of these materials for their intended purpose would not pose a significant risk to the public or environment.

As discussed in Section 2.4.4, the future Operations and Maintenance Plan to be prepared for the Project would include a SAP, which would be used to characterize sediments prior to use on the Project site. The

requirements of the SAP would be implemented either by the location supplying the fill material or by operators of the Project site when materials arrived (and were stockpiled for analysis). Sampling of the sediments would identify potentially contaminated sediments before they were transported to the Project site., and determine if they exceeded the applicable screening levels (ESLs). Contaminated sediments not suited for use on the Project site would require disposal and would be handled, transported, and disposed of by third-party entities licensed to handle these materials in accordance with federal, state, and local regulations. Therefore, impacts would be **less than significant** and no mitigation would be required.

Following reclamation and restoration activities, the Project site would function as revegetated open space/habitat. As such, once reclamation and restoration activities are completed, the Project would not create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials. As described in Chapter 2, Project Description, an objective of the Project would be to fill the abandoned sand and gravel quarry to natural (and historic) landform and restore the Project site to native habitat through the use of native species for revegetation. There would be no significant amount of hazardous materials associated with the operation and maintenance of the completed Project. Therefore, operational and maintenance impacts would be **less than significant** and no mitigation would be required.

2. ***Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

The reasonably foreseeable likelihood that an accident or upset would occur on the Project site is very low. As discussed above, potential materials used during the Project's grading phases (i.e., gasoline, lubricants, oils, and materials common to construction activities) may be deemed hazardous but would be used in full compliance with all applicable federal, state, and local policies regarding the use, transportation, and removal of these hazardous materials. Sediments would be evaluated per SAP standards, so that contaminated sediments are identified and treated/managed appropriately. In the rare event of an upset or accident regarding the release of hazardous materials, procedures and policies would be followed to remove the materials in a safe and timely manner as outlined by the San Diego County Area Plan, as well as federal and state response and reporting procedures (discussed in Section 3.6.2). Therefore, this impact would be **less than significant** and no mitigation would be required.

3. ***Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

There are no existing or proposed school sites within 0.25 miles of the Project site. The Project would have **no impact** and therefore no mitigation is required.

4. ***Would the Project be located on or within one-quarter mile from a site identified in one of the regulatory databases compiled pursuant to Government Code Section 65962.519 or is otherwise known to have been the subject of a release of hazardous substances, and as a result the Project may result in a significant hazard to the public or the environment?***

As discussed in Section 3.6.1, the Project site is listed on the MINES database because of prior sand and gravel quarry operations. The Project site is identified as the "Border Highlands Pit" on the MINES database. This database does not indicate the use of hazardous materials and records revealed no indication of hazardous substances or petroleum products released during active quarry operations. Additionally, as discussed in the Phase I ESA (Appendix H), sand and gravel quarry operations, which ceased in 2002, are not

expected to have required a significant use of hazardous substances or petroleum products beyond use for equipment operation. The records search did not identify other hazardous materials sites within 0.25 miles of the Project site. Therefore, there would be a **less-than-significant impact** and no mitigation is required.

5. ***Would the Project propose structure(s) for human occupancy and/or significant linear excavation within 1,000 feet of an open, abandoned, or closed landfill (excluding burnsites) and as a result, the Project would create a significant hazard to the public or the environment?***

There are no open, abandoned, or closed landfills on or within 1,000 feet of the Project site and the Project does not propose structures for human occupancy. Thus, the Project would have **no impact**.

6. ***Would the Project be proposed on or within 250 feet of the boundary of a parcel identified as containing burn ash (from the historic burning of trash); and as a result, the Project would create a significant hazard to the public or the environment?***

No burn ash sites were identified on or within 250 feet of the Project site. Thus, the Project would have **no impact**.

7. ***Would the Project be proposed on or within 1,000 feet of a FUDS and it has been determined that it is probable that munitions or other hazards are located on site that could represent a significant hazard to the public or the environment?***

No formerly military sites were identified on or within 1,000 feet of the Project site (FUDS 2020). Thus, the Project would have **no impact**.

8. ***Would the Project result in human or environmental exposure to soils or groundwater that exceed EPA Region 9 PRG's, Cal/EPA CHHSL's, or Primary State or Federal Maximum Contaminant Levels (MCLs) for applicable contaminants and the exposure would represent a hazard to the public or the environment?***

As discussed in Section 2.4.4 of the Project Description, the operational SAP would dictate and facilitate sediment evaluation prior to placement on the Project site. Potentially contaminated sediments would be sampled and analyzed for COPCs, including metals, total petroleum hydrocarbons, organochlorine pesticides, herbicides, polychlorinated biphenyls, volatile and semi-volatile organic compounds, and polycyclic aromatic hydrocarbons. Analytical results would be compared to applicable RSLs and ESLs by the City, County, and the RWQCB, to determine the usability of the sediments. If human or environmental health thresholds are exceeded, additional analyses of stockpile leachate would be required to demonstrate suitability for disposal per the respective landfill's waste acceptance guidelines. With these procedures in place, contaminated sediments would not be used on the Project site. Handling, characterization, and disposal would follow protocols developed and included in the future Operations and Maintenance Plan to be prepared for the Project, as well as federal, state, and local laws and regulations. The Project Operations and Maintenance Plan and SAP would include health and safety procedures for handling, sampling, staging, and transporting contaminated sediments, should they be encountered. Health and safety procedures would follow federal Occupational Safety and Health Administration and CalOSHA regulations for worker safety.

Following the completion of phased grading/sediment placement and restoration activities, the Project site would function as revegetated open space and would be managed as a component of the Tijuana River Valley Regional Park. Therefore, impacts would be **less than significant**.

9. ***Would the Project involve the demolition of commercial, industrial or residential structures that may contain ACM, LBP and/or other hazardous materials and as a result, the Project would represent a significant hazard to the public or the environment?***

There are no commercial, industrial, or residential structures on the Project site; therefore, no demolition is required. As such, the Project would have **no impact**.

10. ***Would the Project result in a safety hazard for people residing or working in a designated airport influence area?***

The Project site is not located within an airport influence area. The Project would have **no impact**.

11. ***Would the Project result in a safety hazard for people residing or working within two miles of a private airstrip or a private airport or heliport facility that is not covered by an adopted Airport Land Use Compatibility Plan?***

The Project site is not located within an airport land use plan or within 2 miles of a public use airport. The nearest private airstrip is 2.5 miles west of the Project site. As there are no airstrips within 2 miles of the Project site, a potential safety hazard would not occur. The Project would have **no impact**.

12. ***Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

The adopted emergency response plan is San Diego County's Emergency Operations Plan, which was approved by the County Board of Supervisors in 2018 (Unified San Diego County Emergency Services Organization and County of San Diego 2018). As discussed above, the Project would restore native habitat on an abandoned sand and gravel quarry site. No structures would be constructed as a result of the Project. Additionally, the Project would not induce population growth in the area, nor would it produce a significant increase in circulation. The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; therefore, the Project's impact would be **less than significant**.

3.6.5 Cumulative Impacts

As discussed in Section 2.6, List of Past, Present, and Reasonably Anticipated Future Projects, and identified in Table 2.11 and Figure 2-8, there are multiple cumulative projects in the area of the Project site. As outlined in Table 2.11, the cumulative projects that have potential impacts to hazards and hazardous materials include Tijuana River Vegetation Control; Border Wall Construction and Maintenance, U.S., Mexico, and Canada Agreement Section 821 Border Water infrastructure Projects; City of San Diego Water Reclamation Plant; U.S. International Boundary and Water Commission South Bay International Water Treatment Plant; and County of San Diego Tijuana River Valley Regional Park Campground and Nature Education Center. Existing sediment management activities in the Tijuana River Valley are also listed in Table 2.11 and depicted on Figure 2-8. These cumulative projects do not overlap the Project site, and each has or will undergo the CEQA and/or National Environmental Policy Act evaluation process, thereby identifying potential impacts to hazards and hazardous materials and providing mitigation measures for said impacts, if any. The Project does not have impacts to hazards or hazardous materials which require mitigation, and therefore would not likely contribute to cumulative impacts.

As described in the sections above, there are a variety of hazards and hazardous material issues that are relevant and applicable to the Project site and Project. The potential impacts related to hazards and hazardous materials would be minimized due to compliance with federal, state, and local regulatory requirements. These legal requirements and regulations, as detailed in Section 3.6.2, minimize potential for health and safety risks and potential hazards impacts to the environment. Cumulative projects would also be subject to federal, state, and local regulations related to hazardous materials and other public health and safety issues. In a manner similar to the Project, adherence to these regulatory requirements would reduce incremental impacts associated with public exposure to health and safety hazards in each of the areas area surrounding each of the cumulative project sites. Additionally, most hazardous material and safety-related risks are localized, generally affecting a specific site and immediate surrounding area, thus minimizing the potential for an impact to combine with another project to create a cumulative scenario.

Because cumulative projects would be fully regulated, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would be less than significant. Through compliance with regulatory requirements, the construction or operation of the Project itself would not create significant human or environmental health or safety risks that could combine with other project impacts to create a significant and cumulatively considerable impact. For these reasons, the Project **would not result in cumulatively considerable impacts** related to hazards and hazardous materials.

3.6.6 Mitigation Measures

Impacts would be less than significant and, therefore, no mitigation would be required.

3.6.7 Level of Significance After Mitigation

No mitigation would be required because all potential impacts associated with hazards and hazardous materials would be less than significant.

3.6.8 References

Airnav.com. 2020. "Airport Information." Accessed August 12, 2020. <https://www.airnav.com/airports/>.

CalGEM (California Geologic Energy Management Division). 2020. "Well Finder" [online database]. Accessed August 12, 2020. <https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx>.

California EPA (California Environmental Protection Agency). 2021. "More About the Unified Program". Accessed September 9, 2021. <https://calepa.ca.gov/cupa/about/>.

CDPR (California Department of Parks and Recreation). 2020. *Draft Goat Canyon Deposition Material Sampling and Analysis Program*. March 2020.

City of San Diego. 2018. "Public Facilities, Services & Safety Element." In *City of San Diego General Plan*. June 2018. https://www.sandiego.gov/sites/default/files/pf_2018-_final.pdf.

Cnic.navy.mil (Commander, Naval Installations Command). 2020. *Imperial Beach Outlying Landing Field*. Accessed 2020. https://www.cnic.navy.mil/regions/cnrsw/installations/navbase_coronado/about/installations/imperial_beach_outlying_landing_field.html.

- County of San Diego. 2017. *Multi-Jurisdictional Hazard Mitigation Plan*, Section 5.16, City of San Diego. Office of Emergency Services. https://www.sandiegocounty.gov/oes/emergency_management/oes_jl_mitplan.html.
- Ecology and Environmental Inc. 2014. *Letter Report Border Field Site Removal Assessment; Imperial Beach, San Diego County California*.
- EnviroStor. 2020. "Department of Toxic Substances Control (DTSC) online database." Accessed August 12, 2020. <https://www.envirostor.dtsc.ca.gov/public/>.
- FEMA (Federal Emergency Management Agency). 2003. *Federal Response Plan Interim*. January.
- FUDS (Formerly Used Defense Sites). 2020. "Army Corps of Engineers FUDS database." Accessed August 12, 2020. <https://www.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/FUDS-GIS/>.
- GeoTracker. 2020. "State Water Resources Control Board (SWRCB) online database." Accessed August 12, 2020. <https://geotracker.waterboards.ca.gov/>.
- Nautilus (Nautilus Environmental). 2008. *Draft Final Goat Canyon Retention Basins Phase II and III Source Material Soil Characterization Report, Tijuana Estuary Sediment Fate and Transport Study*. September 2008.
- NPMS (National Pipeline Mapping System). 2020. "Public Viewer Natural Gas and Hazardous Liquid Pipeline Mapping Database." Accessed August 12, 2020. <https://pvnpm.phmsa.dot.gov/PublicViewer/>.
- SDC ALUC (San Diego County Airport Land Use Commission). 2010. *Brown Field Municipal Airport Land Use Compatibility Plan*. December 20, 2010.
- SDRWQCB (San Diego Regional Water Quality Control Board). 2000. *Addendum No. 3 to Cease and Desist Order No. 96-52, International Boundary and Water Commission, U.S. Section, International Wastewater Treatment Plant, South Bay Ocean Outfall, San Diego County*. November 8, 2000.
- SFBRWQCB (San Francisco Bay Regional Water Quality Control Board). 2019. *Environmental Screening Levels*. Updated July 2019.
- SWIS (Solid Waste Information System). 2020. "CalRecycle Facility/Site Search database." Accessed August 12, 2020. <https://www2.calrecycle.ca.gov/SolidWaste/Site/Search>.
- Unified San Diego County Emergency Services Organization and County of San Diego. 2018. *Emergency Operations Plan*. September 2018. Accessed August 220. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2018/2018-EOP-Complete-Plan.pdf.

3.7 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts of the Project. The analysis of the Project impacts related to hydrology and water quality is partly based on information provided in the following technical reports:

- Revegetation Monitoring and Management Plan for the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project, prepared by Dudek, dated March 2021 (Appendix E-2)
- 80% Grading Plans for the Nelson Sloan Quarry Restoration Project, prepared by Dudek, dated January 2021 (see Figures 2-5a through 2-5f in Chapter 2, Project Description)

3.7.1 Existing Conditions

Regional Watershed

The Project site is located within the Tijuana River Watershed Management Area (WMA), which is the largest of the San Diego watersheds, covering over 1.1 million acres. The Tijuana River is formed by two drainage networks that merge in the City of Tijuana, then flow across the U.S./Mexico international border into the Tijuana River Estuary in Imperial Beach, and ultimately to the Pacific Ocean. The watershed is divided by the U.S./Mexico international border, with just over 27% of the WMA within the San Diego region and the remainder located in Mexico (73%). The watershed is comprised of the Tijuana Hydrologic Unit as well as the Tijuana Valley, Potrero, Barrett Lake, Monument, Morena, Cottonwood, Cameron, and Campo Hydrologic Areas. Major waterbodies in this WMA include the Tijuana River, Cottonwood Creek, and the Tijuana River Estuary. Annual precipitation varies from less than 10.5 inches near the coast to more than 22.5 inches in the inland areas. Land uses in the U.S. portion of the watershed include undeveloped/vacant areas (61%), parks (26%), residential (7%), agriculture (3%), transportation (3%), and commercial, recreation, industrial, military, public facilities, land under construction, and water land uses (less than 2%). In Mexico, land uses in the WMA consist predominantly of undeveloped/vacant uses (82%). However, much of the land use that is classified as undeveloped is used for low-intensity cattle and goat grazing (County of San Diego 2011a).

Historically, the Tijuana River WMA has supplied area residents with potable water sourced from one of two U.S. reservoirs: Moreno Reservoir and Barrett Lake. Both reservoirs are in the eastern half of the watershed and outflow into Otay Lake, which is in the San Diego Bay WMA (Project Clean Water 2021).

Topography and Drainage

The Project site is located near the U.S./Mexico international border. The Project Impact Area (approximately 20 acres) constitutes approximately half of the Project site and only a fraction of the larger 70-acre conditional use permit boundary that constituted the original Nelson Sloan Quarry holding. The westernmost portion of the Project site consists of a north- and east-sloping hillside. Surface conditions along the slope consist of moderately steep to steep inclines with inclinations varying from approximately 2:1 (horizontal to vertical) to near vertical. On-site slopes are generally vegetated with brush of varying densities. Drainage occurs as sheetflow across the slope.

Further south toward the international border, where slope inclinations are near vertical, the surface is less vegetated and highly eroded. Evidence of extensive erosion, including riling, gullying, and sloughing, was observed in this area, while evidence of surface erosion, debris (both natural material and trash), and slopewash was

observed throughout the Project site. On-site elevations are approximately 250 feet above mean sea level in the western ridge portion and approximately 100 feet above mean sea level at the eastern boundary. The eastern half of the Project site is generally flat, with a steep east-facing cut slope that traverses the westernmost portion of the site that extends from the Border Highlands area south to Monument Road.

Stormwater along the north-facing slope along the western portion of the Project site appears to drain to the northeast via sheet flow into an unnamed, intermittent channel near Monument Road.

Beneficial Uses and Total Maximum Daily Loads

Stormwater runoff is a significant contributor to local and regional pollution. Urban stormwater runoff is the largest source of unregulated pollution in the waterways of the United States. Federal, state, and regional regulations require the County of San Diego (County) and City of San Diego (City) to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development.

In accordance with state policy for water quality control, the San Diego Regional Water Quality Control Board (RWQCB) regulates water quality, among various other agencies, within the San Diego region. Water quality objectives, plans, and policies for the surface waters within this region are established in the Basin Plan for the San Diego Region. The Basin Plan has identified existing and potential beneficial uses supported by the key surface watershed drainages throughout its jurisdiction. The current and proposed beneficial uses of downstream water bodies within the Tijuana River WMA are provided in Table 3.7-1 (SDRWQCB 2017).

Table 3.7-1. Beneficial Uses

| Water Body | Beneficial Use | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|----------------|-----|-----|------|-----|------|-----|------|------|------|------|------|------|------|------|-----|------|-----|-----|------|------|-------|--|
| | MUN | AGR | IND | PROC | GWR | FRSH | POW | REC1 | REC2 | BIOL | WARM | COLD | WILD | RARE | SPWN | NAV | COMM | EST | MAR | AQUA | MIGR | SHELL | |
| Tijuana River | + | | 0 | | | | | 0 | X | X | X | | X | X | | | | | | | | | |
| Moody Canyon | + | | 0 | | | | | 0 | X | | X | | X | | | | | | | | | | |
| Smugglers Gulch | + | | 0 | | | | | 0 | X | | X | | X | | | | | | | | | | |
| Goat Canyon | + | | 0 | | | | | 0 | X | | X | | X | | | | | | | | | | |
| Tijuana River Estuary | | | | | | | | X | X | X | | | X | X | X | | X | X | X | | X | X | |

Source: SDRWQCB 2017.

Legend:

- | | |
|---|--|
| MUN Municipal and Domestic Supply | WARM Warm Freshwater Habitat |
| AGR Agricultural Supply | COLD Cold Freshwater Habitat |
| IND Industrial Service Supply | WILD Wildlife Habitat |
| PROC Industrial Process Supply | RARE Rare, Threatened, or Endangered Species |
| GWR Ground Water Recharge | SPWN Spawning, Reproduction, and/or Early Development |
| REC 1 Contact Water Recreation | NAV Navigation |
| REC 2 Non-contact Water Recreation | COMM Commercial and Sport Fishing |
| BIOL Preservation of Biological Habitats of Special Significance | EST Estuarine Habitat |
| | MAR Marine Habitat |

| | | | |
|--------------|--------------------------------|----------|--------------------------|
| AQUA | Aquaculture | + | Excepted from MUN |
| MIGR | Migration of Aquatic Organisms | O | Potential Beneficial Use |
| SHELL | Shellfish Harvesting | E | Existing Beneficial Use |

Surface Water Quality

Land use activities that cause erosion can potentially increase the delivery of toxic substances to waterways. Water quality impairment, as defined in the Clean Water Act (CWA) Section 303(d), for waterbodies downstream of the Project site is identified in Table 3.7-2. These impaired bodies are listed as Category 5, which includes waters where at least one beneficial use is not supported, and a total maximum daily load (TMDL) is required. Waters in San Diego County are impaired with a wide variety of point-source (e.g., industrial process water discharges, cleanup sites, sewer system overflows) and non-point-source (e.g., agricultural runoff, urban runoff/storm sewers, construction/land development) pollutants.

Sedimentation/siltation (e.g., high turbidity) has been included as a water quality impairment under CWA Section 303(d). Erosion, sediment transport, and sedimentation are natural fluvial processes and are only considered a water quality issue where anthropogenic activities cause excessively high erosion and turbidity beyond natural background levels (i.e., to the degree that they cause the loss or impairment of beneficial uses). In earthen-engineered channels, urbanization and channelization have increased the quantity of sediment transported and sediment buildup in maintained flood control facilities. However, such sediment buildup is managed through routine maintenance and natural processes. The basins capture sediment-laden runoff from upstream sources. These basins filter out sediment loads in surface runoff, thus decreasing the turbidity of stormwater flows downstream. Generally, issues related to increased surface water flow and sedimentation include increased stream erosion, which has threatened homes, utilities, and other structures; impacts biological species and habitats; and increases the risk of loss of channel hydraulic capacity.

Table 3.7-2. Surface Water Quality Impairment and Total Maximum Daily Loads

| Water Body | 2014 and 2016 303(d) List of Water Quality Impairments (Included under SWRCB Integrated Report Category 5) |
|-------------------------------------|---|
| Tijuana River | Ammonia as Nitrogen, Benthic Community Effects, Cadmium, Chlorpyrifos, Diazinon, Eutrophic, Indicator Bacteria, Low Dissolved Oxygen, Malathion, Pesticides, Phosphorus, Sedimentation/Siltation, Selenium, Solids, Surfactants (Methylene Blue Active Substances), Synthetic Organics, Total Nitrogen as N, ¹ Toxicity, Trace Elements, Trash |
| Moody Canyon | None listed |
| Smugglers Gulch | None listed |
| Goat Canyon | None listed |
| Tijuana River Estuary | Eutrophic, Indicator Bacteria, Lead, Low Dissolved Oxygen, Nickel, Pesticides, Thallium, Toxicity, Trash, Turbidity |
| Pacific Ocean Shoreline, Tijuana HU | Indicator Bacteria |

Source: SWRCB 2017.

Notes: SWRCB = State Water Resource Control Board; HU = Hydrologic Unit.

¹ Total Nitrogen is the sum of nitrate (NO₃), nitrite (NO₂), organic nitrogen, and ammonia (all expressed as N).

The Draft 2020-2022 Integrated Report for the Central Coast, Central Valley, and San Diego Regions was released for public review on June 4, 2021 (public review ending July 16) and includes proposed changes to the current

Section 303(d) List of Water Quality Impairments. Despite the draft status report, submittal to the U.S. Environmental Protection Agency (EPA) is not anticipated until March 2022 and significant delay is anticipated before proposed changes would take effect.

Groundwater

The Project site is underlain by the Coastal Plain of San Diego Groundwater Basin, which includes the San Diego Formation, a confined, coastal plain groundwater basin. The Cities of San Diego, National City, Chula Vista, Imperial Beach, and San Ysidro are all underlain by the Coastal Plain of San Diego Basin. This basin is bound to the west by the Pacific Ocean, to the south by the international border, to the north by the Mission Valley Basin, and to the east by the La Nacion Fault. The southern portion of the San Diego Formation, including the Project site, is also known as the Tijuana Groundwater Basin (DWR 2018; City of San Diego 2016).

Water Supply

Water for the City, including the Project site, is provided by the City of San Diego Public Utilities. The City's water system extends over 404 square miles and delivers approximately 200 million gallons per day, or 224,000 acre-feet per year (AFY) to its service area. The City's water system is split into three major service areas: (1) Miramar, which serves the entire northern area of the City; (2) Alvarado, which serves the Mission Bay area, Mission Valley area, and the areas extending south to the boundary of National City; and (3) Otay, which serves the southernmost part of the City, including the Project area. According to the City of San Diego 2015 Urban Water Management Plan (UWMP), in 2015, approximately 93% of the City's water supply was purchased from the San Diego County Water Authority, which receives approximately 92% of its water supplies from the Metropolitan Water District of Southern California, 3% from local runoff and rainfall within seven surface reservoirs, 4% from recycled water for non-potable water use, and less than 1% from groundwater extracted from the Santee-El Monte Groundwater Basin (identified as the San Diego River Valley Basin in the California Department of Water Resources [DWR] Bulletin 118) (DWR 2020; City of San Diego 2016).

Historically, the City has been able to reliably serve customers' water supply needs from year-to-year. However, interrupted or significantly reduced water supply, such as a drought or earthquake, could threaten this reliability. In order to maintain a sustainable water supply, the City's 2015 UWMP contains a Water Shortage Contingency Plan, which includes the stages of response to a water shortage, such as drought, that occur over a period of time, and to catastrophic supply interruptions that occur suddenly. The primary objective of the Water Shortage Contingency Plan is to ensure that the City has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. This plan involves implementing mandatory water reduction from its customers and implementing fines and penalties for those who exceed their allocated water usage (City of San Diego 2016).

Groundwater Management

In accordance with the Sustainable Groundwater Management Act (SGMA), DWR has classified the San Diego River Valley Basin as having a very low priority regarding the prioritization of the completion of a Groundwater Sustainability Plan (GSP). Similarly, the DWR has determined that the Coastal Plain of San Diego Groundwater Basin has a low priority regarding prioritizing the completion of a GSP (DWR 2019). In addition, no groundwater basins in the City's service area are adjudicated and thus they do not have court rulings determining sustainable extraction rates. Nonetheless, the City has committed to protecting groundwater resources from over-extraction and contamination (City of San Diego 2016).

Flood Hazard

In previous years, major storms have produced floods that caused significant property losses and resulted in extensive damage to public infrastructure throughout the San Diego region. For example, the storms that occurred between December 27, 2004, and January 11, 2005, caused approximately \$7.7 million in damages Countywide. Flood risks also occur during periods of heavy rainfall in areas where land has been converted from pervious to impervious surfaces and where vegetation has been reduced, such as after a wildfire. In both cases, land loses its ability to absorb rainfall, resulting in more stormwater entering stream beds, riverbeds, and reservoirs. The Hydrology Division of the County of San Diego Flood Control District is responsible for maintaining a historical database containing data from over 100 rain gauges (County of San Diego 2011a).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number 06073C2162G, effective on May 16, 2012, indicates that the Project site is located within flood Zone X (Unshaded), Area of Minimal Flood Hazard (FEMA 2012). This area is higher in elevation than the 0.2% annual chance flood (i.e., 500-year flood) (FEMA 2012).

In addition to the FEMA FIRMs, the County has developed its own flood maps that account for additional areas of known risk. The County flood maps depict the 1.0% annual chance (100-year) riverine flood elevations for areas beyond those studied by FEMA and are used in conjunction with FIRMs in regulating development. In many areas, the County floodplain maps overlap the FEMA FIRMs. In areas where overlap occurs, the more stringent restrictions prevail (County of San Diego 2020). According to the County flood maps, the Project site is not located within either a 100-year or 500-year floodplain (SanGIS 2020). As the Project site is not located in an area of flood risk in either FEMA or County flood maps, on-site flood risk is considered low.

3.7.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to the enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

Section 401 of the Clean Water Act

Section 401 of the CWA requires that an applicant for any federal permit (e.g., U.S. Army Corps of Engineers Section 404 permit) obtain certification from the state, requiring that discharges to waters of the United States comply with provisions of the CWA and with state water quality standards. For example, an applicant for a permit under Section 404 of the CWA must also obtain water quality certification per Section 401 of the CWA. For the Project site and surrounding area, the San Diego RWQCB must provide the water quality certification required under Section 401 of the CWA.

Section 404 of the Clean Water Act

Section 404 of the CWA established a permitting program to regulate the discharge of dredged or fill material into waters of the United States, which include wetlands adjacent to national waters (33 USC 1344). This permitting program is administered by the U.S. Army Corps of Engineers and enforced by EPA. For more information on Section 404 of the CWA, see Section 3.3, Biological Resources, of this Environmental Impact Report (EIR).

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The National Flood Insurance Act also requires the identification of all floodplain areas within the United States and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing FIRMs that delineate the areas of known special flood hazards and their risk applicable to the community. The National Flood Insurance Program encourages the adoption and enforcement by local communities of floodplain management ordinances that reduce flood risks. In support of the National Flood Insurance Program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

Federal Antidegradation Policy

The Federal Antidegradation Policy (Title 40 Code of Federal Regulations Part 131.12) requires states to develop and implement statewide antidegradation policies. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods must, at a minimum, protect and maintain (1) existing in-stream water uses; (2) water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses (unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area); and (3) water quality in waters considered an outstanding national resource.

State

National Pollutant Discharge Elimination System

Direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the National Pollutant Discharge Elimination System (NPDES) program, established in Section 402 of the CWA. A Stormwater Pollution Prevention Plan (SWPPP) prepared in compliance with an NPDES permit describes erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls. Dischargers are also required to inspect construction sites before and after storms to identify stormwater discharge from construction activity and to identify and implement controls, where necessary.

California Porter-Cologne Water Quality Control Act

Since 1973, the California State Water Resource Control Board and its nine RWQCBs have been delegated the responsibility for administering permitted discharge into the waters of California. The Project falls within the jurisdiction of the San Diego RWCQB. The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) provides a comprehensive water quality management system for the protection of California waters.

Under this act, “any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state,” must file a report of the discharge with the appropriate RWQCB. Pursuant to the act, the RWQCB may then prescribe “waste discharge requirements” that add conditions related to control of the discharge. Porter-Cologne defines “waste” broadly, and the term has been applied to a diverse array of materials, including non-point-source pollution. When regulating discharges that are included in the federal CWA, the state essentially treats Waste Discharge Requirements and NPDES regulations as a single permitting vehicle. In April 1991, the State Water Resource Control Board and other state environmental agencies were incorporated into the California Environmental Protection Agency.

The RWQCB regulates urban runoff discharges under the NPDES permit regulations. NPDES permitting requirements cover runoff discharged from point (e.g., industrial outfall discharges) and non-point (e.g., stormwater runoff) sources. The RWQCB implements the NPDES program by issuing construction and industrial discharge permits.

Under the NPDES permit regulations, best management practices (BMPs) are required. EPA defines BMPs as “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States.” BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage (Title 40 Code of Federal Regulations Part 122.2).

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High-Quality Water in California, was adopted by the State Water Resource Control Board (State Board Resolution No. 68-16) in 1968. Unlike the federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state (e.g., includes isolated wetlands and groundwater), not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality must be maintained, and discharges to that water body must not unreasonably affect present or anticipated beneficial uses of such water resources.

Section 303 of the Clean Water Act (Beneficial Uses and Total Maximum Daily Loads)

The San Diego RWQCB is responsible for the protection of the beneficial uses of waters within the San Diego region. The San Diego RWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the San Diego Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the San Diego Region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Beneficial uses of waters within the Tijuana River WMA are addressed in the San Diego Basin Plan.

Under CWA Section 303(d), California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The San Diego RWQCB has developed TMDLs for select reaches of water bodies.

California Toxics Rule

EPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule established acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by each RWQCB as having beneficial uses protective of aquatic life or human health.

California Water Code

The California Water Code includes 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (California Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, and a Water Conservation District (California Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

Assembly Bill 3030 – Groundwater Management Act

In 1992, Assembly Bill 3030 was passed, which increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to “fix and collect fees and assessments for groundwater management” (California Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (California Water Code Section 10754.3).

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739, Senate Bill 1168, and Senate Bill 1319—collectively known as SGMA. This act requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt GSPs for crucial groundwater basins in California.

Urban Water Management Plans

Pursuant to the California Urban Water Management Act (California Water Code Sections 10610-10656), urban water purveyors are required to prepare and update a UWMP every 5 years. UWMPs are prepared by California’s urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in a UWMP. UWMPs must be updated and submitted to the DWR every 5 years for review and approval. The Project site is within the area addressed by City’s UWMP.

Local

County of San Diego General Plan

The Safety Element of the San Diego County General Plan, in part, summarizes mitigation goals and specific policies related to flooding (County of San Diego 2011b). In addition, the Conservation and Open Space Element and Land Use Element contain policies to preserve water quality and mitigate flood risk (County of San Diego 2011c, 2011d). Goals and policies related to hydrology and water quality include the following:

- **GOAL S-9: Protection of Life and Property.** Minimized personal injury and property damage losses resulting from flood events.
 - **S-9.1 Floodplain Maps.** Manage development based on federal floodplain maps. County maps shall also be referred to, and in case of conflict(s) between the County floodplain maps and the federal floodplain maps, the more stringent of restrictions shall apply.
 - **S-9.2 Development in Floodplains.** Limit development in designated floodplains to decrease the potential for property damage and loss of life from flooding and to avoid the need for engineered channels, channel improvements, and other flood control facilities. Require development to conform to federal flood-proofing standards and siting criteria to prevent flow obstruction.
- **GOAL S-10: Floodway and Floodplain Capacity.** Floodways and floodplains that have acceptable capacity to accommodate flood events.
 - **S-10.1 Land Uses within Floodways.** Limit new or expanded uses in floodways to agricultural, recreational, and other such low-intensity uses and those that do not result in any increase in flood levels during the occurrence of the base flood discharge, do not include habitable structures, and do not substantially harm, and fully offset, the environmental values of the floodway area. This policy does not apply to minor renovation projects, improvements required to remedy an existing flooding problem, legal sand or gravel mining activities, or public infrastructure.
 - **S-10.2 Use of Natural Channels.** Require the use of natural channels for County flood control facilities except where necessary to protect existing structures from a current flooding problem and where natural channel use is deemed infeasible. The alternative must achieve the same level of biological and other environmental protection, such as water quality, hydrology, and public safety.
 - **S-10.3 Flood Control Facilities.** Require flood control facilities to be adequately sized, constructed, and maintained to operate effectively.
 - **S-10.4 Stormwater Management.** Require development to incorporate low impact development (LID), hydromodification management, and other measures to minimize stormwater impacts on drainage and flood control facilities.
 - **S-10.5 Development Site Improvements.** Require development to provide necessary on- and off-site improvements to stormwater runoff and drainage facilities.
 - **S-10.6 Stormwater Hydrology.** Ensure development avoids diverting drainages, increasing velocities, and altering flow rates to off-site areas to minimize adverse impacts to the area's existing hydrology.
- **GOAL COS-4: Water Management.** A balanced and regionally integrated water management approach to achieve the long-term viability of the County's water quality and supply.
 - **COS-4.1 Water Conservation.** Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources.

- **COS-4.2 Drought-Efficient Landscaping.** Require efficient irrigation systems and in new development encourage the use of native plant species and non-invasive drought tolerant/low water use plants in landscaping.
- **COS-4.3 Stormwater Filtration.** Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces. This policy shall not apply in areas with high groundwater, where raising the water table could cause septic system failures, moisture damage to building slabs, and/or other problems.
- **COS-4.4 Groundwater Contamination.** Require land uses with a high potential to contaminate groundwater to take appropriate measures to protect water supply sources.
- **COS-4.5 Recycled Water.** Promote the use of recycled water and gray water systems where feasible.
- **GOAL COS-5: Protection and Maintenance of Water Resources.** Protection and maintenance of local reservoirs, watersheds, aquifer-recharge areas, and natural drainage systems to maintain high-quality water resources.
 - **COS-5.1 Impact to Floodways and Floodplains.** Restrict development in floodways and floodplains in accordance with policies in the Flood Hazards section of the Safety Element.
 - **COS-5.2 Impervious Surfaces.** Require development to minimize the use of directly connected impervious surfaces and to retain stormwater runoff caused by the development footprint at or near the site of generation.
 - **COS-5.3 Downslope Protection.** Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion, capturing runoff to allow for adequate filtration, and protecting downstream biological resources.
 - **COS-5.4 Invasive Species.** Encourage the removal of invasive species to restore natural drainage systems, habitats, and natural hydrologic regimes of watercourses.
 - **COS-5.5 Impacts of Development to Water Quality.** Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources, and recharge areas, watersheds, and other local water sources.
- **GOAL LU-6: Development—Environmental Balance.** A built environment in balance with the natural environment, scarce resources, natural hazards, and the unique local character of individual communities.
 - **LU-6.9 Development Conformance with Topography.** Require development to conform to the natural topography to limit grading; incorporate and not significantly alter the dominant physical characteristics of a site, and to utilize natural drainage and topography in conveying stormwater to the maximum extent practicable.
 - **LU-6.10 Protection from Hazards.** Require that development be located and designed to protect property and residents from the risks of natural and man-induced hazards.
 - **LU-6.12 Flooding.** Document and annually review areas within floodways and 100- and 200-year floodplains to ensure areas subject to flooding are accurately mapped in accordance with AB 162.

County of San Diego Watershed Protection Ordinance

On May 8, 2013, the San Diego RWQCB adopted a new Municipal Stormwater Permit (NPDES, No. R9-2013-0001) that covered the San Diego County co-permittees. This Permit mandates that the County develop new and updated Runoff Management Plans and Programs, including Water Quality Improvement Plans and a Jurisdictional Runoff

Management Program. These documents were submitted to the RWQCB on June 26, 2015. Permit requirements are generally implemented in the unincorporated County under the authority of the Watershed Protection, Stormwater Management, and Discharge Control Ordinance (WPO).

The amended Municipal Separate Storm Sewer System (MS4) Permit, like all previous iterations, requires the County to establish and maintain the adequate legal authority to implement all updated MS4 Permit provisions. The WPO has been amended to ensure that it is current with the minimum requirements of the recently amended MS4 Permit. The amendments include updating terminology and definitions related to land development priority development projects, removal of outdated sections, minor updates to discharge prohibitions, and the incorporation of an optional program to allow development projects to satisfy some of their stormwater compliance obligations at off-site locations.

County of San Diego Guidelines for Determining Significance

The County of San Diego Guidelines for Determining Significance is used by County staff for the review of discretionary projects and environmental documents pursuant to the California Environmental Quality Act (CEQA). These guidelines present a range of quantitative, qualitative, and performance levels for environmental effects. Normally (in the absence of substantial evidence to the contrary), non-compliance with a particular standard stated in these guidelines would mean the project would result in a significant impact. In contrast, compliance would typically mean the impact would be determined to be less than significant.

City of San Diego General Plan

The Conservation Element of the City of San Diego General Plan, in part, summarizes mitigation goals and specific policies related to water quality. Goals and policies related to hydrology and water quality include the following (City of San Diego 2008):

- **CE-C.2.** Control sedimentation entering coastal lagoons and waters from upstream urbanization using a watershed management approach that is integrated into local community and land use plans.
- **CE-D.1.** Implement a balanced water conservation strategy as an effective way to manage demand by reducing dependence on imported water supplies, maximizing the efficiency of existing urban water and agricultural supplies through conservation measures/programs, and developing reliable alternative sources to sustain present and future water needs.
 - a. Integrate watershed planning with water supply and land use studies to achieve an integrated approach to ensure that the City can provide adequate water supplies for present use, accommodate future growth, attract and support commercial and industrial development, and supply local agriculture.
 - b. Manage groundwater and surface water resources and capacity through an integrated approach to meet overall water supply and resource management objectives.
 - c. Participate in advanced water treatment processes such as brackish groundwater and seawater desalination programs.
 - d. Emphasize and refine recycled water programs to help meet non-potable irrigation demands.
 - f. Support regional efforts towards ensuring that imported water is reliable, cost-effective, and is of high quality.
 - g. Maintain existing and future water supply, storage treatment, and distribution facilities with minimal or no impact to the environment.

- h. Implement conservation incentive programs that increase water-use efficiency and reduce urban runoff.
- **CE-D.2.** Protect drinking water resources by implementing guidelines for future development that may affect water supply watersheds, reservoirs, and groundwater aquifers. The guidelines should address site design, BMPs, and stormwater treatment measures.
 - a. Enter into cooperative, voluntary agreements with other jurisdictions to enable to City to provide an advisory review of development projects outside of the City’s boundaries that may impact watersheds and reservoirs.
- **CE-D.3.** Continue to participate in the development and implementation of watershed management plans.
 - a. Control water discharge in a manner that does not reduce reasonable use by others, damage important native habitats and historic resources, or create hazardous conditions.
 - b. Improve and maintain urban runoff water quality through the implementation of stormwater protection measures.
- **CE-D.5.** Integrate water and land use planning into local decision-making, including using water supply and land use studies in the development review process.
- **CE-E.2.** Apply water quality protection measures to land development projects early in the process-during project design, permitting, construction, and operation in order to minimize the quantity of runoff generated on-site the disruption of natural water flows and the contamination of stormwater runoff.
 - a. Increase on-site infiltration, and preserve, restore, or incorporate natural drainage systems into the site design.
 - b. Direct concentrated drainage flows away from the Multi-Habitat Planning Area (MHPA) and open space areas. If not possible, drainage should be directed into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA or open space areas.
 - c. Reduce the number of impervious surfaces through the selection of materials, site planning, and street design where possible.
 - d. Increase the use of vegetation in drainage design.
 - e. Maintain landscape design standards that minimize the use of pesticides and herbicides.
 - f. Avoid development of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and, where impacts are unavoidable, enforce regulations that minimize their impacts.
 - g. Apply land use, site development, and zoning regulations that limit impacts on, and protect the natural integrity of topography, drainage systems, and water bodies.
 - h. Enforce maintenance requirements and development permit conditions.
- **CE-E.3.** Require contractors to comply with accepted stormwater pollution prevention planning practices for all projects.
 - a. Minimize the amount of graded land surface exposed to erosion and enforce erosion control ordinances.
 - b. Continue routine inspection practices to check for proper erosion control methods and housekeeping practices during construction.
- **CE-E.4.** Continue to participate in the development and implementation of Watershed Management Plans for water quality and habitat protection.
- **CE-E.5.** Assure that the City departments continue to use “Best Practices” procedures so that water quality objectives are routinely implemented.

- a. Incorporate water quality objectives into existing regular safety inspections.
- b. Follow BMPs and hold training sessions to ensure that employees are familiar with those practices.
- c. Educate City employees on sources and impacts of pollutants on urban runoff and actions that can be taken to reduce these sources.
- d. Ensure that contractors used by the City are aware of and implement urban runoff control programs.
- **CE-E.6.** Continue to encourage “Pollution Control” measures to promote the proper collection and disposal of pollutants at the source, rather than allowing them to enter the storm drain system.
 - a. Follow up on the complaints of illegal discharges and accidental spills to storm drains, waterways, and canyons.
- **CE-E.7.** Manage floodplains to address their multi-purpose use, including natural drainage, habitat preservation, and open space and passive recreation, while also protecting public health and safety.

City of San Diego Stormwater Standards Manual

The City’s Stormwater Standards Manual addresses, and provides guidance for complying with, updated on-site post-construction stormwater requirements for Standard Projects and Priority Development Projects; it also provides updated procedures for planning, preliminary design, selection, and design of permanent stormwater BMPs based on the performance standards presented in the current MS4 Permit (City of San Diego 2021). Included in the stormwater standards manual is source control and site design requirements for all development projects in the City, BMP selection and design methodology, and submittal requirements for standard projects.

City of San Diego Municipal Waterways Maintenance Plan

The City’s Municipal Waterways Maintenance Plan (MWMP) guides maintenance of the storm drain system following the expiration of the City’s former Master Storm Water System Management Program. The MWMP is adapted to provide public safety more efficiently through a proactive and responsive maintenance schedule for portions of the storm drain system requiring periodic maintenance to remove accumulated sediment, vegetation, and trash that impedes water flow and increases flood risks (City of San Diego 2020). To maintain the system’s effectiveness, this MWMP identifies specific activities, methods, and procedures that will guide ongoing maintenance and repair of facilities. Lastly, the MWMP provides a comprehensive approach to identify and regulate maintenance and repair activities, primarily within open stormwater facilities (i.e., those facilities located aboveground and not within closed systems, such as pipes).

Both the Pilot Channel of the Tijuana River and the City-responsible portion of Smuggler’s Gulch are included in the MWMP and maintenance activities in the facilities were evaluated in the MWMP EIR.

3.7.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to hydrology and water quality are based on the combined significance thresholds of the County and City, as well as Appendix G of the CEQA Guidelines. According to the combined guidelines, a significant impact related to hydrology and water quality would occur if the Project would:

1. Be a development project listed in County of San Diego, Code of Regulatory Ordinances (Regulatory Ordinances), Section 67.804(g), as amended and does not comply with the standards set forth in the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, or the

Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67 (County of San Diego).

2. Drain to a tributary of an impaired water body listed on the Clean Water Act Section 303(d) list, and would contribute substantial additional pollutant(s) for which the receiving water body is already impaired (County of San Diego).
3. Drain to a tributary of a drinking water reservoir and would contribute substantially more pollutant(s) than would normally runoff from the Project site under natural conditions (County of San Diego).
4. Contribute pollution in excess of that allowed by applicable State or local water quality objectives or would cause or contribute to the degradation of beneficial uses (County of San Diego).
5. Not conform to applicable Federal, State or local "Clean Water" statutes or regulations, including but not limited to the Federal Water Pollution Control Act, California Porter-Cologne Water Quality Control Act, and the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance (County of San Diego).
6. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.
7. Result in a substantial increase in impervious surfaces and associated increased runoff (City of San Diego).
8. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site (County of San Diego).
9. Increase water surface elevation in a watercourse within a watershed equal or greater than 1 square mile, by 1 foot or more in height and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River and Otay River, 2/10 of a foot or more in height (County of San Diego).
10. Result in increased velocities and peak flow rates exiting the Project site that would cause flooding downstream or exceed the stormwater drainage system capacity serving the site (County of San Diego).
11. Be located in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation.
12. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
13. Result in placing housing, habitable structures, or unanchored impediments to flow in a 100-year floodplain area or other special flood hazard area, as shown on a FIRM, a County Flood Plain Map or County Alluvial Fan Map, which would subsequently endanger health, safety and property due to flooding (County of San Diego).
14. Will place structures within a 100-year flood hazard or alter the floodway in a manner that would redirect or impede flow resulting in any of the following:
 - i. Alter the Lines of Inundation resulting in the placement of other housing in a 100-year flood hazard;
OR
 - ii. Increase water surface elevation in a watercourse with a watershed equal to or greater than 1 square mile by 1 foot or more in height and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River and Otay River, 2/10 of a foot or more in height.

Methodology

The analysis of impacts to hydrology and water quality resources is assessed by comparing existing conditions to changes that could occur associated with the implementation of the Project. The analysis evaluates if the Project would directly or indirectly cause or exacerbate impacts related to hydrology and water quality.

Both the County and City have adopted significance guidelines to assist staff, project proponents, and the public in determining whether a project may have a significant impact. These guidelines are used in conjunction with Appendix G of the CEQA Guidelines to provide technical guidance in evaluating the potential significance of a project's environmental impact, as well as to provide a consistent and objective basis for determining the level of impact. The most stringent thresholds of both the County and City guidelines were compiled to create a threshold guideline that would satisfy the requirements of each party. Further, the Project description (see Chapter 2 of this EIR), and 80% grading plans for the Project were used when evaluating hydrologic and water quality-related impacts, in combination with publicly available hydrology- and water quality-related- documents, with respect to the thresholds of significance listed below.

3.7.4 Impacts Analysis

- 1. Is the Project a development project listed in County of San Diego, Code of Regulatory Ordinances (Regulatory Ordinances), Section 67.804(g), as amended, and does the Project comply with the standards set forth in the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, or the Additional Requirements for Land Disturbance Activities set forth in Regulatory Ordinances, Section 67?***

As indicated in the County of San Diego Guidelines for Determining Significance, Surface Water Quality (County of San Diego 2007), this significance guideline was chosen to ensure compliance with applicable state and federal laws that protect surface water quality. The Stormwater Standards Manual is part of the County WPO and sets out in more detail by project category what dischargers must do to comply with the WPO and minimize impacts to surface water quality to a less-than-significant level. An impact of a project would be considered significant if the design conflicts with one or more of the applicable standards presented in the County Stormwater Standards Manual or the Additional Requirements for Land Disturbance Activities. The additional requirements include preparation of a Stormwater Management Plan (SWMP) that specifies the way the BMPs required by the WPO will be implemented and provides minimum BMPs for the land disturbing activity.

Construction

Grading and Restoration

The Project site currently consists of an abandoned sand and gravel quarry. Implementation of the Project would result in the grading and restoration of oversteepened and potentially unstable slopes to less steep topography, similar to conditions prior to quarrying operations, over six north-northeasterly advancing phases (Phases 1 through 6). Restoration activities would include the placement of processed sediment, excavated as part of ongoing annual, permitted channel and basin maintenance activities in the Tijuana River Valley, on graded slopes. As indicated in Table 2-1 in Chapter 2, approximately 1,040,000 cubic yards of sediment would be required for restoration over a 15-year period, or approximately 69,000 cubic yards of sediment per year. Once final landform topography has been established, each phase (excluding Phase

1) would be revegetated with interim native erosion control seed mix, consisting of a mix of low growing herbs, grasses, and wildflowers that germinate quickly and provide vegetative cover.

Potential impacts of grading activities and non-stormwater runoff on water quality during the construction phase are mostly associated with sediment and certain non-sediment-related pollutants. Construction-related activities that primarily result in sediment releases are related to exposing previously stabilized soils to potential mobilization by rainfall/runoff and wind. Environmental factors that affect erosion include topographic, soil, and rainfall characteristics. Erosion and sedimentation affect water quality and interfere with photosynthesis; oxygen exchange; and the respiration, growth, and reproduction of aquatic species. Other pollutants of concern, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages, which could contribute to the degradation of water quality. Furthermore, grading activities may result in soil migration off site via wind (see Section 3.2, Air Quality, for further discussion of construction-generated air quality impacts).

Project-related ground disturbance and restoration activities would be completed in accordance with the San Diego Regional MS4 Permit, as well as with the applicable standards in the City of San Diego Whitebook and the Greenbook (i.e., standard specifications for public works construction). The NPDES MS4 Permit requires the City to implement a SWMP in accordance with the WPO. A key component of the SWMP is the introduction of construction BMPs early in the design process of the Project. While the manual does not explicitly provide guidance for BMPs, all projects are required to address construction BMPs per relevant ordinances, regulations, and statutes, including the provisions of the NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002), also known as the Construction General Permit.

Because the Project is greater than 1.0 acre in size, the applicant would be required to submit a Notice of Intent to the San Diego RWQCB to obtain approval to complete construction activities under the Construction General Permit. This permit would include several design, management, and monitoring requirements for the protection of water quality and the reduction of construction phase impacts related to stormwater (and some non-stormwater) discharges. Permit requirements include the preparation of a SWPPP (this plan would be prepared prior to Project construction), implementation and monitoring of BMPs, implementation of best available technology for toxic and non-conventional pollutants, implementation of best conventional technology for conventional pollutants, and periodic submittal of performance summaries and reports to the San Diego RWQCB. The SWPPP applies to the Project as a whole and includes references to major construction areas, staging areas, and haul roads. Examples of BMPs that are included in the SWPPP to protect water quality include, but are not limited to, the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Placing perimeter straw wattles to prevent off-site transport of sediment
- Using drop inlet protection (filters and sandbags or straw wattles), with sandbag check dams within paved areas
- Regular watering of exposed soils to control dust during grading
- Implementing specifications for demolition/construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Maintaining erosion and sedimentation control measures throughout the construction period

- Stabilizing construction entrances to avoid trucks from imprinting soil and debris onto adjoining roadways
- Training, including for subcontractors, on general site housekeeping

Grading and restoration activities would also be completed in accordance with the Project grading plans (see Figures 2-5a through 2-5f) and revegetation plans (see Figures 2-7a through 2-7h). These plans require the installation of context-appropriate, construction-related BMPs to reduce on- and off-site erosion potential. Proposed BMPs for the Project include the installation of non-invasive non-habitat forming erosion control seed mix, silt fencing, fiber rolls, and gravel bags in between grading phases. In addition, a sediment trap would be maintained throughout each phase of construction. Runoff would be directed to the sediment basin by sheet flow and temporary ditches and/or riprap channels constructed on the face of new slopes and within the Project property.

Incorporation of required BMPs for materials, waste storage and handling, equipment and vehicle maintenance, and fueling would reduce the potential discharge of pollutants from Project construction, consistent with the state NPDES General Construction Permit, City of San Diego Whitebook and Greenbook, and WPO requirements. Moreover, compliance with the Project grading and revegetation plans would ensure that Project construction does not result in an increase in on-site erosion and sedimentation rates. Therefore, Project grading and restoration activities would not violate any water quality standards, waste discharge requirements, or otherwise substantially degrade surface quality.

Sediment Excavation, Stockpiling, and Processing

Given the bi-national nature of the Tijuana WMA, much of the surface water flow in the Tijuana River Valley during storm events originates across the international border with Mexico. These flows transport a considerable volume of trash and waste tires intermixed with entrained sediment. As such, to reduce potential on- and off-site release of contaminants, sediments would be physically and chemically sampled prior to or following excavation.

Initial site preparation would, in part, involve the construction of a sediment processing station, which would include a sediment trap and stockpile site. The sediment trap would be constructed with an impervious earth fill bottom overlain by temporary riprap to allow for runoff and sediment to settle prior to being released from the site. The processing plant would screen rock, cobbles, tires, trash, and other debris and would process sediment into piping sand, fill, and waste stockpiles. The processed fill materials would then be placed in appropriate stockpiles for either on-site placement or removal.

Stockpiled soils would be underlain by plastic sheeting, so no leaching of contaminants would occur. When no stockpiles are being generated, the processed sediment would be covered with plastic sheeting to minimize runoff potential. During active grading, and whenever stockpiles are uncovered, the piles would be treated using water or other dust suppressants, though no off-site runoff would be allowed. Stockpiles would be placed on site such that they do not intercept surface run-on or runoff and would be located no less than 50 feet away from concentrated flows of stormwater, drainage courses, and inlets. Each stockpile would have adequate spacing to allow access for vehicles and materials handling.

All sediment extracted from floodplain facilities not designated as suitable for placement on site would be initially stored in berms surrounding the phase being actively graded. These berms would be regularly managed and hauled off site for reuse or disposal. No tailings, berms, or waste piles would remain on site

following the end of grading operations. In addition, suspect hazardous materials would be removed and disposed of according to federal, state, regional waste regulations (see Section 3.6, Hazards and Hazardous Materials, for further discussion of construction generated hazard impacts).

Sediment excavation and screening activities would be carried out in accordance with the San Diego Regional MS4 Permit, applicable standards in the City of San Diego Whitebook and the Greenbook, and the future Operations and Maintenance plan. Adherence to these regulations would ensure that only suitable, non-contaminated sediments are used for slope restoration activities, and that identified contaminated soils would be stored and disposed of in accordance with federal, state, and local regulations relating to waste disposal.

Conclusion

Water quality enhancement components of the Project, including the implementation of a SWPPP and construction-related stormwater BMPs, would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Tijuana River WMA. As a result, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality during Project grading, restoration, and sediment processing activities. Impacts would be considered **less than significant**.

Operations

As described in detail in Section 2.4.2, Phased Restoration and Revegetation, following completion of each Project phase, temporary drainage facilities would be installed to direct stormwater off and away from new landforms. For example, Phase 2 would include construction of a turf reinforced mat-lined ditch (approximately 3 feet wide with 3:1 slopes) installed at and roughly parallel to the southern boundary of newly created terrain. The turfmat ditch would run downslope and would convey stormwater to a riprap channel constructed at the base of newly created terrain. In addition, a temporary, 1-foot-deep concrete ditch would be constructed and run parallel to the northern boundary of the Phase 2 limits of newly created terrain. Constructed in accordance with City standards, the concrete channel would convey stormwater to a temporary riprap pad (also constructed per City standards) installed at the northeast corner of newly created terrain and would slow flows prior to dispersing off site. The turf reinforced mat-lined ditch would remain during each successive phase, whereas the concrete channel would be relocated following each successive stage of fill placement.

Once a phase has been graded in accordance with the Project grading plan, an erosion control seed mix, native plants, and/or habitat forming coastal sage scrub seed mix would be applied (or planted) along the new slopes. The erosion control seed mix would be applied to slopes subject to future disturbance and sediment placement. Areas where final elevation has been achieved would be planted and/or covered with a habitat forming restoration and enhancement seed mix. During the final phase of reclamation, a concrete ditch and riprap lined channel would be constructed along the ridge landform that would convey stormwater from the highpoint of the site to an existing basin/channel located near Monument Road. The drainage system would be sized and designed to accommodate the stormwater volumes and flowrates of a 50-year storm event in accordance with the City's Drainage Design Manual (City of San Diego 2017) and the County's Standard Urban Stormwater Mitigation Plan Requirements for Development Applications (County of San Diego 2012a, 2012b). Collectively, on-site modifications would create gentler slopes, stabilize on-site soils, and improve drainage conditions, such that stormwater runoff velocities are reduced and flows

are distributed over a wider area. Moreover, sediments placed on site would be screened for pollutants prior to placement. As such, the reduction in runoff velocities and volumes, coupled with the use of suitable, contaminant-free sediments, would ensure that water quality impacts associated with soil erosion and surface water pollutants are minimized.

Implementation of the proposed LID BMPs and compliance with all relevant plans would, to the maximum extent feasible, reduce the discharge of pollutants into receiving waters, in accordance with all relevant local and state development standards. As a result, the Project would not violate any water quality standards or waste discharge requirements, including the County Stormwater Standards Manual, Regulatory Ordinances Section 67.813, as amended, the Additional Requirements for Land Disturbance Activities, Regulatory Ordinances Section 67, or otherwise substantially degrade surface water quality during Project operations. Impacts would be **less than significant**.

2. *Would the Project drain to a tributary of an impaired water body listed on the Clean Water Act Section 303(d) list, and contribute substantial additional pollutant(s) for which the receiving water body is already impaired?*

As indicated in Table 3.7-2, some downstream water bodies of the Tijuana River Valley, including the Tijuana River, Tijuana Estuary, the Pacific Ocean Shoreline, and Tijuana Hydrologic Unit, are impaired with various TMDLs in accordance with CWA Section 303(d). However, as previously discussed in threshold 1, the development of the Project would not result in a substantial increase in pollutants into these impaired water bodies.

On-site grading activities would be conducted in accordance with the state NPDES General Construction Permit, City of San Diego Whitebook and the Greenbook, the SWMP, grading plan, and revegetation plan. These guidelines include the implementation of standard BMPs to ensure that on-site construction activities, including sediment processing, stockpiling, grading, and restoration, would not result in the release of potential pollutants, such as sediment, trash and debris, and residual petroleum products, into the neighboring environment.

Permanent LID BMPs would be constructed on site in accordance with the SWMP, the long-term slope stabilization requirements outlined in the Project description (and future Operations and Maintenance Plan), grading plans, and preliminary geotechnical evaluation. On-site modifications would lower stormwater flow velocities, distribute flows over a larger area, stabilize on-site soils, and encourage on-site infiltration. These improvements would lower stormwater erosion potential and lower off-site runoff volumes compared to existing conditions. As such, construction and operation of the Project would not result in the contribution of additional pollutants into downstream impaired water bodies. Impacts would be **less than significant**.

3. *Would the Project drain to a tributary of a drinking water reservoir and contribute substantially more pollutant(s) than would normally runoff from the Project site under natural conditions?*

The Tijuana River WMA has historically supplied potable drinking water for the Moreno Reservoir and Barrett Lake. However, these reservoirs are in the eastern half of the watershed, upstream of the Project area. As such, these reservoirs would not be affected by Project development. In addition, as previously discussed in threshold 1, the Project would involve grading and revegetation of an abandoned quarry to context-appropriate (and historical) topography, thus improving the site's natural condition. Moreover, excavated

sediment would be processed and screened for pollutants prior to grading and sediment placement activities. As such, the Project would not introduce or increase pollutants on site, and impacts would be considered **less than significant**.

4. *Would the Project contribute pollution in excess of that allowed by applicable State or local water quality objectives or cause or contribute to the degradation of beneficial uses?*

Table 3.7-1 lists established and potential beneficial uses for downstream water bodies from the Project site, per the San Diego RWQCB Basin Plan. As previously discussed in threshold 1, the Project would comply with all applicable state and local water quality objectives and would not introduce, or result in an increase of, on- or off-site pollutants compared to existing conditions. As Project development would not contribute to pollution in excess of applicable state or local water quality objectives and would not contribute to the degradation of downstream beneficial uses, impacts would be **less than significant**.

5. *Would the Project not conform to applicable Federal, State, or local "Clean Water" statutes or regulations including but not limited to the Federal Water Pollution Control Act, California Porter-Cologne Water Quality Control Act, and the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance?*

As previously discussed in threshold 1, the Project would not increase on- or off-site pollutants compared to existing conditions. In addition, the Project would be completed in accordance with the NPDES General Construction Permit and the County of San Diego SWMP. Conformance with these programs would ensure that the Project follows relevant federal, state, and local statutes and regulations pertaining to water quality, including the Federal Water Pollution Control Act, California Porter-Cologne Water Quality Control Act, the County of San Diego Watershed Protection, and WPO. As a result, Project impacts would be **less than significant**.

6. *Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?*

Groundwater Recharge

The Project is underlain by the Coastal Plain of San Diego Groundwater Basin, which includes the San Diego Formation. The Project would involve the grading, sediment placement, and revegetation to return the site to historical (i.e., pre-mining operations) topography and habitat conditions. Once completed, the Project site would remain unpaved and pervious to infiltration of rainfall. In addition, proposed drainage features would reduce on-site stormwater runoff velocities, distribute flows over a wider vegetated area, and encourage an increase in on-site runoff infiltration. As such, Project development would result in little to no change in groundwater recharge rates compared to existing conditions. As a result, impacts associated with groundwater recharge would be **less than significant**.

Groundwater Supply

According to Table 6-8, Existing and Future Groundwater Supply, in the City of San Diego 2015 UWMP, in 2020, the City plans to use the San Diego River Valley and Coastal Plain of San Diego Groundwater Basins as potable water sources (City of San Diego 2016). As previously discussed, DWR has determined that the San Diego River Valley and the Coastal Plain of San Diego Groundwater Basins have a very low and low priority, respectively, regarding the completion of a GSP.

The Project would require water for dust suppression, watering of contoured and compacted fill, and irrigation for revegetation. Water usage would be directly related to processing volume and volume of sediment placed on site. While water usage would vary by grading phase, Table 3.7-3 approximates annual water use for dust control purposes.

Table 3.7-3. Estimated Water Usage

| Water Need | Estimated Annual Water Use (AFY) |
|---------------------------------|----------------------------------|
| Dust Control – Fill Site | 23.2 |
| Dust Control Processing Station | 12 (3.0 per Season) |
| Total | 35.2 |

Notes: AFY = acre-feet per year

As indicated in Table 3.7-3, the Project is estimated to result in a water demand of approximately 35 AFY. As the Project is undeveloped, the net potable water demand would equal the increase in potable water demand of 35 AFY. According to the City’s 2015 UWMP Table 6-16, Existing and Future Water Supply for the City, in 2020, approximately 1.5% (3,100 AFY) of the City’s water supply was forecast be derived from groundwater. If previous water supply trends continue, approximately 0.52 AFY of the Project’s water supply would come from groundwater. This value would represent a marginal increase of 0.02% of the City’s 2020 groundwater demand estimates of 3,100 AFY (City of San Diego 2016).

The City’s 2015 UWMP has planned for growth within its service area over the next 20 years. The City has made allowance for future demand estimates. Future demand services are based on historical growth rates in the City’s service area. According to Table 6-16 of the City’s 2015 UWMP, the City projects an increase in demand of 72,424 AFY from 2020 (200,984 AFY) to 2040 (273,408 AFY). Dust control and irrigation activities would occur over approximately 15 years. As such, the net water demand of the Project would represent approximately 0.05% of this projected growth, which would not be considered substantial.

The City’s 2015 UWMP additionally includes a Water Shortage Contingency Plan, which would ensure that the City maintains the necessary resources and management responses needed to protect health and safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

In addition, as long-term water supply is a significant concern in California, the City has planned projects to meet future water demands for its service area. For example, to improve water efficiency and conserve vital potable water resources, such as groundwater, the City plans to expand local water recycling facilities’ treatment capacity. In addition, to increase local water supply reliability, the City is also considering the conjunctive use and desalination of brackish groundwater within the City’s service area. When coupled with regional groundwater management plans and the regulatory bindings of the groundwater basin, these projects would ensure that the service area attains sustainable groundwater management. Therefore, the Project would not substantially decrease groundwater supplies and would not impede sustainable groundwater management of the basin. Impacts would be **less than significant**.

7. Would the Project result in a substantial increase in impervious surfaces and associated increased runoff?

The Project site currently consists of an unpaved, abandoned quarry. As previously discussed in threshold 6, Project development would not result in a substantial increase in impervious surfaces. As a result, Project

development would not result in an increase in runoff volumes compared to existing conditions, and impacts would be **less than significant**.

8. ***Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?***

Although internal drainage patterns would be somewhat altered because of Project development, the Project would maintain adequate stormwater conveyance as to not result in a substantial increase in erosion or siltation on or off site. As previously discussed, the Project site would involve the restoration of an abandoned quarry to context-appropriate (and historical) topography over six phases. Each phase on the Project would systematically improve on-site drainage conditions by grading steep and potentially unstable slopes to a gentler gradient, then revegetating exposed soils with native vegetation. A concrete ditch and riprap-lined channel would be constructed along the ridge landform and sized in accordance with the preliminary hydraulic calculations and City and County stormwater specifications.

Runoff from the western slope would either be conveyed via the concrete-lined channel or downslope of the western face of the ridge, while runoff from the southern portion of the site would occur along a turf reinforced mat-lined ditch, which would convey stormwater to a riprap channel constructed at the base of newly created terrain. The regraded slope and constructed landforms of later grading/sediment placement phases would reduce on-site stormwater runoff velocities, distribute flows over a wider area, and encourage an increase in on-site runoff infiltration, reducing on- and off-site erosion potential. As a result, Project impacts would be **less than significant**.

9. ***Would the Project increase water surface elevation in a watercourse within a watershed equal or greater than 1 square mile, by 1 foot or more in height, and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River and Otay River, 2/10 of a foot or more in height?***

As previously discussed in Threshold 7, the Project would not result in an increase of runoff on or off site compared to existing conditions. As a result, Project development would not result in the increase of water surface elevation in a watercourse. **No impacts** would occur.

10. ***Would the Project result in increased velocities and peak flow rates exiting the Project site that would cause flooding downstream or exceed the stormwater drainage system capacity serving the site?***

As previously discussed, the Project drainage system would mimic existing conditions and would not increase the rate or amount of stormwater velocities or peak flows compared to existing conditions. As a result, flooding on or off site would not occur. Impacts would be **less than significant**.

11. ***Would the Project be located in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?***

The Project site is in FEMA Zone X (Unshaded), Area of Minimal Flood Hazard, which is outside of the 500-year floodplain. The Project site is also located outside the County's 100-year and 500-year floodplain. Furthermore, the Project site would not be subject to flooding because of tsunamis or seiches. As a result, impacts associated with the release of pollutants due to Project inundation would be **less than significant**, and no mitigation is required.

12. *Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

As previously discussed, the Project would comply with applicable water quality regulatory requirements, including implementation of a SWPPP, stormwater BMPs, and LID design, which would minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Tijuana River WMA. In addition, with compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the Basin Plan for the San Diego Region would not be adversely impacted. As a result, the Project would not conflict with or obstruct the Basin Plan for the San Diego Region.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainably and requires those GSAs to adopt GSPs for crucial groundwater basins in California. A GSA has not been established for the San Diego River Valley Basin or Coastal Plain of San Diego Groundwater Basin, as the basins are not considered medium or high priority. While neither basin is adjudicated, the City is committed to regulating groundwater extraction and improving groundwater quality in basins within its service area. Further, the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge and would not conflict with or obstruct a water quality control plan or sustainable groundwater management plan. As a result, impacts would be considered **less than significant**.

13. *Would the Project result in placing housing, habitable structures, or unanchored impediments to flow in a 100-year floodplain area or other special flood hazard area, as shown on a FIRM, a County Flood Plain Map or County Alluvial Fan Map, which would subsequently endanger health, safety, and property due to flooding?*

As previously discussed in Threshold 11, the Project would be located outside both FEMA and the County's 500-year floodplain. The Project would involve the restoration of an abandoned quarry to context-appropriate (and historical) topography over six phases. Further, once final elevations of each phase are complete and where landforms would not be subjected to additional sediment placement, areas would be revegetated with appropriate coastal sage scrub plants or an enhancement and restoration coastal sage scrub seed mix. Each phase on the Project would systematically improve on-site drainage conditions by slowing stormwater runoff velocities, distributing flows over a wider area, and encouraging on-site runoff infiltration. No housing, habitable structures, or unanchored impediments would be developed because of Project development. As a result, the implementation of the Project would not endanger health, safety, and property due to flooding. Impacts would be **less than significant**.

14. *Would the Project place structures within a 100-year flood hazard or alter the floodway in a manner that would redirect or impede flow resulting in any of the following:*

- i. Alter the Lines of Inundation resulting in the placement of other housing in a 100-year flood hazard?;*
or

As previously discussed, the Project would be located outside both FEMA and the County's 500-year floodplain. Implementation of the Project would improve on-site drainage conditions by grading oversteepened and unstable slopes to context-appropriate topography, lowering runoff rates while

encouraging on-site stormwater infiltration. Furthermore, aside from permanent LID features, implementation of the Project would not result in the development of any structures. As the Project would not result in the placement of structures within a 100-year floodway, would not alter floodways, and would not alter the lines of inundation, Project impacts would be **less than significant**.

- ii. Increase water surface elevation in a watercourse with a watershed equal to or greater than 1 square mile by 1 foot or more in height, and in the case of the San Luis Rey River, San Dieguito River, San Diego River, Sweetwater River and Otay River 2/10 of a foot or more in height?*

As previously discussed, the Project would be located outside both FEMA and the County's 500-year floodplain. The drainage system of the Project would mimic existing conditions and would not result in an increase of on- or off-site flood potential, including conditions that would raise water surface elevations. Furthermore, the Project would not result in the development of structures. As the Project would not result in the placement of structures within a 100-year floodway, would not alter a floodway, and would not result in an increase in water surface elevation, Project impacts would be **less than significant**.

3.7.5 Cumulative Impacts

The geographic scope for the water quality and drainage cumulative analysis is the Tijuana River WMA and the geographic scope for the groundwater analysis is the Coastal Plain of San Diego Groundwater Basin. Cumulative impacts require the analysis of other projects located within the Tijuana River WMA and overlying the Coastal Plain of San Diego Groundwater Basin. Cumulative impacts are considerable if the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects.

Water Quality

All cumulative projects listed in Table 2-11 are located within the Tijuana River WMA and include projects associated with sediment management, habitat restoration, new construction, and wastewater and pollution control along the main channel of the Tijuana River. Similar to the Project, each of these cumulative projects would result in temporary soil disturbance and associated potential for erosion-induced sedimentation of downstream water bodies, including wetland areas and the Tijuana River. In addition, similar to the Project, each of these cumulative projects would potentially result in incidental spills of petroleum products and hazardous materials due to leaks and maintenance of construction equipment.

However, water quality impacts at each cumulative Project site would be minimized during construction through implementation of site-specific SWPPPs and associated BMPs, as required by the NPDES Construction General Permit, City of San Diego Whitebook and Greenbook requirements, and WPO requirements. For development projects within the City's jurisdiction, construction BMPs would be designed and implemented in accordance with the City's Stormwater Standards Manual. Similarly, during cumulative project operations, water quality impacts would be minimized as a result of implementation of LID features and drainage control features, in compliance with the San Diego Regional MS4 Permit, the City of San Diego Drainage Design Manual (City of San Diego 2017), and County of San Diego Standard Urban Stormwater Mitigation Plan Requirements for Development Applications (County of San Diego 2012a). Proper drainage control prevents off-site erosive scour and sedimentation of downstream water bodies. Similar to the Project, implementation of LID BMPs and compliance with all relevant plans at cumulative project sites would (to the maximum extent feasible) reduce the discharge of pollutants into

receiving waters, in accordance with all relevant local and state development standards. As a result, cumulative water quality impacts would not be considerable, and impacts would be **less than significant**.

Drainage

As indicated previously, all cumulative projects listed in Table 2-11 are located within the Tijuana River WMA. Cumulative drainage impacts would be considered significant if incremental increases in runoff rates or volumes (due to increased paving/impervious surfaces) from cumulative project sites combined to cause downstream flooding or erosive-scour induced sedimentation of downstream water bodies. However, stormwater runoff impacts at each cumulative project site would be minimized as a result of implementation of LID features and drainage control features, in compliance with the City of San Diego Drainage Design Manual (City of San Diego 2017), Stormwater Standards Manual, and County of San Diego Standard Urban Stormwater Mitigation Plan Requirements for Development Applications (County of San Diego 2012a). Similar to the Project, proper drainage controls, including construction of stormwater detention basins, bioswales, and riprap-lined channels at cumulative project sites, in compliance with all relevant plans, would reduce runoff flow rates such that downstream flooding and erosive scour would not occur. As a result, cumulative stormwater runoff impacts would not be considerable, and impacts would be **less than significant**.

Groundwater

All cumulative projects listed in Table 2-11 overlie the Coastal Plain of San Diego Groundwater Basin. Cumulative groundwater impacts would be considered significant if incremental increases in groundwater extraction for cumulative project development substantially decreased groundwater supplies such that the projects may impede sustainable groundwater management of the basin. As discussed for the Project, only 1.5% of the City's water supply is derived from groundwater. In addition, with respect to groundwater management, a GSA has not been established for the San Diego River Valley Basin or Coastal Plain of San Diego Groundwater Basin, as the basins are not considered medium or high priority.

The City's 2015 UWMP has planned for growth within its service area over the next 20 years. The City has made allowance for future demand estimates. Future demand services are based on historical growth rates in the City's service area. The City's 2015 UWMP additionally includes a Water Shortage Contingency Plan, which would ensure that the City maintains the necessary resources and management responses needed to protect health and safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

In addition, as the long-term water supply is a significant concern in California, the City has planned projects to meet future water demands for its service area. For example, to improve water efficiency and conserve vital potable water resources, such as groundwater, the City plans to expand local water recycling facilities' treatment capacity. In addition, to increase local water supply reliability, the City is also considering the conjunctive use and desalination of brackish groundwater within the City's service area. When coupled with regional groundwater management plans and the regulatory bindings of the groundwater basin, these projects would ensure that the service area attains sustainable groundwater management. Therefore, cumulative groundwater impacts would not be considerable, and impacts would be **less than significant**.

3.7.6 Mitigation Measures

No mitigation measures would be necessary as Project impacts would be less than significant or would have no impact.

3.7.7 Level of Significance After Mitigation

As Project impacts would be less than significant and no mitigation measures are required, residual impacts would be **less than significant**.

3.7.8 References

- City of San Diego. 2008. "Conservation Element." In *City of San Diego General Plan*. March 2008.
<https://www.sandiego.gov/sites/default/files/legacy//planning/genplan/pdf/2012/ce120100.pdf>.
- City of San Diego. 2016. *City of San Diego 2015 Urban Water Management Plan*. Accessed April 2, 2020.
- City of San Diego. 2017. *Transportation and Storm Water Design Manuals: Drainage Design Manual*. January 2017 Edition.
- City of San Diego. 2020. *Municipal Waterways Maintenance Plan*. March 2020.
- City of San Diego. 2021. *City of San Diego Stormwater Standards*. Effective February 2016, Updated May 2021.
- County of San Diego. 2007. *County of San Diego Guidelines for Determining Significance, Surface Water Quality*. July 2007.
- County of San Diego. 2011a. *San Diego County General Plan Update, Final Environmental Impact Report, Chapter 2: Environmental Effects of the Proposed Project, 2.8 Hydrology and Water Quality*. Accessed April 1, 2020. https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/BOS_Aug2011/EIR/FEIR_2.08_-_Hydrology_2011.pdf.
- County of San Diego. 2011b. "Safety Element." In *San Diego County General Plan*. August 2011.
<https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/SafetyElement-Aug2021.pdf>.
- County of San Diego. 2011c. "Conservation and Open Space Element." In *San Diego County General Plan*. August 2011. <https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/ConservationandOpenSpace.pdf>.
- County of San Diego. 2011d. "Land Use Element." In *San Diego County General Plan*. August 2011.
https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/03_LU%20Element_Jan2020.pdf.
- County of San Diego. 2012a. *Standard Urban Stormwater Mitigation Plan Requirements for Development Applications*. January 2011, revised August 2012.
- County of San Diego. 2012b. *Major SWMP Form (.pdf), updated September 2012*. Accessed April 3, 2020.
<https://www.sandiegocounty.gov/dpw/watersheds/susmp/susmp.html>.

County of San Diego. 2020. "Flood Hazard Mapping." Accessed June 22, 2020.

https://www.sandiegocounty.gov/content/sdc/dpw/flood/flood_mapping1.html.

DWR (California Department of Water Resources). 2018. *9-033 Coastal Plain of San Diego*. Accessed June 23, 2020.

https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2016-Basin-Boundary-Descriptions/9_033_CoastalPlainOfSanDiego.pdf.

DWR. 2019. *Sustainable Groundwater Management Act 2019 Basin Prioritization*. Accessed March 2, 2020.

https://www.emwd.org/sites/default/files/file-attachments/sigma_basin_prioritization_2019_results.pdf?1559164669.

DWR. 2020. "Bulletin 118." Accessed June 23, 2020. <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118>.

FEMA (Federal Emergency Management Agency). 2012. FEMA FIRM Panel 06073C2162G effective May 16,

2012. Accessed September 13, 2021. <https://msc.fema.gov/portal/search?AddressQuery=Tijuana%20Rlevr%20Valley%20#searchresultsanchor>.

Project Clean Water. 2021. "Watersheds – Tijuana River." Accessed September 13, 2021.

<https://projectcleanwater.org/watersheds/tijuana-wma/>.

SDRWQCB (San Diego Regional Water Quality Control Board). 2016. *San Diego Region – The Basin Plan, Chapter 2, Beneficial Uses*. Accessed on April 1, 2020.

https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/docs/update082812/Chpt_2_2012.pdf.

SanGIS. 2020. "SanGIS Interactive Map." Accessed on June 22, 2020. <http://www.sangis.org/>.

SWRCB (State Water Resource Control Board). 2017. *Category 5, 2014 and 2016 California 303(d) List of Water Quality Limited Segments*. Accessed on April 1, 2020.

https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/category5_report.shtml.

INTENTIONALLY LEFT BLANK

3.8 Mineral Resources

This section describes the existing mineral resources conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts of the Project.

The assessment of existing conditions and analysis of the Project impacts related to mineral resources is partly based on information provided in the following technical report:

- Mineral Resources Valuation Memorandum, Nelson Sloan Quarry Restoration Project, prepared by EnviroMINE (Appendix J)

3.8.1 Existing Conditions

San Diego's important mineral resources include salt, sand, and gravel, all of which have been mined in San Diego for many decades. San Diego's aggregate mineral resources (sand and gravel) provide necessary materials for the local economy. However, due to competing demands for open land, access to aggregate reserves in western San Diego County has significantly decreased over the past 20 years (City of San Diego 2008).

The Project site encompasses two parcels (i.e., Assessor's Parcel Numbers [APNs] 664-011-05-00 and 664-011-04-00) that together comprise 40 acres. The area of potential impact associated with proposed Project activities (i.e., the Project Impact Area) is approximately 20 acres and is primarily located on APN 664-011-05-00.

In 1982, Nelson and Sloan (previous owners and operators of the Project site) received a 20-year conditional use permit (CUP) to operate a sand and gravel quarry called the Border Highlands Pit (also known as Nelson Sloan Quarry) with potential to extract up to 7.5 million cubic yards of material. The CUP included the Project site and additional parcels to the west. Approximately one-third of the permitted volume of sand and gravel was actively mined from the site over the 20-year operational life of the quarry. Mining operations occurred on two parcels: APN 664-011-50-00 and 664-011-04-00. The approved CUP expired in 2002. According to the Department of Conservation, reclamation has not started, and current mine status is "closed with no intent to resume" (DOC 2020).

Due to mining activities, the east-facing hillside on the Project site is bisected by a steep cut slope that quickly descends to relatively flat terrain. Scattered coastal sage scrub habitat has naturally established on the east-facing slope exposed by mining operations.

Topographical Setting

The Project site is in an area known as the Border Highlands. Located within the southeast corner of Tijuana River Valley Regional Park, the Project site is owned by the County of San Diego (County) but is within the jurisdictional limits of the City of San Diego (City). The Project site is included in the Multi-Habitat Planning Area (MHPA) of the City's Subarea Plan for the Multiple Species Conservation Program. Currently, the Project site is vacant and is crossed by several dirt roads and paths. An aboveground water line and disturbance associated with previous staging and soil/sediment stockpile areas is visible in the eastern portion of the site.

The eastern portion of the Project site also includes an east-sloping hillside that transitions to relatively flat terrain. Evidence of extensive erosion, including riling and sloughing, is visible on the east-facing hillside that was actively mined, while evidence of surface erosion, debris (both natural material and trash), and slopewash was observed throughout the

Project site. On-site elevations range from approximately 250 feet above mean sea level at the elevated ridge to 120 feet above mean sea level in the relatively flat, eastern portion of the Project site (i.e., APN 664-011-05-00).

Mineral Resource Potential

As mandated by the Surface Mining and Reclamation Act of 1975 (SMARA), the California State Mining and Geology Board classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones were established based on the presence or absence of significant sand and gravel deposits and crushed rock source areas (i.e., products used in the production of cement). The classification system emphasizes Portland Cement Concrete aggregate, which is subject to a series of specifications to ensure the manufacture of strong, durable concrete. The following definitions are presented in the mineral land classification for the region:

- MRZ-1 – Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence
- MRZ-2 – Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that there is a high likelihood for their presence
- MRZ-3 – Areas containing mineral deposits, the significance of which cannot be evaluated from available data
- MRZ-4 – Areas where available information is inadequate for assignment to any other MRZ zone

According to the Department of Conservation (DOC 1982) and Figure CE-6 of the City of San Diego's General Plan Conservation Element (City of San Diego 2008), the Project site is partially in an MRZ-2 designated zone (see Figure 3.8-1, Mineral Resource Zones). In general, the MRZ-2 areas are concentrated along major drainages such as the Otay River, the Tijuana River, the San Diego River, Carroll Canyon, and the San Dieguito River (City of San Diego 2007). Mineral deposits that are acceptable for use as Portland Cement Concrete grade aggregate are the rarest and most valuable of aggregate resources. The location of San Diego's high-quality mineral resource areas is within MRZ-2 areas. State law requires cities to plan for the beneficial management of these valuable mineral resources (City of San Diego 2008).

More specifically, the elevated portions of the Project site coinciding with hillsides and ridges of the Border Highlands area are mapped as MRZ-2 (Sector V[2]) (DOC 1982). As described further in Section 3.8.2 (see discussion under County of San Diego Guidelines for Determining Significance: Mineral Resources), sectors designated as MRZ-2 meet the State Mining and Geology Board's guidelines as eligible to be designated of regional or statewide significance. Sector V(2) includes a total area of 146 acres, of which approximately 45 acres was mined in the 1980s (see Appendix J). Further, according to Appendix J, the mined resources had a small percentage of rock per volume of material and was generally not acceptable for Portland Cement Concrete aggregate uses.

The Project site is identified by the County as an MRZ-2 site and a known mineral resource deposit for sand and gravel (see Figures 2 and 3 in County of San Diego 2008).

3.8.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations, authorities, or administering agencies pertaining to mineral resources that regulate the Project.

State

California Surface Mining and Reclamation Act

SMARA, Chapter 9, Division 2 of the California Public Resources Code, requires the State Mining and Geology Board to adopt state policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act (Government Code) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1. SMARA, California Public Resources Code, Sections 2710-2796, provides a comprehensive surface mining and reclamation policy including the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state's mineral resources (DOC 2019).

Sections 2762 and 2763 of SMARA require that jurisdictions issue a Statement of Reasons when projects would result in the elimination of the potential to extract minerals in the areas containing regionally significant mineral resources. SMARA requires that the County decision makers consider this elimination of extraction potential in their decision on land use. The Statement of Reasons lists potential reasons to approve the project and to eliminate the potential for extraction of this resource; decision makers may adopt or modify any of these. The Statement of Reasons must be submitted to the State Geologist and California State Mining and Geology Board for their review for a period of 60 days in conjunction with the environmental review of the project.

Integrated Waste Management Act

Assembly Bill 939, the Integrated Waste Management Act, mandates that each jurisdiction reduce the amount of waste entering landfills each year. This is beneficial in lengthening the lifespan of available mineral resources within the County because it leads to recycling materials from demolished buildings, roadways, or other facilities.

Local

Since the Project site is owned by the County, but within the Tijuana River Valley Regional Park under the jurisdiction of the City, both County and City applicable regulations are outlined below.

County of San Diego General Plan

The Conservation and Open Space Element of the General Plan includes a Mineral Resources section, which identifies goals and policies intended to assure an adequate supply of mineral resources to support the economic activity projected to occur under the General Plan and to assure compliance with the requirements of SMARA with regard to the conservation of mineral resources and the permitting and reclamation of mining sites. The following goals and policies are identified (County of San Diego 2011):

- **Goal COS-10: Protection of Mineral Resources.** The long-term production of mineral materials adequate to meet the local County average annual demand, while maintaining permitted reserves equivalent to a 50-year supply, using operational techniques and site reclamation methods consistent with SMARA standards such that adverse effects on surrounding land uses, public health, and the environment are minimized.
 - **Policy COS-10.1 Siting of Development.** Encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction. Discourage development that would substantially preclude the future development of mining facilities in these areas.

Design development or uses to minimize the potential conflict with existing or potential future mining facilities. For purposes of this policy, incompatible land uses are defined by SMARA Section 3675.

- **Policy COS-10.2 Protection of State-Classified or Designated Lands.** Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.
- **Policy COS-10.3 Road Access.** Prohibit development from restricting road access to existing mining facilities, areas classified MRZ-2 or MRZ-3 by the State Geologist, or areas identified in the County Zoning Ordinance for potential extractive use in accordance with SMARA Section 2764.a.
- **Policy COS-10.4 Compatible Land Uses.** Discourage the development of land uses that are not compatible with the retention of mining or recreational access to non-aggregate mineral deposits. See Policy COS-10.1 for a definition of incompatible land uses.
- **Policy COS-10.6 Conservation of Construction Aggregate.** Encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities consistent with the goal to establish permitted aggregate resources that are sufficient to satisfy 50 years of County demand.
- **Policy COS-10.7 Recycling of Debris.** Encourage the installation and operation of construction and demolition (C&D) debris recycling facilities as an accessory use at permitted (or otherwise authorized) mining facilities to increase the supply of available mineral resources.

San Diego County Zoning Ordinance, Sections 2820-2835, S82 Extractive Use Regulations

San Diego County Zoning Ordinance, Sections 2820 et seq., are known as the S82 Extractive Use Regulations and are intended to identify and create areas within the County where mining, quarrying, or oil extractive uses are permitted. Typically, the S82 Extractive Use Regulations would be applied to areas of mineral deposits to signify the presence of such deposit and notify adjacent or affected properties of the intention to allow extraction of minerals within the zone. They would be used to preserve areas with valuable mineral deposits until extraction can take place.

San Diego County Zoning Ordinance, Sections 6550-6556, Extractive Use Regulations

San Diego County Zoning Ordinance, Sections 6550 et seq., are known as the Extractive Use Regulations and provide the means for public review and regulation of mineral extraction and associated on-site processing operations.

County of San Diego Code of Regulatory Ordinances Sections 87.701 – 87.714, Surface Mining

In 2003, the Board of Supervisors added Sections 87.701 through 87.714, entitled Surface Mining, to the County of San Diego Code of Regulatory Ordinances to regulate all surface mining operations in the unincorporated area of the County, as authorized by the San Diego County Zoning Ordinance and SMARA to ensure that:

- a) The continued mining of minerals will be permitted in a manner which will protect public health and safety, and will provide for the protection and subsequent beneficial use of mined and reclaimed land;
- b) The possible adverse effects of surface mining operations on the environment, including air pollution, impedance of groundwater movement, water quality degradation, damage to aquatic or wildlife habitat, flooding, erosion and sedimentation, will be prevented or minimized; and

- c) The production and conservation of minerals will be encouraged while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

This Ordinance is intended to implement the minimum requirements of SMARA and to specify local requirements. County Code Sections 87.701 through 87.714 require that no person conduct surface mining unless a Major Use Permit is obtained, a Reclamation Plan is approved as provided by the Zoning Ordinance and SMARA, and financial assurances for reclamation have been approved by the County. Grading performed pursuant to such a Major Use Permit or Reclamation Plan must be in accordance with a plot plan and conditions approved therewith.

County of San Diego Guidelines for Determining Significance: Mineral Resources

In addition to providing guidance for evaluating adverse environmental effects a project may have on mineral resources, the County's Guidelines for Determining Significance: Mineral Resources includes environmental baseline information concerning the location of MRZ-2 areas. These areas, which are underlain by mineral deposits where geologic data show that significant measured or indicated resources are present, are identified as "sectors." According to the County, of the 22 sectors classified by the State Department of Mine Reclamation as having aggregate deposits, 19 are still extractable. Lastly, sectors consist of MRZ-2 areas meeting the State Mining and Geology Board's guidelines as eligible to be designated of regional or statewide significance (County of San Diego 2008).

Both the Tijuana River and Border Highlands areas are identified as Aggregate Resource Sectors (see Table 1, Aggregate Resource Sectors, in County of San Diego 2008). Border Highlands (Sector V; approximately 475 acres) consists of conglomerate deposits of the San Diego Formation and is situated immediately south of the Tijuana River.

City of San Diego General Plan

The Conservation Element of the City's General Plan includes a mineral production section which identifies the City's policies to achieve the goal of balancing mineral production and conservation with habitat and topography protection. These policies are outlined below (City of San Diego 2008):

- **CE-K.1** Promote the recycling and reclamation of construction materials to provide for the city's current and future growth and development needs (see also Public Facilities, Policy PF-I.1 and Conservation Element, Policy CE-A.8).
- **CE-K.2** Permit new or expanding mining operations within the MHPA in accordance with MSCP policies and guidelines.
- **CE-K.3** Produce sand and gravel with minimal harm and disturbance to adjacent property and communities.
- **CE-K.4** Plan rehabilitation of depleted mineral areas to facilitate reuse consistent with state requirements, the Surface Mining and Reclamation Act, and local planning goals and policies, including the MSCP.
- **CE-K.5** Consider local evaporative salt production for future economic value, open space use, and for important ecological habitat.

Multiple Species Conservation Program

The City's Multiple Species Conservation Program (MSCP) forms the basis for the implementing agreement between the City and Wildlife Agencies (i.e., U.S. Fish and Wildlife Service and California Department of Fish and Wildlife) that allows the City to issue take permits at the local level. The MSCP includes an MHPA that delineates core biological resource areas and corridors targeted for conservation. Limited development is permitted within the

MHPA and the MSCP identifies conditionally compatible land uses within the MHPA. The Project site and the majority of local jurisdictional lands (i.e., City and County) within the Tijuana River Valley are within the MHPA.

While not included in the limited list of conditionally compatible land uses, mining and extraction facilities are discussed in the MSCP. For example, currently permitted mining operations with approved reclamation plans are permitted to operate in the MHPA; however, new or expanded operations are generally incompatible with MSCP preserve goals for covered species and their habitat unless agreed to by the wildlife agencies (City of San Diego 1997). In addition, new operation are permissible if (1) impacts have been assessed and conditions incorporated to mitigate biological impacts and restore mined areas, (2) adverse impacts to covered species in the MHPA have been mitigated consistent with the Subarea Plan, and (3) requirements of other City land use policies and regulations (e.g., Adjacency Guidelines, CUP) have been satisfied (City of San Diego 1997).

Open space/habitat is not included in the list of conditionally compatible land uses; however, because the Project entails the enhancement and restoration of disturbed lands, includes measures to mitigate biological impacts and restore mined areas, and would not result in long-term active use of the site, the Project is anticipated to be considered conditionally compatible by the City.

Tijuana River Valley Local Coastal Program Land Use Plan

The Tijuana River Valley planning area, including Border Highlands, is located within the California Coastal Zone and, as such, is subject to the regulations of the California Coastal Act of 1976. San Diego City Council adopted the Tijuana River Valley Plan on December 8, 1976; it is a comprehensive plan that outlined balance between conservation and development in the Valley. The Tijuana River Valley Plan was amended in 1990 to recognize the National Estuarine Sanctuary (now Research Reserve) and the County's Tijuana River Valley Regional Park. The amended plan, Tijuana River Valley Local Coastal Program Land Use Plan, replaces the previous Tijuana River Valley Plan and Local Coastal Program Addendum, as well as the 1982 Border Highlands Local Coastal Program Land Use Plan. The Tijuana River Valley Local Coastal Program Land Use Plan outlines goals, objectives and specific recommendations to ensure the Multiple Species Conservation Open Space designation of the Plan area is attained. Recommendations specific to this Environmental Impact Report section are outlined below (City of San Diego 1999):

D. Mining, Extraction, and Processing Facilities. Mining operations include mineral extraction, processing and other related mining activities (e.g. asphaltic processing). Currently permitted mining operations that have approved restoration plans may continue operating in the MHPA.

- All mining and other related activities must be consistent with the objectives, guidelines and recommendations in all land use policy documents and zoning regulations adopted by the City of San Diego and certified by the California Coastal Commission, as well as with the State Surface Mining and Reclamation Act of 1975.
- Monitor any sand removal activities for noise impacts to surrounding sensitive habitats, and all new sediment removal or mining operations proposed in proximity to the MHPA, or changes in existing operations, much include noise reduction methods that take into consideration the breeding and nesting season of sensitive bird species.
- All existing and future mined lands adjacent to or within the MHPA shall be reclaimed pursuant to SMARA.
- Any permitted mining activity including reclamation of sand must consider changes and impacts to water quality, water table level, fluvial hydrology, flooding, and wetlands and habitats upstream and downstream, and provide adequate mitigation.

3.8.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this Environmental Impact Report, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project site. As further described below, all relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to mineral resources are based on County guidelines. According to Appendix G of the CEQA Guidelines and County guidelines, a significant impact related to mineral resources would occur if the Project would:

1. Result in the loss of a site:
 - On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2; or
 - On land classified as MRZ-3; or
 - Underlain by Quaternary alluvium; or
 - On a known sand and gravel mine, quarry, or gemstone deposit;

AND

The project will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state;

AND

The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):

- Construction materials (\$12,500,000)
 - Industrial and chemical materials (\$2,500,000)
 - Metallic and rare minerals (\$1,250,000)
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan (County of San Diego).

3.8.4 Impacts Analysis

1. ***Would the Project result in the loss of a site:***

- On or within the vicinity (generally up to 1,300 feet from the site) of an area classified as MRZ-2; or
- On land classified as MRZ-3; or
- Underlain by Quaternary alluvium; or
- On a known sand and gravel mine, quarry, or gemstone deposit;

AND

The Project will result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state;

AND

The deposit is minable, processable, and marketable under the technologic and economic conditions that exist at present or which can be estimated to exist in the next 50 years and meets or exceeds one or more of the following minimum values (in 1998 equivalent dollars):

- Construction materials (\$12,500,000)
- Industrial and chemical materials (\$2,500,000)
- Metallic and rare minerals (\$1,250,000)

The Project site is in a MRZ-2 designated zone and was previously managed between 1982 and approximately 2002 as a sand and gravel quarry. As stated in Section 3.8.1, in 1982, the previous owners and operators of the Project site received a 20-year CUP to operate a sand and gravel quarry with potential to extract up to 7.5 million cubic yards of material. Over the approximate 20-year lifespan of the quarry, approximately 1/3 of the permitted volume of sand and gravel was actively mined. Because on-site mineral resources were extracted during previous quarry operations and the Project would reclaim the previously mined portion of the site, a significant mineral resource would not be made inaccessible for future extraction. The new landform created on site would overlay the previously mined east-facing slope and the relatively flat portion of the Project site (also previously mined) that appear to be outside of the California Department of Conservation's aggregate resources sector line that generally coincides with the elevated terrain of the Border Highlands area (DOC 1982). Therefore, reclamation of the former quarry and phased grading and restoration of the site for habitat protection, restoration, and open space would not result in the loss of availability of a known mineral resource. With the exception of the ridge that would undergo restoration prior to Phase 1 of the grading plan, the Project does not propose to impact or otherwise disturb areas that were not previously subject to quarry activities.

In accordance with the grant deed for the property, the site may not be used for mineral production and shall only be used for habitat protection, restoration, and open space. However, as stated above, proposed reclamation would occur on the previously mined portions of the site (i.e., mineral resources have been extracted from these areas) and phased grading and revegetation would generally occur outside of the portion of the site within the state's MRZ-2 boundary. Further, the Project does not consist of execution or transfer of the grant deed (such an action occurred in 2002) and would not deviate from current management of the site. No development has occurred on the Project site since mining operations ceased in approximately 2002 and, as such, the site has been effectively operating as partially disturbed open space since mining operations ceased.

Regarding mineral valuation, the Mineral Resource Valuation Memorandum prepared for the Project by EnviroMINE (Appendix J) approximated the value of remaining mineral materials/resources at the site. Utilizing a conservative estimate of \$6.00 per ton for mining and processing and a calculated estimate of 975,000 tons of remaining recoverable materials from the property, an operating margin (i.e., the value of remaining materials at the site) of approximately \$5.8 million dollars (U.S.) was estimated. As such, the estimated value of remaining materials at the Project site (approximately \$5.8 million dollars) is less than the quantitative County threshold of \$12.5 million dollars for construction materials.

Based on the support provided above, implementation of the Project would not result in the permanent loss of availability of a known mineral resource that would be of value to the region and the residents of the state and the estimated value of remaining mineral resources present on site is well below the County's threshold for construction materials valuation. Therefore, mineral resource impacts concerning loss of a site would be **less than significant**.

2. *Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

Please refer to the analysis for Threshold 1.

While the Project site contains lands delineated as an important mineral resources recovery site, implementation of the Project would not result in the permanent loss of availability of a locally important mineral resource recovery site. Mineral resources occurring on the previously mined portions of the site have been extracted and Phase 1 of the Project entails reclamation of the oversteepened slope creating by previous mining activities. Subsequent phases of the Project would create a landform that would generally overlie the flatter portions of the site that are outside of the state's MRZ-2 mapping and local delineated mineral resource recovery site. As such, Project impacts would be **less than significant** as they relate to the loss of a locally important mineral resources recovery site.

3.8.5 Cumulative Impacts

A cumulative impact would occur if, in combination with the Project, other cumulative development projects in the study area would result in the loss of, or preclude future extraction of, available and marketable mineral resources in areas of San Diego County classified as MRZ-2 or MRZ-3. Development of past, present, and reasonably anticipated future projects outlined in Table 2-11 could result in the loss of mineral resources, including but not limited to, constructing impervious surfaces, which would preclude future mining activities, or implementation of habitat restoration projects and/or sediment basins, which would preclude the site from future mining activities. However, as detailed above in Section 3.8.4, implementation of the Project would not result in the loss of availability of a locally important mineral resource recovery site and would result in a less than significant impact under Threshold 1. And while none of the cumulative development projects occur in the Border Highlands areas (i.e., Sector V[1] or V[2] per California Department of Conservation's map of the Otay River, Tijuana River, and Border Highlands Areas (DOC 1982), several are located in Sector U or the floodplain deposition of the Tijuana River from the international boundary downstream about 4 miles (County of San Diego 2008).

Specifically, projects associated with vegetation control (Project No. 8; see Table 2-11), sediment management (Projects No. 1 and No. 3), sewage/water treatment (Projects No. 13 and No. 14), and the County campground (Project No. 18) are within Sector U, which is an MRZ-2 area. Vegetation control, sediment management, and sewage treatment projects would not preclude future mining activities (regular maintenance and/or management of resources does not preclude the extraction of mineral resources) and thus would not result in the loss of a future potential MRZ-2 site. Water treatment projects and the County campground would include the constructing of impervious surface and, thus, may result in the loss of availability of a potential mineral resource site. Despite this potential, the Project would result in less-than-significant impacts to mineral resources and, as such, the Project would **not contribute to a cumulative impact**.

3.8.6 Mitigation Measures

Impacts would be less than significant and no mitigation is required.

3.8.7 Level of Significance After Mitigation

Impacts on available mineral resources and mineral resource recovery sites because of the Project would be **less than significant**.

3.8.8 References

City of San Diego. 1997. City of San Diego MSCP Subarea Plan. March 1997.

City of San Diego. 1999. *Tijuana River Valley Local Coastal Program Land Use Plan*. Adopted December 1976, amended June 1999.

City of San Diego. 2007. "Chapter 3.9: Mineral Resources." In *City of San Diego General Plan Environmental Impact Report*. Accessed May 20, 2019. <https://www.sandiego.gov/sites/default/files/legacy/planning/genplan/pdf/peir/3p9d0mineralresourcesfinal.pdf>.

City of San Diego. 2008. "Conservation Element." In *City of San Diego General Plan*. Accessed May 20, 2019. <https://www.sandiego.gov/sites/default/files/legacy/planning/genplan/pdf/2012/ce120100.pdf>.

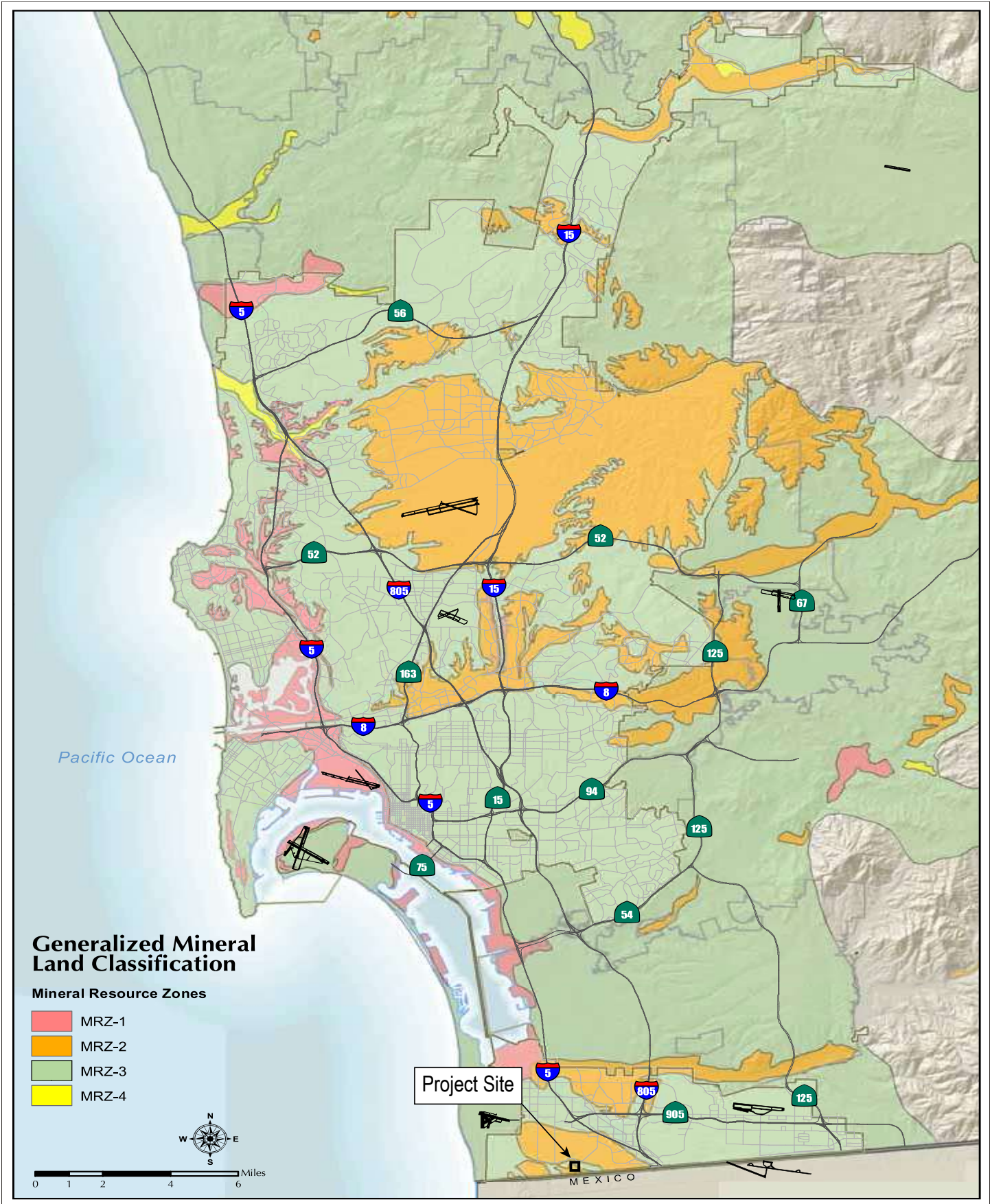
County of San Diego. 2008. *Guidelines for Determining Significance and Report Format and Content Requirements: Mineral Resources*. July 30, 2008.

County of San Diego. 2011. "Chapter 5: Conservation and Open Space Element." In *San Diego County General Plan*. August 2011. <https://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/ConservationandOpenSpace.pdf>.

DOC (California Department of Conservation). 1982. *Mineral Land Classification of the Western San Diego County Production-Consumption Region. Otay Valley, Tijuana River, and Border Highlands Resources Areas*. Prepared by R.V. Miller and S.L. Kohler.

DOC. 2019. *State Mining and Geology Board Statutes and Regulations*. Accessed May 20, 2019. <https://www.conservation.ca.gov/smgbr/regulations/Pages/regulations.aspx>.

DOC. 2020. "Division of Mine Reclamation. Mines Online (MOL) interactive map." Accessed July 9, 2020. <http://maps.conservation.ca.gov/mol/index.html>.



SOURCE: City of San Diego 2008

FIGURE 3.8-1

Mineral Resource Zones

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

3.9 Noise

This section describes the existing noise conditions of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed project. The analysis of the Project impacts related to noise is partly based on information provided in the following technical reports:

- Noise Technical Report, prepared by Kroner (Appendix G)

In addition to the Noise Technical Report, supplemental Project analysis was conducted by Dudek in February 2021. The supplemental analysis is presented in its entirety in this section of the Environmental Impact Report (EIR).

3.9.1 Existing Conditions

Fundamentals of Noise and Vibration

Noise Definitions and Criteria

The following is a brief discussion of fundamental noise concepts and terminology.

Sound, Noise, and Acoustics

Sound is a process that consists of three components: the sound source, sound path, and sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; i.e., a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

Sound Pressure Levels and Decibels

The amplitude of a sound determines its loudness. Loudness of sound increases with increasing amplitude. Sound pressure amplitude is measured in units of micronewtons per square meter, also called micropascals. One micropascal is approximately one-hundred billionth (0.0000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million micropascals, or 10 million times the pressure of the weakest audible sound. Because expressing sound levels in terms of micropascals is very cumbersome, logarithmic units are used instead to describe the ratio of actual sound pressure to a reference pressure squared. These units are called bels. To provide a finer resolution, a bel is subdivided into 10 decibels (dB).

A-Weighted Sound Level

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness, or human response, is determined by the characteristics of the human ear.

Human hearing is limited not only in the range of audible frequencies, but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 hertz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of sound level adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency-dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special situations (e.g., B-scale, C-scale, D-scale), but these scales are rarely used in conjunction with most environmental noise. Noise levels are typically reported in terms of A-weighted sound levels. All sound levels discussed in this report are A-weighted decibels (dBA). Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 3.9-1.

Table 3.9-1. Typical Sound Levels in the Environment and Industry

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|--|-------------------|---|
| Jet fly over at 300 meters (1,000 feet) | 110 | Rock band |
| Gas lawn mower at 1 meter (3 feet) | 100 | Food blender at 1 meter (3 feet) |
| Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 miles per hour) | 90 | Garbage disposal at 1 meter (3 feet) |
| Noisy urban area, daytime | 80 | Vacuum cleaner at 3 meters (10 feet); |
| Gas lawn mower at 30 meters (100 feet) | 70 | Normal speech at 1 meter (3 feet) |
| Commercial area | 60 | Large business office |
| Heavy traffic at 90 meters (300 feet) | 50 | Dishwasher next room |
| Quiet urban, daytime | 40 | Theater; large conference room (background) |
| Quiet urban, nighttime | 30 | Library |
| Quiet suburban, nighttime | 20 | Bedroom at night; concert hall (background) |
| Quiet rural, nighttime | 10 | Broadcast/Recording studio |
| Lowest threshold of human hearing | 0 | Lowest threshold of human hearing |

Source: Caltrans 2009

Note: dBA = A-weighted decibel

Human Response to Changes in Noise Levels

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear can discern changes in sound levels of 1 dBA when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dBA. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as twice or half as loud. A doubling of sound energy results in a 3 dBA increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

Noise Descriptors

Additional units of measure have been developed to evaluate the long-term characteristics of sound. The equivalent sound level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound level during the same time period. The 1-hour A-weighted equivalent sound level, L_{eq} (1-hr), is the energy average of the A-weighted sound levels occurring during a 1-hour period and is the basis for the City's noise ordinance criteria.

People are generally more sensitive and annoyed by noise occurring during the evening and nighttime hours. Thus, another noise descriptor used in community noise assessments—the community noise equivalent level (CNEL)—was introduced. The CNEL scale represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. The CNEL accounts for the increased noise sensitivity during the evening hours (7:00 p.m. to 10:00 p.m.) and nighttime hours (10:00 p.m. to 7:00 a.m.) by adding 5 dBA and 10 dBA, respectively, to the average sound levels occurring during the evening and nighttime hours.

Sound Propagation

Sound propagation (i.e., the passage of sound from a noise source to a receiver) is influenced by geometric spreading, ground absorption, atmospheric effects, and shielding by natural and/or built features.

Sound levels attenuate (diminish) at a rate of approximately 6 dBA per doubling of distance from an outdoor point source due to the geometric spreading of the sound waves. Atmospheric conditions such as humidity, temperature, and wind gradients can also temporarily either increase or decrease sound levels. In general, the greater the distance the receiver is from the source, the greater the potential for variation in sound levels due to atmospheric effects. Additional sound attenuation can result from built features such as intervening walls and buildings, and by natural features such as hills and dense woods.

Groundborne Vibration Fundamentals

Groundborne vibration is a small, rapidly fluctuating motion transmitted through the ground. The strength of groundborne vibration attenuates rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. Several basic measurement units are commonly used to describe the intensity of ground vibration. The descriptors used by the Federal Transit Administration are peak particle velocity (PPV), in units of inches per second, and root-mean square (RMS) velocity decibel (VdB).

The calculation to determine PPV at a given distance is as follows:

$$PPV_{dist} = PPV_{ref} * (25/D)^{1.5}$$

where:

PPV_{dist} = the peak particle velocity in inches per second of the equipment adjusted for distance

PPV_{ref} = the reference vibration level in inches per second at 25 feet

D = the distance from the equipment to the receiver

The velocity parameter (instead of acceleration or displacement) best correlates with human perception of vibration. Thus, the response of humans, buildings, and sensitive equipment to vibration is described in this

section in terms of the RMS velocity level in VdB units relative to 1 micro-inch per second. As a point of reference, the average person can just barely perceive vibration velocity levels below 70 VdB (typically in the vertical direction). The calculation to determine the RMS at a given distance is as follows:

$$L_v(D) = L_v(25 \text{ feet}) - 30 * \log(D/25)$$

where:

$L_v(D)$ = the vibration velocity decibel level at the receiver

$L_v(25 \text{ feet})$ = the reference source vibration velocity decibel level

D = the distance from the vibration activity to the receiver

Typical background vibration levels are between 50 and 60 VdB, and the level for minor cosmetic damage to fragile buildings or blasting generally begins at 100 VdB.

Noise

In general, land uses in the Tijuana River Valley mainly consist of open space with limited residential and developed recreational uses. In addition, two water treatment uses/facilities are located in the valley. The noise environments through most of the valley is characterized by a background or “ambient” noise level generated by vehicular traffic. Typical secondary noise sources include distant aircraft, rustling leaves, landscaping maintenance, construction noise, birds, children playing, and passing conversations. Noise-sensitive receptors are locations where human activity may be adversely affected by noise. Examples of noise sensitive receptors are residences, hotels and motels, educational institutions, libraries, and hospitals and clinics.

Ambient Noise Monitoring

The existing outdoor environmental noise was quantified and characterized with short- and long-term noise level monitoring that was performed in the vicinity of the Project site. Noise monitoring was conducted using Larson-Davis models 831 and LXT sound level meters. These instruments are American National Standards Institute (ANSI) Type I certified. Two long-term monitoring locations (LT1 and LT2), depicted on Figure 3.9-1, Noise Measurement Locations and Noise Sensitive Land Uses and Wildlife, were selected to develop representative 24-hour distributions of L_{eq} and CNEL values at nearby residential areas.

The LT1 monitor was deployed in the backyard of a residence at the southwestern edge of a dense single-family residential neighborhood to the west of Glancy Drive and east of Camino De La Plaza. Although the neighborhood lies approximately 1 mile east of the Project site and an open field, riverbed, and a wastewater treatment complex lie between the neighborhood and the Project site, no substantial noise-occluding terrain features such as ridgelines are present.

The LT2 monitor was deployed at the southeast corner of a rural residential property near Monument Road facing the Project site, and was deployed to monitor this area where occupied land uses includes an equestrian complex. LT2 is separated from the Project site by a series of natural ridges (the first of which is located approximately 0.35 miles southeast of LT2) that occludes line of sight between the residences in this area and the Project site.

Short-duration sound pressure level measurements were performed at three noise-sensitive locations (ST1, ST2, and ST3) near the Project site to represent environmental noise in the area at different times of the day. Among the three, ST2 (Tijuana River Valley Regional Park Ranger Station) was located within 800 feet of the Project site and thus the nearest field noise survey position. A summary of the monitoring results at all five locations is shown below in Table 3.9-2.

Table 3.9-2. Measured Baseline Outdoor Ambient Noise Locations and Levels

| Measurement Location Tag | Measurement Location (or Address) ¹ | Date (mm/dd/yy) and Time (hh:mm) | Measurement Duration | L _{eq} (dBA) | L _{max} (dBA) | CNEL (dBA) |
|--------------------------|---|----------------------------------|----------------------|-----------------------|------------------------|-----------------|
| LT1 | 3250 Glancy Drive (Residential) | 4/23/19: 14:00 - 4/24/19: 14:00 | 24 hours | 55 | 58 | 58 |
| LT2 | 2550 Monument Road (Residential) | 4/24/19: 12:00 - 4/25/19: 12:00 | 24 hours | 52 | 57 | 55 |
| ST1 | 2301 Monument Road (Residential) | 4/24/19: 12:53 | 20 minutes | 59 | 75 | 62 ² |
| | | 4/25/19: 8:53 | 20 minutes | 58 | 76 | |
| ST2 | 2721 Monument Road (Tijuana River Valley Regional Park – recreation and wildlife sensitive habitat) | 4/24/2019: 13:38 | 20 minutes | 57 | 70 | 58 ² |
| | | 4/25/2019: 9:04 | 20 minutes | 52 | 70 | |
| ST3 | Dairy Mart Pond Staging Area (Tijuana River Valley Regional Park – recreation and wildlife sensitive habitat) | 4/24/2019: 14:07 | 20 minutes | 54 | 66 | 59 ² |
| | | 4/25/2019: 9:31 | 20 minutes | 58 | 74 | |

Source: Appendix G

Notes:

- All monitoring locations are in the City of San Diego.
- CNEL values at ST1, ST2, and ST3 were estimated by comparing hourly L_{eq} distributions to 24-hour CNEL at the adjacent long-term location.

L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; dBA = A-weighted decibel.

3.9.2 Relevant Plans, Policies, and Ordinances

Federal

There are no applicable federal regulations related to noise that would apply to the Project.

State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) (California Code of Regulations, Guidelines for Implementation of CEQA, Appendix G, Title 14, Chapter 3 Section 15000-15387 and 21000-21178) requires lead agencies to

consider noise impacts. Under CEQA, lead agencies are directed to identify generation of substantial temporary or permanent increase in excess of locally established noise standards or those of other agencies, identify generation of excessive groundborne vibration or groundborne noise levels, and identify excessive noise exposures associated with air traffic to people residing or working in a project area.

The California Health and Safety Code section (46000-46080) of the California Noise Control Act finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economical damage. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizen through control, prevention, and abatement of noise.

Local

City of San Diego

Municipal Code Section 59.5.0401 (Noise Ordinance)

The City's Municipal Code sets forth sound level limits. It is unlawful for any person to cause noise by any means to the extent that the 1-hour average sound level exceeds the applicable limit given in Table 3.9-3 at any location in the City of San Diego on or beyond the boundaries of the property on which the noise is produced. The noise subject to these limits is the part of the total noise at the specified location that is due solely to the action of said person/event.

Table 3.9-3. City of San Diego Applicable Exterior Limits

| Land Use | Time of Day | 1-Hour Average Sound Level Limit (dBA) |
|---|------------------------|--|
| Single-family residential | 7:00 a.m. – 7:00 p.m. | 50 |
| | 7:00 p.m. – 10:00 p.m. | 45 |
| | 10:00 p.m. – 7:00 a.m. | 40 |
| Multi-family residential (up to a maximum density of 1/2,000) | 7:00 a.m. – 7:00 p.m. | 55 |
| | 7:00 p.m. – 10:00 p.m. | 50 |
| | 10:00 p.m. – 7:00 a.m. | 45 |
| All other residential | 7:00 a.m. – 7:00 p.m. | 60 |
| | 7:00 p.m. – 10:00 p.m. | 55 |
| | 10:00 p.m. – 7:00 a.m. | 50 |
| Commercial | 7:00 a.m. – 7:00 p.m. | 65 |
| | 7:00 p.m. – 10:00 p.m. | 60 |
| | 10:00 p.m. – 7:00 a.m. | 60 |
| Industrial or agricultural | Any time | 75 |

Source: City of San Diego 2010.

Note dBA = A-weighted decibel

Municipal Code Section 59.5.0404 (Noise Ordinance)

Section 59.5.0404 of the City's Municipal Code sets forth limitations related to construction noise (City of San Diego 2010).

- A. It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter, or repair any building or structure in such a manner as to create disturbing, excessive, or offensive noise unless a permit has been applied for and granted beforehand by the Noise Abatement and Control Administrator. In granting such permit, the Administrator shall consider whether the construction noise in the vicinity of the proposed work site would be less objectionable at night than during the daytime because of different population densities or different neighboring activities; whether obstruction and interference with traffic, particularly on streets of major importance, would be less objectionable at night than during the daytime; whether the type of work to be performed emits noises at such a low level as to not cause significant disturbances in the vicinity of the work site; the character and nature of the neighborhood of the proposed work site; whether great economic hardship would occur if the work were spread over a longer time; and whether proposed night work is in the general public interest; and he/she shall prescribe such conditions, working times, types of construction equipment to be used, and permissible noise levels as he/she deems to be required in the public interest.
- B. Except as provided in Subsection C hereof, it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.
- C. The provisions of Subsection B of this section shall not apply to construction equipment used in connection with emergency work, provided the Administrator is notified within 48 hours after commencement of work.

City of San Diego General Plan Noise Element

The City developed the Noise Element of the City of San Diego General Plan to provide goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment. The City uses the Land Use - Noise Compatibility Guidelines shown in Table 3.9-4 for evaluating land use noise compatibility when reviewing proposed land use development projects. A "compatible" land use indicates that standard construction methods will attenuate exterior noise to an acceptable indoor noise level and people can carry out outdoor activities with minimal noise interference. Noise Element policies state the following (City of San Diego 2015):

- NE-A.1. Separate excessive noise-generating uses from residential and other noise-sensitive land uses with a sufficient spatial buffer of less sensitive uses.
- NE-A.2. Assure the appropriateness of proposed developments relative to existing and future noise levels by consulting the guidelines for noise-compatible land use to minimize the effects on noise-sensitive land uses.
- NE-A.3. Limit future residential and other noise-sensitive land uses in areas exposed to high levels of noise.

- NE-A.4. Require an acoustical study consistent with Acoustical Study Guidelines for proposed developments in areas where the existing or future noise level exceeds Noise Compatibility Guidelines, so that noise mitigation measures can be included in the project design to meet the noise guidelines.
- NE-A.5. Prepare noise studies to address existing and future noise levels from noise sources that are specific to a community when updating community plans.

Table 3.9-4 City of San Diego Land Use - Noise Compatibility Guidelines

| Land Use Category | Exterior Noise Exposure (dBA CNEL) | | | | |
|---|------------------------------------|-------|-------|-------|-----|
| | <60 | 60-65 | 65-70 | 70-75 | 75+ |
| Parks and Recreational | | | | | |
| Parks, Active and Passive Recreation | | | | | |
| Outdoor Spectator Sports, Golf Course; Water Recreational Facilities; Indoor Recreation Facilities | | | | | |
| Agricultural | | | | | |
| Crop Raising and Farming; Community Gardens, Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintain and Keeping; Commercial Stables | | | | | |
| Residential | | | | | |
| Single Dwelling Units; Mobile Homes | | 45 | | | |
| Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations <i>*For uses affected by aircraft noise, refer to Policies NE-D.2 and NE-D.3</i> | | 45 | 45* | | |
| Institutional | | | | | |
| Hospitals; Nursing Facilities; Intermediate Care Facilities; K-12 Educational Facilities; Libraries; Museums; Child Care Facilities | | 45 | | | |
| Other Educational Facilities including Vocational/Trade Schools and Colleges, and Universities | | 45 | 45 | | |
| Cemeteries | | | | | |
| Retail Sales | | | | | |
| Building Supplies/Equipment; Groceries; Pets and Pet | | | 50 | 50 | |

Table 3.9-4 City of San Diego Land Use - Noise Compatibility Guidelines

| Land Use Category | Exterior Noise Exposure (dBA CNEL) | | | | |
|---|------------------------------------|---|-------|-------|-----|
| | <60 | 60-65 | 65-70 | 70-75 | 75+ |
| Supplies; Sundries, Pharmaceutical, and Convenience Sales; Apparel and Accessories | | | | | |
| Commercial Services | | | | | |
| Building Services; Business Support; Eating and Drinking; Financial Institutions; Maintenance and Repair; Personal Services; Assembly and Entertainment (includes public and religious assembly); Radio and Television Studios; Golf Course Support | | | 50 | 50 | |
| Visitor Accommodation | | 45 | 45 | 45 | |
| Offices | | | | | |
| Business and Professional; Government; Medical, Dental and Health Practitioner; Regional and Corporate Headquarters | | | 50 | 50 | |
| Vehicle and Vehicular Equipment Sales and Services Use | | | | | |
| Vehicle Repair and Maintenance; Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking | | | | | |
| Wholesale, Distribution, Storage Use Category | | | | | |
| Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution | | | | | |
| Industrial | | | | | |
| Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries | | | | | |
| Research and Development | | | | 50 | |
| Compatible | Indoor Uses | Standard construction methods should attenuate exterior noise to an acceptable indoor noise level. | | | |
| | Outdoor Uses | Activities associated with the land use may be carried out. | | | |
| Conditionally Compatible | Indoor Uses | Building structure must attenuate exterior noise to the indoor noise level indicated by the number (45 or 50) for occupied areas. Conditionally indicated by the number for occupied areas. | | | |

Table 3.9-4 City of San Diego Land Use - Noise Compatibility Guidelines

| Land Use Category | | Exterior Noise Exposure (dBA CNEL) | | | | |
|-------------------|--------------|---|-------|-------|-------|-----|
| | | <60 | 60-65 | 65-70 | 70-75 | 75+ |
| | Outdoor Uses | Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable. | | | | |
| Incompatible | Indoor Uses | New construction should not be undertaken. | | | | |
| | Outdoor Uses | Severe noise interference makes outdoor activities unacceptable. | | | | |

Source: City of San Diego 2015.

County of San Diego

San Diego County Code of Regulatory Ordinances Title 3, Division 6, Chapter 4, Sections 36.401 – 36.435, Noise Ordinance

Section 36.404 of the County Noise Ordinance contains sound level limits specific to the receiving land uses. It establishes prohibitions for disturbing, excessive, or offensive noise as well as provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Planned compliance with sound level limits and other specific parts of the ordinance, by way of conducting predictive analyses of anticipated noise levels, supports a reasonable expectation that the noise from a proposed project would not be disturbing, excessive, or offensive. Limits are specified depending on the zoning requirements for the property (e.g., varying densities and intensities of residential, industrial, and commercial zones). Where two adjacent properties have different zones, the sound level limit at a location on a boundary between the two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. It is unlawful for any person to cause or allow the creation of any noise that exceeds the applicable limits of the County Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced.

The sound level limits are in terms of a one-hour average sound level. The allowable noise limits depend upon the County’s zoning district and time of day. Section 36.404 of the County’s Noise Ordinance reads as follows:

- (a) Except as provided in section 36.409 of this chapter, it shall be unlawful for any person to cause or allow the creation of any noise, which exceeds the one-hour average sound level limits in Table 36.404 [Sounds Level Limits in Decibels (dBA), of the County’s Noise Ordinance], when the one-hour average sound level is measured at the property line of the property on which the noise is produced or at any location on a property that is receiving the noise.
- (b) Where a noise study has been conducted and the noise mitigation measures recommended by that study have been made conditions of approval of a Major Use Permit, which authorizes the noise-generating use or activity and the decision making body approving the Major Use Permit determined that those mitigation measures reduce potential noise impacts to a level below significance, implementation and compliance with those noise mitigation measures shall constitute compliance with subsection (a) above.
- (c) S88 zones are Specific Planning Areas which allow different uses. The sound level limits in Table 36.404 of the County’s Noise Ordinance that apply in an S88 zone depend on the use being made of the property. The limits in Table 36.404 [of the County’s Noise Ordinance], subsection (1) apply to property with a residential, agricultural, or civic use. The limits in subsection (3) apply to property with a commercial use. The limits in subsection (5) apply to property with an industrial use that would only be

allowed in an M50, M52 or M54 zone. The limits in subsection (6) apply to all property with an extractive use or a use that would only be allowed in an M56 or M58 zone.

- (d) If the measures ambient noise level exceeds the applicable limit in Table 36.404 [of the County's Noise Ordinance], the allowable one-hour average sound level shall be the one-hour average ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.
- (e) The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones. The one-hour average sound level limit applicable to extractive industries, however, including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the zone in which the extractive industry is located.
- (f) A fixed-location public utility distribution or transmission facility location on or adjacent to a property line shall be subject to the sound level limits of this section measured at or beyond six feet from the boundary of the easement upon which the facility is located.

In 2002, the County added note (b) to this section to allow greater compliance flexibility for projects for which a Major Use Permit has been granted. In the ordinance document adopting this amendment, the County explained: "It is the purpose of this ordinance to amend the San Diego County noise control regulations, to permit noise created by a project for which a Major Use Permit has been approved based upon a specific noise study, to be controlled by the noise mitigation conditions of that permit rather than the general standards of the noise ordinance" (County of San Diego 2002).

The Noise Ordinance also regulates temporary noise levels from construction activities. Sections 36.408 through 36.411 of the Noise Ordinance establish additional noise limitations for operation of construction equipment.

Sections 36.408 and 36.409 state that, except for emergency work, in shall be unlawful for any person to operate or cause to be operated, construction equipment:

- (a) Between 7 p.m. and 7 a.m.
- (b) On a Sunday or a holiday. For purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, the fourth Thursday in November and December 25th. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10 a.m. and 5 p.m. at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does not violate the limitations in sections 36.409 and 36.410.
- (c) Section 36.409 limits allowable construction noise to no more than 75 dB over an eight-hour period between 7:00 a.m. and 7:00 p.m. when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.410, which regulates sound limitations on impulsive noise, states that in addition to the general limitations on sound levels in Section 36.404 and the limitations on construction equipment in Section 36.409, the following additional sound-level limitations shall apply:

- (a) Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 36.410A, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is

received, for 25% of the minutes in the measurement period, as described in subsection (c), below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 36.410A are as described in the County Zoning Ordinance.

Table 36.410A, County of San Diego Code Section 36.410, Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA)

| Occupied Property Use | Decibels (dBA) |
|---|----------------|
| Residential, village zoning or civic use | 82 |
| Agricultural, commercial, or industrial use | 85 |

- (a) Except for emergency work, no person working on a public road project shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 36.410B, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25% of the minutes in the measurement period, as described in subsection (c) below. The maximum sound level depends on the use being made of the occupied property. The uses in Table 36.410B are as described in the County Zoning Ordinance.
- (b) The minimum measurement period for any measurements conducted under this section shall be 1 hour. During the measurement period, a measurement shall be conducted every 1 minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it would be deemed that the maximum sound level was exceeded during that minute.

Table 36.410B, County of San Diego Code Section 36.410, Maximum Sound Level (Impulsive) Measured at Occupied Property in Decibels (dBA) for Public Road Projects

| Occupied Property Use | Decibels (dBA) |
|---|----------------|
| Residential, village zoning or civic use | 85 |
| Agricultural, commercial, or industrial use | 90 |

County General Plan Noise Element

The County's General Plan Noise Element (Noise Element) (County of San Diego 2011) establishes noise and land use compatibility standards and outlines goals and policies to achieve these standards. The Noise Element characterizes the noise environment in the County and provides the context for the County's noise/land use compatibility guidelines and standards. The Noise Element also describes the County's goals for achieving the standards and introduces policies designed to implement the goals. Under implementation of the General Plan, the County would use the Noise Compatibility Guidelines to determine the compatibility of land uses when evaluating proposed development projects. The Noise Compatibility Guidelines indicate ranges of compatibility and are intended to be flexible enough to apply to a range of projects and environments.

3.9.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City of San Diego, and relevant County of San Diego significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. Despite the hybridized approach employed throughout this EIR and the Project site encompassing County-owned land, surrounding properties and land uses that would receive noise generated by Project activities are generally within the City of San Diego's jurisdiction. Therefore, for purposes of this noise analysis, City of San Diego noise standards are referenced herein.

The significance criteria used to evaluate Project impacts related to noise are based on City guidelines. According to City guidelines, a significant impact related to noise would occur if the Project would:

1. Generate noise levels which exceed the City's adopted noise ordinance threshold at or within the property boundaries of land uses under City jurisdiction.
2. Per City of San Diego CEQA Significance Thresholds Table K-4, exceed 60 dBA CNEL, the noise compatibility threshold for nature preserves, parks, and single-family residential land uses.
3. Expose neighboring residential land uses (where people usually sleep) to vibration velocity levels that exceed 0.004 inches per second RMS PPV for frequent events (greater than 70 occurrences per day).
4. Result in land uses which are not compatible with aircraft noise levels as defined by an adopted Airport Land Use Compatibility Plan (ALUCP).
5. Expose persons to current or future transportation noise levels which exceed standards established in the Transportation Element of the General Plan or an adopted airport Comprehensive Land Use Plan.

Additionally, and discussed in greater detail as part of Biological Resources EIR Section (i.e., Section 3.3), a potentially significant impact would occur if sensitive avian wildlife (e.g., coastal California gnatcatcher) within the Multiple Species Habitat Area (MHPA) during its breeding season would be exposed to Project-attributed noise in excess of 60 dBA L_{eq} (hourly) or, if greater, the existing outdoor ambient noise level.

3.9.4 Impacts Analysis

Due to the nature of the Project and the duration of its on-site activities over the course of 10 to 15 years, for purposes of this environmental impact assessment the noise from the Project would be considered "operational" and not "construction-related" with respect to applicable regulatory and general plan standards.

1. ***Would the project generate noise levels in excess of the City's adopted noise ordinance?***

Transportation Noise

Sediment Transport

The Federal Highway Administration Traffic Noise Model Version 2.5 and accompanying user guide (USDOT 2004) was used to estimate noise levels attributed to Project truck traffic traveling on Monument Road between Goat Canyon and the Project site. These predicted Project truck traffic noise levels for the five studied receptor positions (R1 through R5) appearing in Appendix G and on Figure 3.9-1 appear in Table 3.9-5 and account for several factors including receptor distance to the roadway, Federal Highway Administration reference truck noise emission levels, and the average quantity of trucks per day on the

basis of expected total sediment volume to be moved per each of the six successive Project phases. The highest estimated Project truck traffic noise levels are associated with the representative residential receptor positions (R2 and R3) along Monument Road.

Table 3.9-5. Predicted Noise from Project Haul Truck Traffic by Phase

| Project Phase | Project Annual Weekday Truck Traffic (AWT) | Predicted L_{eq} (dBA) at Studied Receptor Position | | | | |
|---------------|--|---|----------------------------|----------------------------|-----------------------------|-------------------------------|
| | | R1 (1,850 feet to roadway) | R2 (45 feet to roadway) | R3 (20 feet to roadway) | R4 (140 feet to roadway) | R5 (4,275 feet to roadway) |
| Phase 1 | 7 | 29 | 46 | 50 | 39 | 24 |
| Phase 2 | 120 | 42 | 58 | 62 | 51 | 36 |
| Phase 3 | 172 | 43 | 60 | 64 | 53 | 38 |
| Phase 4 | 250 | 45 | 61 | 65 | 54 | 39 |
| Phase 5 | 250 | 45 | 61 | 65 | 54 | 39 |
| Phase 6 | 302 | 46 | 62 | 66 | 55 | 40 |

Project Site Employee Traffic

Aside from the flows of sediment haul trucks discussed in the preceding paragraphs, the quantity of expected employees entering and leaving the Project site represents a small contribution to Project-attributed traffic noise and for purposes of this assessment can be neglected or considered part of the Project haul truck traffic.

On-Site Operations Noise

Methodology

While the noise technical report (Appendix G to the EIR) conservatively assumed that the on-site noise generators comprise four pieces of conventional construction heavy equipment (dozer, excavator, grader, and scraper) that could be approximated as a combined point-type noise source near the northern end of the Project site, a more granular and per-Phase approach using updated Project information allows a more accurate analysis for assessing potential Project noise impacts. The more detailed analysis is presented herein.

According to Chapter 2, Project Description, Project progress would proceed as six successive phases, each with two distinct sets of sequential on-site operational activities and their associated equipment as follows:

- Processing Equipment and Earthmoving/Restoration (PEER) is anticipated to include operation of an on-site dump truck, large bulldozer, grader, water truck, and up to two front-end loaders, vibrating hoppers, and radial stackers. With the radial stacker and vibrating hopper tending to remain at fixed locations corresponding with the imported sediment stacks, on-site mobile construction-type heavy equipment can be approximated as time-averaged geographic positions that reflect their activity focus on movement of material from the sediment stacks to the on-site areas of distribution that vary by Project phase.
- Restoration and Revegetation (RandR) is anticipated to include a concrete truck, seeder truck, and employee truck. Like the PEER sub-phase, the locations of these mobile equipment can be approximated geographically as fixed positions that are proximate to the sediment distribution areas and therefore vary by Project phase.

In addition to the on-site set and geographic arrangement of major noise producers unique to PEER and RandR activities assumed for each of the six phases, the more refined model approach considers the potential for surrounding terrain to occlude direct sound paths between one or more of these on-site operation noise sources and the five studied “human” receptors as well as three identified coastal California gnatcatcher observation sites (two pairs and one individual) that are much closer to the Project site. A further model refinement for these three wildlife receptors was to include the anticipated changes in site elevation based on the placement of sediment material—in other words, much of the Project site grade increases in height with each successive completed Phase, meaning the noise-producing equipment would be likely be higher in each successive Phase. With respect to very distant representative community receptors such as R1 (LT1) and R5 (ST3) that already have direct line-of-sight to the Project, these elevation changes would have negligible effects on sound propagation. But for the nearby coastal California gnatcatcher receptors that may currently be located on the other side of a ridge or beyond the edge of an on-site ledge, an increase in source height over time could eventually diminish such early noise path occlusion and thus create conditions that may increase predicted noise level at those receptors.

Two other important modeling parameters in the refined modeling approach that were conservatively ignored in the noise report (Appendix G to this EIR) are naturally occurring attenuation factors in addition to geometric divergence (i.e., the “6 dB per doubling of distance” propagation rule of thumb for a point-type sound source) and can be summarized as follows:

- Acoustical air absorption, which for “standard air” (i.e., about 70° Fahrenheit and 50% relative humidity) can be approximated as -1 dBA per one thousand feet of distance traversed; and,
- Acoustical ground absorption, which per equation 10 of International Organization of Standardization (ISO) 9613-2 can allow up to approximately 5 dBA of noise reduction due to sound traveling over a substantially porous surface (e.g., loose soils, grasses, fresh snow, etc.) (ISO 1996).

Typically neglected when source-to-receiver distances are less than 250 feet, these two attenuation terms in the modeling algorithm help accurately predict noise exposure levels at a receptor when the distances traveled from the source are substantial. As for potential wind or other meteorological effects, usage of ISO 9613-2 methodology ensures that all modeled receptors are conservatively considered “downwind”, meaning wind direction and sound propagation are assumed to be the same, regardless of actual wind direction that may vary with time. When the direction of sound from a source to a receiver location is traveling “upwind”, there is the potential for sound to be diffracted and thus reduced.

Predicted Results

Table 3.9-6 presents the predicted L_{eq} values due to on-site PEER and RandR activities for each of the six phases, and without any benefit of sound-occluding terrain features.

Table 3.9-6. Predicted On-Site Project Operations Noise by Phase and Activity (no terrain)

| Phase | On-Site Activity | Predicted L_{eq} (dBA) at the Indicated Residential Community (R_) and Wildlife Receptor (WR_) | | | | | | | |
|---------|------------------|--|----------|----------|----------|----------|-----|-----|-----|
| | | LT1 (R1) | LT2 (R2) | ST1 (R3) | ST2 (R4) | ST3 (R5) | WR1 | WR2 | WR3 |
| Phase 1 | PEER | 37 | 49 | 44 | 54 | 38 | 62 | 63 | 57 |
| | RandR | 26 | 38 | 33 | 41 | 26 | 46 | 54 | 47 |
| Phase 2 | PEER | 37 | 49 | 44 | 54 | 38 | 62 | 63 | 57 |

Table 3.9-6. Predicted On-Site Project Operations Noise by Phase and Activity (no terrain)

| Phase | On-Site Activity | Predicted Leq (dBA) at the Indicated Residential Community (R_) and Wildlife Receptor (WR_) | | | | | | | |
|---------|------------------|---|----------|----------|----------|----------|-----------|-----------|-----|
| | | LT1 (R1) | LT2 (R2) | ST1 (R3) | ST2 (R4) | ST3 (R5) | WR1 | WR2 | WR3 |
| Phase 3 | RandR | 26 | 38 | 33 | 41 | 26 | 47 | 53 | 47 |
| | PEER | 37 | 49 | 44 | 54 | 38 | 62 | 66 | 57 |
| | RandR | 26 | 39 | 33 | 44 | 27 | 51 | 55 | 48 |
| Phase 4 | PEER | 35 | 48 | 42 | 52 | 36 | 61 | 62 | 56 |
| | RandR | 26 | 39 | 33 | 44 | 27 | 51 | 55 | 48 |
| Phase 5 | PEER | 35 | 47 | 42 | 51 | 36 | 57 | 65 | 56 |
| | RandR | 26 | 40 | 33 | 45 | 27 | 56 | 56 | 48 |
| Phase 6 | PEER | 35 | 47 | 41 | 53 | 36 | 63 | 58 | 54 |
| | RandR | 27 | 39 | 33 | 45 | 28 | 56 | 49 | 45 |

Notes: PEER = Processing Equipment and Earthmoving/Restoration; RandR = Restoration and Revegetation; dBA = A-weighted decibel; Leq = energy-equivalent sound level

Due to their closer proximity to the Project site, two of the three coastal California gnatcatcher receptors (WR1 and WR2) are anticipated to experience aggregate operation noise levels that exceed 60 dBA and would thus suggest a noise impact to these sensitive avian species during their breeding season. However, with local natural terrain and on-site elevation changes considered in the modeling algorithm, Table 3.9-7 shows that the predicted noise exposure levels from on-site Project activities at these wildlife receptors would be lower, thus minimizing potential noise impacts.

At the more distant community receptor locations beyond the natural terrain west of the Project site that breaks line-of-sight, the predictive modeling that includes terrain conservatively approximates a modest 3 dB noise reduction due to the topography barrier effect.

Table 3.9-7. Predicted On-Site Project Operations Noise by Phase and Activity (with terrain)

| Phase | On-Site Activity | Predicted Leq (dBA) at the Indicated Residential Community (R_) and Wildlife Receptor (WR_) | | | | | | | |
|---------|------------------|---|----------|----------|----------|----------|-----------|-----|-----|
| | | LT1 (R1) | LT2 (R2) | ST1 (R3) | ST2 (R4) | ST3 (R5) | WR1 | WR2 | WR3 |
| Phase 1 | PEER | 37 | 46 | 41 | 51 | 38 | 57 | 51 | 44 |
| | RandR | 26 | 35 | 30 | 38 | 26 | 36 | 41 | 34 |
| Phase 2 | PEER | 37 | 46 | 41 | 51 | 38 | 57 | 52 | 45 |
| | RandR | 26 | 35 | 30 | 38 | 26 | 42 | 42 | 34 |
| Phase 3 | PEER | 37 | 46 | 41 | 51 | 38 | 57 | 55 | 47 |
| | RandR | 26 | 36 | 30 | 41 | 27 | 44 | 46 | 37 |
| Phase 4 | PEER | 35 | 45 | 39 | 49 | 36 | 57 | 55 | 47 |
| | RandR | 26 | 36 | 30 | 41 | 27 | 43 | 46 | 38 |
| Phase 5 | PEER | 35 | 44 | 39 | 48 | 36 | 55 | 51 | 42 |
| | RandR | 26 | 37 | 30 | 42 | 27 | 45 | 43 | 34 |
| Phase 6 | PEER | 35 | 44 | 38 | 50 | 36 | 63 | 60 | 53 |
| | RandR | 27 | 36 | 30 | 42 | 28 | 55 | 51 | 44 |

Notes: PEER = Processing Equipment and Earthmoving/Restoration; RandR = Restoration and Revegetation; dBA = A-weighted decibel; Leq = energy-equivalent sound level

As a result of the final Phase 6 locating on-site PEER activity closer to its off-site position and at increased ground elevation, WR1 is expected to experience noise levels greater than 60 dBA L_{eq} . See Section 3.3, Biological Resources, for further discussion of this potential wildlife impact and the appropriate mitigation measure. For all other studied receptors and phases in Table 3.9-7, prediction results that include terrain effects would be less than 60 dBA.

Combined Project Operations Noise

Due to the nature of the Project, which involves frequent import of sediment from Goat Canyon and other locations in the Tijuana River Valley via haul trucks to the Project site where sediment would be stacked and processed for deposit on site, there would be periods of time when such Project-attributed truck trips and on-site activities would be concurrent. Analyzed separately in the preceding paragraphs, Table 3.9-8 presents logarithmic sums of the predicted values from Table 3.9-5 and Table 3.9-7, respectively. The truck traffic noise contributions at the wildlife receptors are based on predictions shown in Table 6 of the noise report (Appendix G).

Table 3.9-8. Predicted Combined Project Truck Traffic and On-Site Activities (hourly L_{eq}) by Phase

| Phase | On-Site Activity | Predicted L_{eq} (dBA) at the Indicated Residential Community (R_) and Wildlife Receptor (WR_) | | | | | | | |
|---------|------------------|--|----------|----------|----------|----------|-----|-----|-----|
| | | LT1 (R1) | LT2 (R2) | ST1 (R3) | ST2 (R4) | ST3 (R5) | WR1 | WR2 | WR3 |
| Phase 1 | PEER | 38 | 49 | 50 | 51 | 38 | 57 | 51 | 44 |
| | RandR | 31 | 46 | 50 | 41 | 28 | 38 | 41 | 34 |
| Phase 2 | PEER | 43 | 58 | 62 | 54 | 40 | 58 | 52 | 45 |
| | RandR | 42 | 58 | 62 | 51 | 37 | 46 | 43 | 37 |
| Phase 3 | PEER | 44 | 60 | 64 | 55 | 41 | 58 | 55 | 47 |
| | RandR | 44 | 60 | 64 | 53 | 38 | 48 | 46 | 39 |
| Phase 4 | PEER | 45 | 61 | 65 | 55 | 41 | 57 | 55 | 47 |
| | RandR | 45 | 61 | 65 | 54 | 40 | 49 | 47 | 40 |
| Phase 5 | PEER | 45 | 61 | 65 | 55 | 41 | 55 | 51 | 43 |
| | RandR | 45 | 61 | 65 | 54 | 40 | 49 | 44 | 38 |
| Phase 6 | PEER | 46 | 62 | 66 | 56 | 42 | 63 | 60 | 53 |
| | RandR | 46 | 62 | 66 | 55 | 40 | 56 | 52 | 45 |

Notes: PEER = Processing Equipment and Earthmoving/Restoration; RandR = Restoration and Revegetation; dBA = A-weighted decibel; L_{eq} = energy-equivalent sound level

Because the Project would operate approximately ten hours per day during daytime periods, the predicted combined Project operation noise levels in Table 3.9-8 should only be compared with the City's noise ordinance daytime-period hourly L_{eq} limits. At community receptor R1, the land use is zoned RS-1-7 by the City and therefore suggests 50 dBA hourly L_{eq} as the noise standard per Table 3.9-3. Because the predicted combined Project noise level for all six phases at R1 are less than this value, the Project noise would be considered a **less than significant** impact.

Since the studied community receptors R2 through R5 are all zoned as "AR-1-1" land, and would therefore have a 75 dBA threshold that is several dB higher than the predicted levels appearing in Table

3.9-8, on this basis there is no expected regulatory exceedance and thus would be considered a **less than significant** noise impact.

2. Would Project operation noise exceed City of San Diego CEQA Significance Thresholds Table K-4 noise limits with respect to nature preserves, parks, and single-family residential land uses?

Although the preceding paragraphs find that the City's daytime hourly L_{eq} noise ordinance thresholds would not be exceeded by predicted Project noise, community receptors R2 through R5 represent land uses for which a more stringent CNEL limit of 60 dBA per the City's Table K-4 from its CEQA Significance Thresholds (City of San Diego 2016) would be expected for noise impact assessment. But because the predicted combined noise levels in Table 3.9-8 are hourly L_{eq} values, they need to be converted to CNEL and account for the fact that the Project would only operate ten hours per day (approximate) during daytime periods. Therefore, Table 3.9-9 presents the predicted combined Project operation noise levels per the calculated CNEL metric, which can then be compared directly with this 60 dBA CNEL standard.

Table 3.9-9. Predicted Combined Project Truck Traffic and On-Site Activities (CNEL) by Phase

| Phase | On-Site Activity | Predicted CNEL (dBA) at the Indicated Community (R_) and Wildlife Receptor (WR_) | | | | | | | |
|---------|------------------|--|----------|----------|----------|----------|-----|-----|-----|
| | | LT1 (R1) | LT2 (R2) | ST1 (R3) | ST2 (R4) | ST3 (R5) | WR1 | WR2 | WR3 |
| Phase 1 | PEER | 34 | 45 | 46 | 47 | 34 | 53 | 47 | 40 |
| | RandR | 27 | 42 | 46 | 38 | 24 | 34 | 37 | 30 |
| Phase 2 | PEER | 39 | 54 | 58 | 50 | 36 | 54 | 48 | 41 |
| | RandR | 38 | 54 | 58 | 47 | 33 | 42 | 39 | 33 |
| Phase 3 | PEER | 41 | 56 | 60 | 51 | 37 | 54 | 51 | 43 |
| | RandR | 40 | 56 | 60 | 49 | 34 | 44 | 43 | 35 |
| Phase 4 | PEER | 42 | 58 | 61 | 52 | 37 | 53 | 51 | 43 |
| | RandR | 41 | 57 | 61 | 51 | 36 | 45 | 43 | 36 |
| Phase 5 | PEER | 42 | 57 | 61 | 51 | 37 | 52 | 47 | 39 |
| | RandR | 41 | 57 | 61 | 51 | 36 | 46 | 40 | 34 |
| Phase 6 | PEER | 42 | 58 | 62 | 52 | 38 | 59 | 57 | 49 |
| | RandR | 42 | 58 | 62 | 51 | 37 | 52 | 48 | 41 |

Notes: PEER = Processing Equipment and Earthmoving/Restoration; RandR = Restoration and Revegetation; dBA = A-weighted decibel; CNEL = community equivalent noise level

Table 3.9-9 indicates that studied community receptor R3 would experience CNEL greater than 60 dBA during Project Phases 4, 5, and 6 and is due to the substantial predicted truck traffic noise levels appearing in Table 3.9-5. On this basis, the Project would incur a **potentially significant noise impact** at R3 and comparable residential receptors along and in sufficient proximity to the Monument Road segment where the Project haul truck traffic shall travel.

3. Would the Project expose neighboring residential land uses to ground-borne vibration in excess of County guidance?

Within the proximity of the Project site there are no occupied buildings where low ambient vibration is essential for interior operations (such as research and manufacturing facilities with special vibration constraints). The closest residence is at least 900 feet from the construction and grading limits. This

distance is greater than the vibration impact screening distance of 200 feet in Attachment D of the County's Noise Guidelines for Determining Significance.

Per FTA guidance and assuming a crest factor of 4 (FTA 2018), large bulldozers and excavators would normally generate a reference vibration velocity of 0.023 inches per second RMS PPV at 25 feet from the equipment. Propagated through the ground soils and rock strata, the resulting vibration velocity level at the nearest occupied residence from operating of this type of heavy equipment on the Project site would be less than the County's 0.004 inches per second standard and thus be considered a **less than significant** impact.

For haul trucks, Federal Highway Administration research indicates that a loaded belly truck or end dump truck travelling at 30 miles per hour and experiencing a 20 millimeter roadway irregularity would cause a vibration level of 0.003 inches per second PPV (Henwood and Haramy 2002). Converted to an RMS value and accounting for ground-borne distance propagation, the expected vibration velocity exposure due to Project haul truck traffic at apparent occupied homes along the studied portion of Monument Road would be less than the County's 0.004 inches per second standard and thus be considered a **less than significant** impact.

4. *Would the project result in land uses which are not compatible with aircraft noise levels as defined by an adopted airport Comprehensive Land Use Plan (CLUP)?*

The nearest public airport to the Project site is Brown Field Municipal Airport, which is located at 1424 Continental Street, San Diego, California, approximately 5 miles northeast of the Project site. Tijuana International Airport, located in Mexico, is located approximately 5 miles east of the Project site. The nearest private airport to the Project site is Naval Outlying Field Imperial Beach (Ream Field) Airport located at 1498 13th Street, 2.5 miles northwest of the Project site.

According to the Brown Field Municipal ALUCP (San Diego County ALUC 2010), the Project site is not located within the 60 to 65 dBA CNEL noise contour of Brown Field. See Figures IV-4 and IV-5 of the Brown Field Municipal ALUCP. Also, according to the Naval Outlying Field Imperial Beach ALUCP (San Diego County ALUC 2015), the Project site is not located within the 60 to 65 dBA CNEL noise contour of Naval Outlying Field Imperial Beach. Due to the distance to Brown Field and Naval Outlying Field Imperial Beach, the Project site would not be exposed to excessive noise levels from both airports. Once the grading plan and restoration plan are completed, the Project site would function as habitat/open space and would not result in a land use that would be incompatible with airport operations and would not be exposed to excessive noise. Therefore, aircraft noise impacts would be **less than significant**.

5. *Would the project expose persons to current or future transportation noise levels which exceed standards established in the Transportation Element of the General Plan or an adopted airport Comprehensive Land Use Plan?*

Please refer to the analysis presented above for operational noise and compatibility with an adopted ALUCP. Project operations would occur seasonally for a period of up to 15 years. Once the grading and restoration plans are completed, the Project site would function as wildlife habitat/open space and would generate limited annual traffic. As described above, noise generated by Project operations would be less than significant and the Project site is not located within the 60 to 65 dBA CNEL noise contours of Brown Field or Naval Outlying Field Imperial Beach. Therefore, impacts would be **less than significant**.

3.9.5 Cumulative Impacts

The geographic context for the analysis of cumulative noise impacts is the immediate surrounding vicinity of the Project site, as noise emission levels are localized and decrease geometrically with distance from the sources of sound. There are limited cumulative projects in the immediate surrounding area that would potentially be operating simultaneously with the proposed Project (see Section 2.6, List of Past, Present, and Reasonably Anticipated Future Projects). One anticipated project, the replacement of a water main in Monument Road that may occur in the near future, may contribute to extant ambient noise levels associated with ongoing sediment management activities sampled and documented in Table 3.9-2.

The Project and any construction, facility maintenance, or building development projects within its vicinity will be subject to applicable noise standards as described herein. Further, while the operation period of the Project has the potential to overlap with the construction of other projects, due to the distance and the presence of nearby physical barriers (i.e., intervening buildings and natural topography), noise due to construction of other projects would not meaningfully combine with that of the Project to produce a cumulative noise effect. By way of illustration, if there are two concurrent projects of comparable sound emission intensity, and the activity nearest to a studied noise-sensitive receptor is compliant with applicable noise standards, the other activity could be no closer than three times the distance of the receptor to the nearest activity and not make a cumulatively measurable contribution to the total noise exposure level. If two concurrent projects were close to a receptor, the cumulative noise would be one of the following:

- the louder (in dBA) of the two concurrent activities; or,
- a logarithmic sum of the two activity noise levels that, per acoustic principles, cannot be more than 3 dBA greater than the louder of the two individual noise-producing activities.

In sum, cumulative noise is likely to be dominated by the closest or loudest activity to the receptor, and the combination would be no more than a barely perceptible difference (i.e., up to a 3 dBA change). For this reason, the Project would not contribute to cumulative exceedances of noise standards, and its incremental effect is considered a **less than significant impact**. In addition, implementation of MM-NOI-1 would further reduce potential cumulative impacts related to the proposed Project. No additional mitigation would be required.

3.9.6 Mitigation Measures

MM-NOI-1 Due to predicted average daily volumes of sediment haul truck traffic during Project Phases 4, 5, and 6, Project sediment haul truck vehicle speed along the portion of Monument Road representing the haul route between Goat Canyon and the Project site shall be no greater than 22 miles per hour.

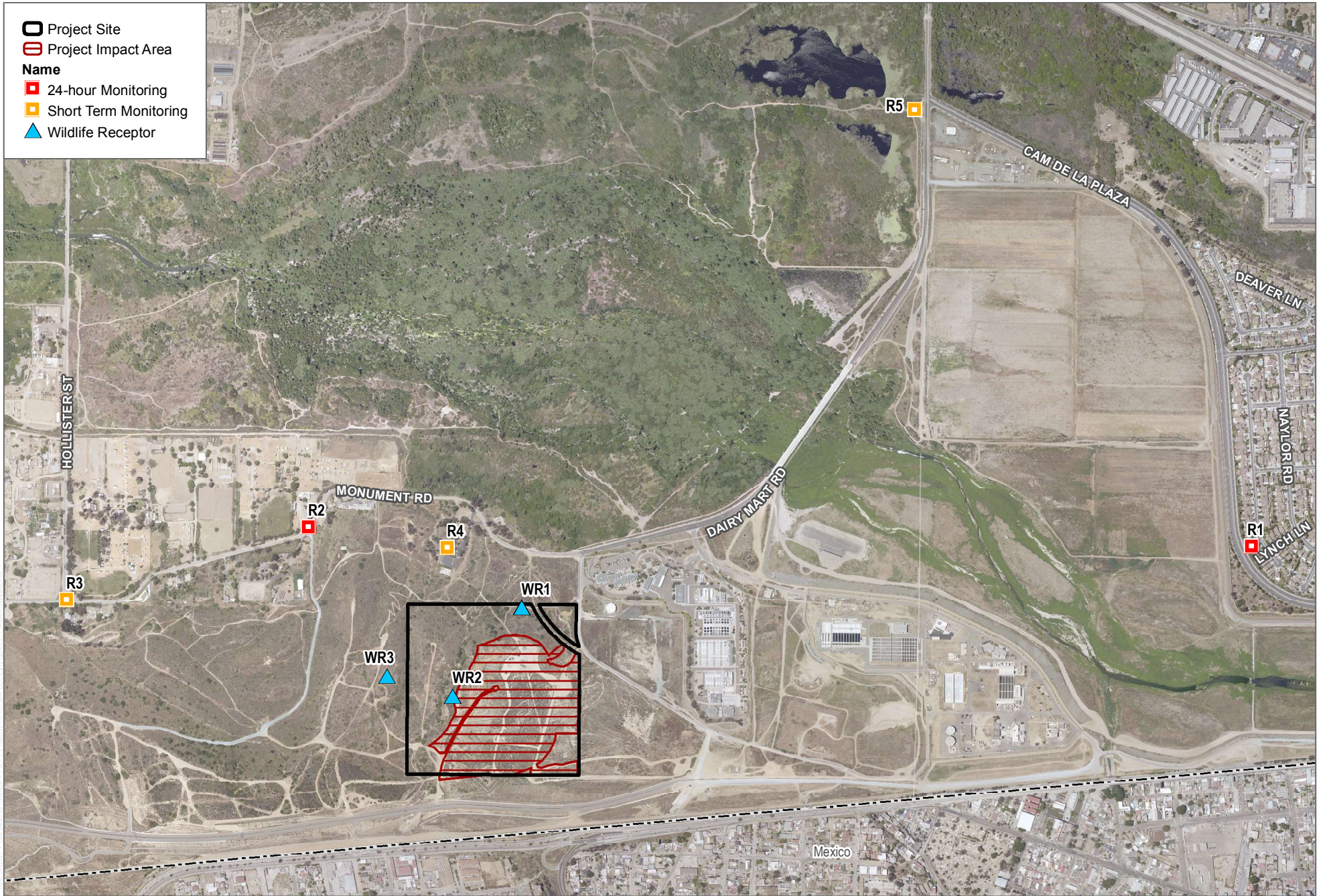
3.9.7 Level of Significance After Mitigation

Implementation of MM-NOI-1 would reduce Project sediment haul truck speed on Monument Road and thereby reduce emitted noise levels to a City-compliant CNEL value at R3 and thus become a **less than significant impact**. This recommended speed limit on Project sediment haul trucks, which represents a difference from the posted roadway speed limit of 35 miles per hour (and for which traffic noise level was predicted in this noise impact assessment), should yield a 2 dBA reduction in Project traffic noise level according to FTA guidance (FTA 2018) and thus bring predicted noise exposure levels at R3 into compliance with the City's 60 dBA CNEL standard per its CEQA Significance Thresholds.

3.9.8 References

- Caltrans (California Department of Transportation). 2009. Technical Noise Supplement.
- City of San Diego. 2010. Article 9.5: Noise Abatement and Control, Division 4: Limits. July.
- City of San Diego. 2015. "Noise Element." In *City of San Diego General Plan*. June 2015.
https://www.sandiego.gov/sites/default/files/ne_2015.pdf
- City of San Diego. 2016. California Environmental Quality Act Significance Determination Thresholds. July 2016.
- County of San Diego. 2002. Noise Ordinance. Ordinance No 9962.
- County of San Diego. 2011. "Noise Element." In *San Diego County General Plan*. August 2011.
- FTA (Federal Transit Administration). 2018. Transit Noise and Vibration Impact Assessment manual. FTA Report No. 0123. September.
- Henwood, J.T. and Haramy, K.Y. 2002. "Vibrations Induced by Construction Traffic: A Historic Case Study." Federal Highway Administration, Denver. http://www.dot.ca.gov/hq/esc/geotech/geo_support/geophysics_geology/documents/geophysics_2002/043henwood_construction_vibrations.pdf
- ISO (International Organization of Standardization). 1996. ISO 9613-2: Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation.
- San Diego County ALUC (San Diego County Airport Land Use Commission). 2010. Brown Field Municipal Airport Land Use Compatibility Plan. Adopted January 25, 2010 and Amended December 20, 2010.
- San Diego County ALUC. 2015. Naval Outlying Landing Field Imperial Beach Airport Land Use Compatibility Plan. Adopted October 15, 2015.
- USDOT (U.S. Department of Transportation Federal Highway Administration). 2004. Traffic Noise Model. Version 2.5.

INTENTIONALLY LEFT BLANK



SOURCE: SANGIS 2017; CA Geological Survey 2007

FIGURE 3.9-1

Noise Measurement Locations and Noise Sensitive Land Uses and Wildlife

Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project

INTENTIONALLY LEFT BLANK

3.10 Wildfire

This section describes the existing wildfire conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts associated with wildfire and contribution to regional wildfire conditions, and identifies mitigation measures related to implementation of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project). Potential wildfire impacts resulting from construction and operation of the Project were evaluated based on a review of existing resources and applicable laws, regulations, guidelines, and standards.

3.10.1 Existing Conditions

Wildfire

Wildfire is a continuous threat in Southern California and is of concern in the wildland–urban interface, the geographic area where urban development either abuts or intermingles with wildland or vegetative fuels. Due to climate, topography, and native vegetation, the City of San Diego (City) is subject to both wildland and urban fires (City of San Diego 2007). Prolonged drought conditions characteristic of the region’s Mediterranean climate result in large areas of dry vegetation that provide fuel for wildland fires. During summer and fall, dry vegetation and Santa Ana wind conditions can combine to increase the risk of wildfires. Santa Ana winds bring hot, dry desert air into the region and quickly dry out vegetation, resulting in additional easily ignitable fuel sources.

Wildland fire hazards exist throughout much of the City, as depicted on Figure 3.5-3, High Fire Risk Areas, of the City’s General Plan Program EIR (City of San Diego 2008a). Hillside and canyon areas in and adjacent to the City present a potentially serious hazard, including the mountainous areas along the eastern City limits and canyon and open space areas that traverse the City. The Project site is located in the southern portion of the City within a high fire risk area, as mapped by the City (City of San Diego 2009), the County of San Diego (County) (County of San Diego 2019), and the California Department of Forestry and Fire Protection (CAL FIRE) (CAL FIRE 2009a).

The Project site is primarily vacant land consisting of native vegetation communities, previously quarried slopes, and access roads. The Project site is surrounded by the City’s South Bay Water Reclamation Plant to the east, County lands including a regional park and private rural residences and agricultural uses to the north and west, and federal lands managed by the U.S. Customs and Border Protection and the U.S./Mexico border to the south. The Project site encompasses two parcels (i.e., Assessor’s Parcel Nos. [APNs] 664-011-05-00 and 664-011-04-00) that together comprise 40 acres within the over-1,800-acre Tijuana River Valley Regional Park. The area of potential impact (i.e., Project Impact Area) within the Project site is approximately 20 acres in size.

Topography and Terrain

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread upslope and slower spread downslope. Terrain that forms a funneling effect—such as chimneys, chutes, or saddles—on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind.

The Tijuana River Valley consists of a broad floodplain containing contiguous beach, dune, salt marsh, riparian, and upland ecosystems. The floodplain is bound on three sides by urban development and on the fourth by the Pacific Ocean, with high natural mesas to the south. The floodplain is a mixture of natural habitats intermixed with agricultural fields, equestrian facilities, rural housing, and areas disturbed by dumping, off-road activities, grading and recontouring (berming), and the effects of flooding (TRNERR 2014).

Considering the topography specific to the Project site, the easternmost parcel (APN 664-011-0500) is primarily flat but includes eroded slopes along the western boundary. The slopes extend west to APN 664-011-0400 and then transition to a narrow ridge featuring a dirt access road and several overhead light poles installed by U.S. Customs and Border Protection. The western portion of the parcel includes sloping terrain separated by a drainage. A similar collection of ridges, mesas, and drainages also occurs on parcels to the west of the Project site (APNs 664-011-0300 and 664-020-0400). Elevations on site are approximately 100 feet above mean sea level in the eastern portion and approximately 250 feet above mean sea level at the ridge in the western portion of the Project site.

Vegetation Communities and Land Covers

Vegetation communities on site consist primarily of coastal sage scrub dominated by moderately tall California sagebrush, California buckwheat, and sages. As discussed in Section 3.3, Biological Resources, of this EIR, four plant community types and two land cover types were identified within the Project site: Diegan coastal sage scrub–*Baccharis* dominated, disturbed habitat, maritime succulent scrub, mulefat scrub, open water, and southern riparian scrub. The acreage of each vegetation community and land cover type is presented in Section 3.3, Table 3.3-1, and Figure 3.3-1. With the exception of the eroded, east-facing hillside and narrow dirt roads that traverse the Project site, the site is covered by relatively dense coastal sage scrub vegetation.

Climate, Weather, and Wind

The City, including the Tijuana River Valley, has a Mediterranean climate with cool, wet winters and warm, dry summers. The warm season lasts for approximately 2.8 months (July to early October), with an average daily high temperature above 75°F. The cool season lasts for approximately 4.1 months (late November to April), with an average daily high temperature below 67°F (Weather Spark 2020).

More than 90% of the mean annual precipitation occurs during a 6-month period between November and April, with an average annual rainfall of 9 to 10 inches. Like much of Southern California, the Tijuana River Valley is subject to prolonged periods of drought sometimes followed by years with torrential floods (TRNERR 2014).

The Project site, like much of Southern California, is influenced by prevailing wind patterns. Prevailing winds are winds that blow from a single direction over a specific area of the Earth. The prevailing wind pattern is from the west (on-shore), but the presence of the Pacific Ocean causes a diurnal wind pattern known as the land/sea breeze system. During the day, winds are from the west (sea) and at night winds are from the east (land). The average hourly wind speed in San Diego experiences mild seasonal variation over the course of the year. The windier part of the year (mid-November to early June) experiences average wind speeds of more than 6.9 mph, and the calmer time of year (early June to mid-November) experiences average wind speeds of 5.8 mph, with maximum wind speeds and gusts exceeding 14 mph throughout the year. The prevailing wind direction is most often from the west during the majority of the year (late January to November) and from the east during the remainder of the year (late November to late January) (Weather Spark 2020).

The wind experienced at any given location is highly dependent on local topography and slope variations and other factors, and instantaneous wind speed and direction vary more widely than hourly averages. The highest wind velocities are associated with downslope, canyon, and Santa Ana winds. The site is subject to seasonally strong winds, such as Santa Ana winds, which can result in periodic extreme fire weather conditions that occur throughout San Diego County. Typically, the highest fire danger is produced by the high-pressure systems that occur in the Great Basin, which result in the Santa Ana winds of Southern California. Sustained wind speeds recorded during Santa Ana wind conditions may exceed 25–35 mph, with gusts reaching 55 mph in the valleys and 75

mph near mountain ridge tops (KUSI 2019). The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a regional basis during late summer and early fall. Santa Ana winds are warm winds that flow from the higher desert elevations in the north through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Consequently, peak velocities are highest at the mouths of canyons and dissipate as they spread across valley floors. Santa Ana winds generally coincide with the regional drought period and the period of highest fire danger.

Fire Hazard Severity Zones

CAL FIRE's Fire and Resource Assessment Program database includes map data documenting areas of significant fire hazards in the state. These maps categorize geographic areas of the state into different Fire Hazard Severity Zones (FHSZs), ranging from moderate to very high. CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state, and includes classifications for State Responsibility Areas, Local Responsibility Areas, and Federal Responsibility Areas. FHSZs are classified based on fuel loading, slope, fire history, weather, and other relevant factors.

The Project site is located within a Local Responsibility Area and is more than 5 miles from the nearest State Responsibility Area as mapped by CAL FIRE (CAL FIRE 2016). However, the Project site and larger Tijuana River Valley area are located within a Very High FHSZ and 300-foot Brush Buffer as mapped by the City (City of San Diego 2009), the County (County of San Diego 2019) and CAL FIRE (CAL FIRE 2009a) (see Figure 3.10-1, Fire Hazard Severity Zones).

Fire History

The Tijuana River Valley, like all of San Diego County, is subject to seasonal weather conditions that can heighten the likelihood of fire ignition and spread, and considering the site's terrain and vegetation, may result in fast-moving and moderate-intensity wildfire. Fire history is an important component of wildfire analysis. Wildfire history information can provide an understanding of fire frequency, fire type, most vulnerable areas, and significant ignition sources. The CAL FIRE Fire and Resource Assessment Program database was used to evaluate the Project site's fire history to determine whether large fires (greater than 10 acres) have occurred in the Tijuana River Valley, and thus determine the likelihood of future fires. Per the recorded fire history database, and as shown in Figure 3.10-2, Wildfire History, four wildfires have burned within 5 miles of the Project site, and one fire has burned onto the Project site (CAL FIRE 2019). Recorded wildfires within 5 miles of the Project site range from 38 acres (1980 Assist No. 4 Fire) to 363 acres (1953 Lazy A Fire). The Lazy A Fire, which burned onto the Project site, occurred in 1953 and burned across the U.S./Mexico border. The site has not been subject to fire since, and the most recent fires in the valley occurred in the 1980s (CAL FIRE 2019).

Emergency Response

The Project site is located within the City of San Diego Fire-Rescue Department (SDFD) responsibility area. SDFD is responsible for the preparation, maintenance, and execution of Fire Preparedness and Management Plans. In the event of a large wildfire within or threatening City limits, SDFD could be assisted by CAL FIRE, a federal fire department, or other local fire department jurisdictions through mutual aid agreements (City of San Diego 2007).

The Project site is primarily undeveloped and presents no major interference with implementation of emergency response services. Via Monument Road, the Project site is easily accessible from Interstate (I) 5. Emergency response for the Project site and surrounding area is provided, initially, by the City from Station 29 in San Ysidro. Station 29 is located at 198 West San Ysidro Boulevard and is staffed with City firefighters and paramedics.

Apparatus at Station 29 includes Engine 29, Truck 29, Brush 29, and Paramedic 29. Station 29 is approximately 2.4 miles northeast of the Project site and is adjacent to I-5. In addition, Station 30 is located approximately 3.7 miles northwest of the Project site at 2265 Coronado Avenue in Otay Mesa Nestor.

In fiscal year 2017, the engine at Station 29 responded to 4,776 calls for service (City of San Diego 2019). The greatest number of responses to calls for service in fiscal year 2017 was for Emergency Medical Response (3,539), followed by Urgent Medical Response (473), Non-Emergency Medical Response (428), Fire (177), and Hazard (129).

3.10.2 Relevant Plans, Policies, and Ordinances

Federal

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection, but are not laws or codes unless adopted as such or referenced as such by the California Fire Code (CFC) or the local fire agency.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995 and updated in 2001 and again in 2009 by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. The Federal Wildland Fire Management Policy acknowledges the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles, found in the Guidance for Implementation of Federal Wildland Fire Management Policy (National Wildfire Coordinating Group 2009):

- Firefighter and public safety is the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan, officially titled *Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000*, was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (DOI/USDA 2000).

International Fire Code

Created by the International Code Council, the International Fire Code (IFC) addresses a wide array of conditions hazardous to life and property, including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The IFC places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the IFC uses a hazards classification system to determine the appropriate measures to be incorporated to protect life and property (often times these measures include construction standards and specialized equipment). The IFC uses a permit system (based on hazard classification) to ensure that required measures are instituted (International Code Council 2017).

State

California Government Code

California Government Code Sections 51175 through 51189 provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria and makes the information available for public review. Further, local agencies must designate, by ordinance, Very High FHSZs within their jurisdiction based on the recommendations of CAL FIRE.

Section 51182 sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuels management, and building materials and standards. Defensible space around structures in fire hazard areas must consist of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe, vegetation near buildings must be maintained, and roofs of structures must be cleared of vegetative materials. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

California Code of Regulations

California Fire Code

Part 9 of Title 24 of the California Code of Regulations contains the CFC, which incorporates by adoption the IFC with necessary California amendments. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous

conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the wildland–urban interface and fire hazard areas.

The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission. The 2019 CFC took effect on January 1, 2020.

Fire Hazard Severity Zones

CAL FIRE maps FHSZs based on fuel loading, slope, fire history, weather, and other relevant factors as directed by California Public Resources Code, Sections 4201–4204, and California Government Code Sections 51175–51189. FHSZs are ranked from Moderate to Very High, and are categorized for fire protection within a Federal Responsibility Area, State Responsibility Area, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

As previously stated, the Project site and surrounding area is designated as a Very High FHSZ within the Local Responsibility Area (CAL FIRE 2009b).

California Strategic Fire Plan

The 2018 Strategic Fire Plan for California reflects CAL FIRE's focus on fire prevention and suppression activities to protect lives, property, and ecosystem services, and natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire resilient, buildings and infrastructure that are more fire resistant, and a society that is more aware of and responsive to the benefits and threats of wildland fire, all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2018). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

Emergency Response

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

California Emergency Services Act

The California Emergency Services Act was adopted to establish the state's roles and responsibilities during human-caused or natural emergencies that result in conditions of disaster and/or extreme peril to life, property, or resources of the state. This act is intended to protect health and safety by preserving the lives and property of the people of the state.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The California Natural Disaster Assistance Act is activated after the following occurs: a local declaration of emergency and the California Emergency Management Agency gives concurrence with the local declaration, or the governor issues a proclamation of a state emergency. Once the act is activated, local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

Local

Emergency and Evacuation Plans

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state, and local levels for all types of disaster, both natural and human-caused. Local governments have the primary responsibility for preparedness and response activities. The County has numerous levels of emergency response and evacuation plans, including the Operational Area Emergency Operations Plan (EOP) that was approved in 2014. The San Diego County Operational Area consists of 19 jurisdictions within the County and was formed to assist with developing emergency plans, exercising those plans, developing mutual aid capabilities, and improving communication between jurisdictions and agencies. The EOP is intended to guide jurisdictional and agency response to major emergencies and disasters. The EOP is used by all key partner agencies within the County to respond to major emergencies and disasters, and describes the roles and responsibilities between the County and its departments with local jurisdictions within the County (County of San Diego 2021). Since 1965, San Diego County has had 44 federal disaster declarations, half of them attributed to fires (City of San Diego 2018). Annex B (Fire and Rescue Mutual Aid Operations) of the EOP is devoted to Fire and Rescue Operations. There are multiple mutual aid agreements between fire agencies in the County that can be called upon in the event of a major fire event.

In addition to the EOP, the County also has a Multi-Jurisdictional Hazard Mitigation Plan that was last revised in 2017 and identifies risks and ways to minimize damage caused by natural and human-caused disasters. Potential hazards or events that may trigger an emergency response in the County include earthquakes, tsunamis, floods, wildland fires, landslides, droughts, hurricanes, tropical storms, and freezes. Emergency response actions could also be triggered by a hazardous materials incident; water or air pollution; a major transportation accident; water, gas, or energy shortage; a health epidemic; a nuclear accident; or terrorism (County of San Diego 2017).

City of San Diego General Plan

The City of San Diego General Plan (General Plan) provides policies for protecting communities from unreasonable risk of wildfire. The following policies provide the foundation and support for implementing fire-wise and fire-safe development regulations.

Public Facilities, Services and Safety Element, Section D. Fire-Rescue

The Public Facilities, Services and Safety Element of the City's General Plan sets forth the following goals and policies related to wildfire protection and hazard mitigation (City of San Diego 2018).

Fire-Rescue Goals

- Protection of life, property, and environment by delivering the highest level of emergency and fire-rescue services, hazard prevention, and safety education.
- Minimize fire hazards resulting from structural or wildland fires.
- Manage fuel loads in wildland areas

Fire Service and Infrastructure Policies

- PF-D.1. Locate, staff, and equip fire stations to meet established response times as follows:
 - a) To treat medical patients and control small fires, the first-due unit should arrive within 7.5 minutes, 90% of the time from the receipt of the 911 call in fire dispatch. This equates to 1-minute dispatch time, 1.5 minutes company turnout time and 5 minute drive time in the most populated areas.
 - b) To provide an effective response force for serious emergencies, a multiple-unit response of at least 17 personnel should arrive within 10.5 minutes from the time of 911-call receipt in fire dispatch, 90% of the time.
 - This response is designed to confine fires near the room of origin, to stop wildland fires to under 3 acres when noticed promptly, and to treat up to 5 medical patients at once.
 - This equates to 1-minute dispatch time, 1.5 minutes company turnout time and 8 minutes' drive time spacing for multiple units in the most populated areas.
- PF-D.2. Determine fire station needs, location, crew size and timing of implementation as the community grows.
 - c) Use the fire unit development performance measures (based on population density per square mile) shown in Table PF-D.1 to plan for needed facilities. Where more than one square mile is not populated at similar densities, and/or a contiguous area with different density types aggregates into a population cluster area, use the measures provided in Table PF-D.2.

- d) Reflect needed fire-rescue facilities in community plans and associated facilities financing plans as a part of community plan updates and amendments.

Table PF-D.2. Deployment Measures to Address Future Growth by Population Clusters

| Area | Aggregate Population | First-Due Unit Travel Time Goal |
|----------------|----------------------|---------------------------------|
| Metropolitan | > 200,000 people | 4 minutes |
| Urban-Suburban | < 200,000 people | 5 minutes |
| Rural | 500 - 1,000 people | 12 minutes |
| Remote | < 500 people | > 15 minute |

Wildfire Planning Policies

- PF-D.12. Protect communities from unreasonable risk of wildfire within very high fire hazard severity zones.
 - a) Assess site constraints when considering land use designations near wildlands to avoid or minimize wildfire hazards as part of a community plan update or amendment. (see also LU-C.2.a.4)
 - b) Provide adequate fire protection. (see also PF-D.1 and PF-D.2)
- PF-D.13. Incorporate fire safe design into development within very high fire hazard severity zones to have fire-resistant building and site design, materials, and landscaping as part of the development review process.
 - a) Locate, design and construct development to provide adequate defensibility and minimize the risk of structural loss from wildland fires.
 - b) Design development on hillsides and canyons to reduce the increased risk of fires from topography features (i.e., steep slopes, ridge saddles).
 - c) Minimize flammable vegetation and implement brush management best practices in accordance with the Land Development Code.
 - d) Design and maintain public and private streets for adequate fire apparatus vehicles access (ingress and egress) and install visible street signs and necessary water supply and flow for structural fire suppression.
 - e) Coordinate with the Fire-Rescue Department to provide and maintain adequate fire breaks where feasible or identify other methods to slow the movement of a wildfire in very high fire hazard severity zones.
- PF-D.14. Implement brush management along City maintained roads in very high fire hazard severity zones adjacent to open space and canyon areas.
- PF-D.15. Maintain access for fire apparatus vehicles along public streets in very high fire hazard severity zones for emergency equipment and evacuation.
- PF-D.16. Provide wildland fire preparedness education for fire safety advance planning.
- PF-D.17. Coordinate with local, state, and federal fire protection agencies with respect to fire suppression, rescue, mitigation, training and education.
- PF-D.18. Coordinate with local, state, and federal agencies to update emergency, evacuation, and hazard mitigation plans, as necessary (also see section PF-P. Hazard Mitigation and Disaster Preparedness).
- PF-D.19. Support city-wide emergency and disaster preparedness education programs. (Also see Section PF-P. Hazard Mitigation and Disaster Preparedness)

City of San Diego Municipal Code

Section 55.9401, Very High Fire Hazard Severity Zone, adopts the Very High FHSZs as recommended by CAL FIRE and adopts Brush Management Zones as defined in Section 142.0412.

Section 142.0403, General Planting and Irrigation Requirements, establishes general planting and irrigation requirements, including plant material, spacing, maintenance, and irrigation requirements, as well as regulations regarding invasive and native plant species.

Section 142.0411, Revegetation and Erosion Control, requires the revegetation of all graded, disturbed, or eroded areas that will not be permanently paved or covered by structures.

Section 142.0412, Brush Management, outlines the City's brush management requirements for all publicly or privately owned premises within 100 feet of a structure that contain native or naturalized vegetation. The policy includes implementation of two distinct brush management areas around structures, referred to as Zone One and Zone Two.

County of San Diego Consolidated Fire Code Section 4903.1 (2020)

County Planning and Development Services or the fire authority having jurisdiction may require an applicant for a parcel map, subdivision map, specific plan, or major use permit for any property located in a wildland-urban interface fire area to submit a Fire Protection Plan (FPP) as part of the approval process. As the Project would not require a parcel map, subdivision map, specific plan, or major use permit from the County, the FPP requirements of Consolidated Fire Code Section 4903.1 would not be applicable and an FPP would not be required for the Project.

County of San Diego General Plan

Chapter 7, Safety Element, of the San Diego County General Plan provides policies and programs to protect the community from risks associated with seismic, geologic, flood, and wildfire hazards. The following goals and policies pertain to wildfire hazards and are applicable to the Project site by virtue of it being located on County lands within the Tijuana River Valley Regional Park (County of San Diego 2011).

- **GOAL S-3. Minimized Fire Hazards.** Minimize injury, loss of life, and damage to property resulting from structural or wildland fire hazards.
- **Policy S-3.2 Development in Hillside and Canyons.** Require development located near ridgelines, top of slopes, saddles, or other areas where the terrain or topography affect its susceptibility to wildfires to be located and designed to account for topography and reduce the increased risk from fires.
- **Policy S-3.3 Minimize Flammable Vegetation.** Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.
- **Policy S-3.5 Access Roads.** Require development to provide additional access roads when necessary to provide for safe access of emergency equipment and civilian evacuation concurrently.
- **Policy S-3.6 Fire Protection Measures.** Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire.
- **Policy S-6.4 Fire Protection Services for Development.** Require that new development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards from Closest Fire Station).

Table S-1. Travel Time Standards from the Closest Fire Station*

| Travel Time | Regional Category (and/or Land Use Designation) | Rationale for Travel Time Standards** |
|-------------|--|---|
| 5 min | <ul style="list-style-type: none"> --Village (VR-2 to VR-30) and limited Semi-Rural Residential Areas (SR-0.5 and SR-1) --Commercial and Industrial Designations in the Village Regional Category --Development located within a Village Boundary | In general, this travel time standard applies to the County's more intensely developed areas, where resident and business expectations for service are the highest. |
| 10 min | <ul style="list-style-type: none"> --Semi-Rural Residential Areas (> SR-1 and SR-2 and SR-4) --Commercial and Industrial Designations in the Semi-Rural Regional Category --Development located within a Rural Village Boundary | In general, this travel time provides a moderate level of service in areas where lower-density development, longer access routes and longer distances make it difficult to achieve shorter travel times. |
| 20 min | <ul style="list-style-type: none"> --Limited Semi-Rural Residential areas (>SR-4, SR-10) and Rural Lands (RL20) --All Commercial and Industrial Designations in the Rural Lands Regional Category | In general, this travel time is appropriate for very low-density residential areas, where full-time fire service is limited and where long access routes make it impossible to achieve shorter travel times. |
| > 20 min | <ul style="list-style-type: none"> --Very-low rural land densities (RL-40 and RL-80) | Application of very-low rural densities mitigates the risk associated with wildfires by drastically reducing the number of people potentially exposed to this hazard. Future subdivisions at these densities are not required to meet a travel time standard. However, independent fire districts should impose additional mitigation requirements on development in these areas. |

Source: County of San Diego General Plan, Table S-1, Policy S-6.4 Fire Protection Services for Development

* The most restrictive standard will apply when the density, regional category and/or village/rural village boundary do not yield a consistent response time standard.

** Travel time standards do not guarantee a specific level of service or response time from fire and emergency services. Level of service is determined by the funding and resources available to the responding entity.

3.10.3 Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project site. As further described below, all relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts are based on CEQA Appendix G Guidelines and County guidelines for wildland fire and fire protection. According to the CEQA Appendix G Guidelines, a significant impact related to wildfire would occur if the Project would:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan.
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Regarding County guidelines, an affirmative response to, or confirmation of any one of the following Guidelines, will generally be considered a significant impact related to wildland fire and fire protection as a result of the Project, in the absence of evidence to the contrary:

1. The Project cannot demonstrate compliance with all applicable fire codes.
2. A comprehensive Fire Protection Plan has been accepted, and the Project is inconsistent with its recommendations.
3. The Project does not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.

3.10.4 Impacts Analysis

1. *Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?*

An emergency plan describes a comprehensive emergency management system that provides for the planned response to disaster situations associated with natural disasters, technological incidents, terrorism, and nuclear-related incidents. The County and all cities within the County use the EOP to respond to major emergencies and disasters. The EOP identifies a broad range of potential hazards, including wildfire, and a response plan. According to Annex Q, Evacuation (see Attachment 2 – Evacuation Routes), of the EOP, primary evacuation routes consist of the major interstates, highways, and prime arterials within San Diego County (County of San Diego 2018). The primary evacuation routes nearest to the Project site include I-5, which is approximately 1.2 miles northeast of the Project site, and I-805, which is approximately 1.6 miles northeast of the Project site. However, as noted in the EOP, specific evacuation routes would be determined based on the location and extent of the incident and would include as many predesignated transportation routes as possible (County of San Diego 2018). The Project does not include any development that would impair the use of nearby roadways or designated evacuation routes. Further, the Project does not include any habitable structures nor would the Project result in population growth in the region, which could affect emergency response. Therefore, the Project would not interfere with or impair the implementation of an adopted emergency response or evacuation plan. Impacts would be **less than significant**.

2. *Would the Project, due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

As stated, the Project site is located within an area classified as a Very High FHSZ by the City, County, and CAL FIRE. Vegetation on the site and surrounding areas is dominated by scrub species, which represent fuels that could spread wildfire on and off the site. Restoration of the Project site would introduce new potential sources of ignition during Project construction and operation and management (O&M) activities, as well as when final restoration conditions are achieved. The Project does not include habitable structures, and Project occupants would be limited to workers who would be on site temporarily.

Construction/Operations and Management Activities

An increase in the risk of wildland fire would occur during construction and O&M activities when the Project would introduce increased activity combined with new ignition sources on site. Potential ignition sources during construction and related activities include the following:

- Earth-moving and materials sorting equipment – may create sparks, heat sources, fuel or hydraulic leaks, etc.
- Vehicles – heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Compost piles – large piles that are allowed to dry and are left on site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders – sparks from grinding metal components may land on a receptive fuel bed
- Other human-caused accidental ignitions – ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others

Ongoing Project activities could result in an increased risk of wildland fires due to the potential for sparks from equipment and/or vehicles that would be on the Project site. As such, impacts would be **potentially significant**.

Final Restoration

Slopes

The Project site is surrounded by the broad floodplain of the Tijuana River Valley, which primarily consists of gentle to moderate slopes. Under existing conditions, the Project site contains oversteepened slopes (5:1 or greater) that resulted from the previous mining operation on site. The Project would include substantial grading, sediment placement, and compaction to create stable slopes and to eliminate the existing steep slopes. New slopes would resemble existing surrounding terrain. Due to existing slope instability, the Project would re-grade the slopes on site, implement erosion and drainage control best management practices (BMPs), and revegetate the area to restore the oversteepened slopes to conditions similar to the surrounding environment (2:1 slopes). Interim drainage features, such as a sediment trap and riprap stormwater drainage feature, may include steeper slopes (4:1); however, these features would not contain flammable vegetation and would further control on-site erosion and sedimentation. Interim erosion control measures would occur as interim grading is completed, including revegetation of the re-graded slopes with a native erosion control seed mix that includes low growing herbs, grasses, and wildflowers that germinate quickly and provide vegetative cover (erosion control) while avoiding the creation of native vegetation communities that are likely to attract nesting birds or other wildlife.

Areas receiving the native erosion control seed mix would temporarily support vegetative cover for erosion control and slope stabilization purposes. The erosion control seed mix would be applied to areas that would be subject to additional placement of sediment and re-contouring during future grading phases. As such, the resulting vegetation from the erosion control seed mix would be temporary and these areas would be subject to ongoing disturbance and construction activities, which would preclude the establishment of particularly flammable vegetation, while reducing the likelihood for further erosion. Further, as part of Project plan review, the proposed seed mix would be approved by the City, County, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife (Wildlife Agencies), and SDFD prior to implementation. Upon reaching final grade elevations, newly constructed slopes would receive a habitat-forming coastal sage scrub restoration and enhancement seed mix, which would feature native species and would also be subject to approval by the City, County, Wildlife Agencies, and SDFD during plan review.

As discussed in Section 3.10.1, steep terrain typically results in faster fire spread and higher intensity fires. The Project would convert oversteepened slopes that form potentially hazardous terrain into more moderate slopes (2:1), thereby helping to reduce the risk of uncontrolled spread of a wildfire on site. Therefore, new slopes associated with the Project would not exacerbate wildfire risk and would result in improved conditions.

Prevailing Winds

Prevailing winds are winds that blow from a single direction over a specific area. The predominant average hourly wind speed and direction in the City varies throughout the year. However, as discussed in Section 3.10.1, prevailing winds in the region are most often from the west-northwest. The wind experienced at any given location is highly dependent on local topography, slope variations, and other factors. The highest wind velocities are associated with downslope, canyon, and Santa Ana winds. The site is subject to seasonally strong winds, such as Santa Ana winds, which can result in periodic extreme fire weather conditions that occur throughout San Diego County. Because the Project would restore oversteepened slopes to a natural state, the Project would result in reduced hazards on site, and it is not anticipated that the Project would exacerbate wildfire risks related to prevailing winds.

Other Factors

The Project would result in revegetation of the disturbed Project site. A revegetation plan has been prepared, which defines the vegetation communities and restoration areas to be established on the Project site. The plan would be prepared and submitted to the City, SDFD, County, and Wildlife Agencies as part of the plan review process. As previously discussed, re-vegetation of the site would be phased and would include both interim native erosion control seed mix on slopes that would be subject to further grading, sediment placement, and landform creation, and a final coastal sage scrub plant palette once the final slopes (2:1) are achieved.

Final restoration of the Project site would involve revegetating the site with species like those in adjacent undisturbed areas and at similar densities. Final revegetation of finished graded slopes would include coastal sage scrub container plant and seed mix application analogous to naturally occurring coastal sage scrub found on the adjacent ridge. Three seed mixes have been developed for the Project and container plants would be used generally to supplement seed mixes for permanent restoration. Restoration with the coastal sage scrub plant palette would be implemented where final Project elevations are achieved and where terrain would not be subject to future disturbance/sediment placement. Plant species and seed mixes proposed for the Project are shown in Tables 2-5 through 2-8 in Chapter 2. The Project would introduce new fuel sources to the Project site (i.e., vegetation), and because various phases of the Project would overlap, potential ignition sources (i.e., equipment, personnel, vehicles, construction/O&M activities, etc.) would be on site as vegetation in restored areas is establishing. Therefore, the addition of new vegetation to the Project site would present a **potentially significant impact**.

Summary

Project activities would not exacerbate fire risks due to slopes or prevailing winds, and no habitable structures are proposed as part of this Project. However, as discussed above, the Project would involve construction, O&M, and restoration of the Project site with coastal sage scrub habitat atop new terrain and a 5-year monitoring period. As such, the Project would introduce new potential ignition sources and fuel sources to the Project site. Therefore, due to the introduction of new ignition sources and the inclusion of a restoration plan that would include native vegetation that would function as potential new fuel sources on the site, Project impacts would be **potentially significant**.

3. *Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

As proposed, the Project would include the installation and maintenance of associated infrastructure, including roads, water connections and power lines, as further described below. Site preparation would include improvements to the existing dirt road from Monument Road that would function as the site driveway. The road would be regraded and widened to approximately 28 feet to accommodate haul trucks and other vehicles. A gate would be installed at the ingress point to the proposed driveway off Monument Road and would control access to the site. The proposed road improvement and widening would allow Project access and improve fire and emergency access. The proposed road width (28 feet) would exceed the minimum road width requirement for fire apparatus access roads (20 feet), as required by the CFC (CFC Section 503.2.1). Therefore, the Project would result in improved access by fire and emergency vehicles.

In addition, a temporary aboveground drip irrigation system would be installed to support proposed vegetation development (the system would be removed once vegetation is established). An existing 8-inch water line within Monument Road would be extended to the Project site to accommodate anticipated water needs and would require a new connection and meter. Existing water infrastructure, and proposed irrigation features are shown on the Project Revegetation Plan (see Chapter 2, Project Description). The proposed irrigation system would not exacerbate fire risk, but rather would increase moisture content and ensure that native vegetation is properly established, reducing the likelihood for dry, readily ignitable vegetation on site.

Lastly, an existing electrical line in the area would be extended to the Project site to provide temporary power for the operations trailer and processing equipment. Temporary power would be provided by San Diego Gas and Electric from nearby power poles through an overhead transmission line located along Monument Road. New poles and infrastructure would be installed to run power to the Project site. Once the final phase of sediment placement, grading, and revegetation is complete, poles and infrastructure that are located within the limits of the Project site would be abandoned, per San Diego Gas and Electric requirements. The temporary power line would introduce new potential sources of ignition to the Project site that could exacerbate fire risks and would represent a **potentially significant impact**.

4. *Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

As presented in Section 3.5, Geology and Soils, the Project site is not within a landslide hazard category area (i.e., confirmed, known, or highly suspected or possible or conjectured) as identified in the City's Seismic Safety Study Geologic Hazards and Faults Map (City of San Diego 2008b). The map designates

the site as low to moderate geologic hazard risk. In addition, the majority of the site is mapped as “Generally Susceptible” or “Most Susceptible” relative landslide susceptibility areas by the California Department of Conservation (CDOC 1995).

The Project would conform to design requirements associated with proper site preparation and grading practices and would implement surface drainage improvements and erosion control measures in accordance with the approved reclamation plan and construction BMPs. Also, the fill on the Project site would be appropriately placed and compacted such that the eroded slopes on APN 664-011-0500 would be stabilized. The installation and establishment of vegetation would also aid in the stabilization of the existing slopes. Revegetation of the site would be phased and would include both interim native erosion control seed mix and a final CSS plant palette. Further, under existing conditions, the mined, east-facing slope is eroded and oversteepened such that current conditions present unstable slopes and unnatural drainage patterns. The Project would result in substantial grading, cut and fill operations, and compaction to create a stable slope and reduce the risk of erosion.

During construction, BMPs would be implemented throughout work areas, in quantities and design as necessitated by grade and conditions. Unvegetated areas within the impact footprint would receive erosion control BMPs. The Project biologist would monitor periodically during the Project to help ensure BMP compliance. Construction BMPs (installation of fiber rolls, gravel bags, etc.) would be utilized on and around the grading operations as specified in the Stormwater Pollution Prevention Plan to stabilize graded slopes. The Stormwater Pollution Prevention Plan is required for coverage of construction stormwater discharges under the statewide Construction General Permit and would be prepared prior to Project construction. In addition to measures identified in the Stormwater Pollution Prevention Plan, BMPs include installation (as necessary) of a non-invasive, non-habitat forming erosion control seed mix and silt fencing at key locations where the potential for erosion and soil transport exists. In addition, a sediment trap would be maintained on site throughout all Project phases. Runoff from manufactured slopes would be directed to the sediment trap through sheet flow and temporary swales. Further, riprap-lined channels located at the north and south side of the Project would convey runoff into existing on-site drainages. Water from these channels and sheet flow from the completed Project would flow into an existing permanent basin/pond located north of the Project along Monument Road.

With consideration to the intent of the Project; implementation of construction BMPs to stabilize slopes, control erosion, and protect water quality; appropriate compaction and protection of fill slopes; and installation of native vegetation, potential impacts associated with post-fire flooding, runoff, or slope instability are considered **less than significant**.

5. *Would the Project not demonstrate compliance with all applicable fire codes?*

The Project would be required to meet all applicable fire and other codes related to the type of the land use and activities proposed. The Project would be required to comply with applicable portions of the City Municipal Code related to fire hazard severity zones, brush management, revegetation, erosion control, and irrigation requirements (Municipal Code Sections 55.9401, 142.0403, 142.0411, 142.0412) and the goals and policies outlined in the City’s General Plan related to wildfire and fire safety (City of San Diego 2018). The Project would also be consistent with applicable portions of the 2019 CFC, as adopted and amended by the City. Design and revegetation plans would be subject to review and approval of the City, County, Wildlife Agencies, and SDFD and the Project contractor and operator would comply with state and local best practices for fire prevention. Therefore, impacts would be **less than significant**.

6. *If a comprehensive Fire Protection Plan has been accepted, would the Project be inconsistent with its recommendations?*

As stated in the County Consolidated Fire Code, County Planning and Development Services or the fire authority having jurisdiction may require an applicant for a parcel map, subdivision map, specific plan, or major use permit for any property located in a wildland-urban interface fire area to submit an FPP as part of the approval process. As the Project would not require a parcel map, subdivision map, specific plan, or major use permit from the County, and the Project does not include the development of habitable structures (or other potentially flammable structures/development), the FPP requirements of Consolidated Fire Code Section 4903.1 would not be applicable and an FPP would not be required for the Project.

Because a comprehensive FPP would not be required, impacts associated with inconsistency with FPP recommendations would be **less than significant**.

7. *Would the Project not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives?*

The Project site and surrounding area is designated as a Very High FHSZ within the Local Responsibility Area (CAL FIRE 2009b). Therefore, the Project site would be served by local fire departments.

The closest San Diego County Fire Authority station, Otay Mesa Advanced Life Support Station No. 38, is located approximately 1.3 miles from the Project site within the County Sheriff's George F. Bailey Detention Center. As discussed in Section 3.10.2, the County's General Plan Policy S-6.4 establishes response time goals based on underlying zoning or land use designations (County of San Diego 2011). While the Project site is located on County lands within the Tijuana River Valley Regional Park, the Project site has not been zoned by the County. In addition, the Project site has not been formally designated with a land use type by the County. Despite the underlying ownership, the Project site is within the City's Tijuana River Valley Community Plan Area, which designates the land use for the Project site as Multi-Species Conservation Open Space (City of San Diego 2007). Further, the site is zoned by the City for Agriculture-Residential (AR-1-1) use. As the City's AR-1-1 zone requires minimum 10 acre lots, the zone is most closely aligned with the County's Limited Semi-Rural Residential areas (SR-10), which requires a 20-minute response time from the nearest County fire station (see Table S-1; Section 3.10.2). The 20-minute response travel time is appropriate for very low-density residential areas, where full-time fire service is limited and where long access routes make it impossible to achieve shorter travel times, such as in the Tijuana River Valley. However, for the purposes of this analysis, the Project site is understood to be within the response area of the City Fire Department, and initial response would be provided by the City from Station 29 in San Ysidro, approximately 3.1 miles to the northeast of the Project site. As such, the County's emergency response time goals would not be applicable to proposed activities on the Project site. Nonetheless, an analysis of response times from County Station 38 has been included in Table 3.10-1.

The Project site is located within the Administrative Boundary for Engine 29 of SDFD (City of San Diego 2021). Therefore, emergency response for the Project site and surrounding area is provided, initially, by SDFD from Station 29 in San Ysidro. Station 29 is located at 198 West San Ysidro Boulevard and is approximately 2.4 miles northeast of the Project site and is adjacent to I-5. In addition, SDFD Station 30 is located approximately 3.7 miles northwest of the Project site at 2265 Coronado Avenue in the City's Otay Mesa Nestor community. As discussed in Section 3.10.2, the City's General Plan Policy PF-D.1 establishes a response time goal of 10.5 minutes and Policy PF-D.2 establishes a response time goal of

12 minutes for rural areas supporting a population less than 1,000; response times can exceed 15 minutes in remote areas supporting a population less than 500 people (City of San Diego 2018).

Based on current fire station distribution, both City Stations 29 and 30 and County Station 38 are analyzed herein; either City Fire Stations 29 or 30 are most likely to provide initial response. However, if additional support is needed, County resources are available to service the Project site if necessary and could respond to an incident. Table 3.10-1 presents a summary of the location, maximum travel distance, and estimated travel time for the three closest City and County fire stations that would respond to an incident on the Project site.

Travel distances are derived from Google road data while travel times are calculated using response speeds of 35 mph, consistent with nationally recognized National Fire Protection Association 1710 and Insurance Services Office Public Protection Classification Program's Response Time Standard formula: $Time = 0.65 + 1.7(Distance)$ (MTAS 2021). The Insurance Services Office response travel time formula discounts speed for intersections and vehicle deceleration and acceleration, and does not include turnout time. Automatic and/or mutual aid agreements with surrounding fire departments are in place and would potentially result in additional resources that are not analyzed herein.

Table 3.10-1. Emergency Response Times

| Station No. | Travel Distance | Estimated Response Travel Time |
|-------------|-----------------|--------------------------------|
| 29 (City) | 2.4 miles | 5 minutes 55 seconds |
| 30 (City) | 3.7 miles | 6 minutes 56 seconds |
| 38 (County) | 6.2 miles | 11 minutes 19 seconds |

As shown in Table 3.10-1, all responding fire stations would be able to achieve a response time to the Project site that is within the City and County's response time standards. As such, the Project would not conflict with emergency response objectives identified in both the County and City General Plan, and impacts would be **less than significant**.

3.10.5 Cumulative Impacts

The cumulative context considered for wildfire impacts is southern San Diego County, and more specifically, the Tijuana River Valley. As previously discussed, the Project site is in a Very High FHSZ. The Project, combined with other projects in the region, would increase the level of activity and introduce potential ignition sources in the Tijuana River Valley, which may increase the potential of a wildfire and increase the number of people and structures exposed to risk of loss, injury, or death from wildfires. Individual projects would be required to comply with applicable state and local fire and building codes, which have been increasingly strengthened as a result of severe wildfires that have occurred in the last 2 decades. The fire and building codes include fire prevention and protection features that reduce the likelihood of a fire igniting in a specific project and spreading to off-site vegetated areas; these codes also protect projects from wildfires that may occur in the area through implementation of brush management and fuel management zones, ensuring adequate water supply, preparation of fire protection plans, and other measures.

As presented in Chapter 2, Table 2-11, development/projects in the area that are similar to the Project include trash and sediment management, habitat restoration, storm and wastewater treatment/conveyance, recreational

improvements, and vegetation management activities. Many of these projects are recurring or ongoing/operational. Each of these projects would be required to comply with vegetation clearance and fire safety requirements.

Other cumulatively considerable projects in the area include development of residential development such as subdivisions and condominiums. However, these projects are located in developed areas to the north and northeast of the Project site and would not alter the fire environment in the Tijuana River Valley. These residential projects would introduce additional population to the periphery of the Tijuana River Valley, and there would be potential for an increase in recreational visitors to the Tijuana River Valley Regional Park. However, improvement projects in the Regional Park (such as the Border Field State Park Interpretation, Resilience and Access Improvements Project, and the County of San Diego Tijuana River Valley Regional Park Campground and Nature Education Center) would ensure that the recreational space is adequate for a growing population. Further, vegetation management projects and vegetation management that would be required for other projects in the Tijuana River Valley would reduce the amount of flammable materials present along trails and other areas frequented by recreational visitors.

Cumulatively considerable projects would be required to comply with state and local fire and building codes, along with project-specific needs assessments and FPP requirements, which would ensure that every project approved for construction includes adequate emergency access. Roads for all projects would be required to meet minimum widths, have all-weather surface, and be capable of supporting the imposed loads of responding emergency apparatus. The Project and all cumulatively considerable projects would be subject to discretionary review by SDFD and would be required to comply with regulations related to fire safety, building construction, access, fire flow, and vegetation management. Therefore, because all projects are required to comply with these requirements, cumulative impacts related to increased wildfire hazards and emergency response and access would be **less than significant**.

3.10.6 Mitigation Measures

MM-WF-1 Pre-Construction Requirements. Vegetation management shall be conducted prior to the start of construction and throughout all phases of the Project. Adequate firebreaks consisting of vegetation removal or thinning of dead and dry vegetation at least 50 feet wide or as required by local fire agencies shall be created around all grading, staging areas, and other construction activities in areas where there is flammable, non-irrigated vegetation (special-status species and irrigated native species planted as part of the Project would be exempt). The area around the sediment processing plant staging area shall be cleared and kept clear of all flammable vegetation, invasive plant species, debris, or other potentially flammable materials, in accordance with the City of San Diego Municipal Code Section 142.0412, Brush Management, and approved by the City of San Diego Fire-Rescue Department.

The Project shall comply with the following risk reducing vegetation management guidelines:

- Temporary construction power lines may be allowed in areas that have been cleared of combustible vegetation. Width of clearance along the temporary construction power line alignment shall be consistent with local fire agency and California Public Utilities Commission General Order 95.
- Caution must be used to avoid causing erosion or ground (including slope) instability or water runoff due to vegetation removal, vegetation management, maintenance, landscaping, or irrigation.

MM-WF-2

Fire Management and Prevention Plan. Prior to the start of Project work, the California Department of Parks and Recreation (and/or designee or Responsible Agency) shall prepare and implement a Fire Management and Prevention Plan to ensure the safety of workers and the public during site preparation, operation and maintenance, and future monitoring activities for the Project. The applicant shall submit the Fire Management and Prevention Plan to the City of San Diego Fire-Rescue Department (SDFD) for review and approval prior to the commencement of Project activities. The Fire Management and Prevention Plan shall include fire prevention, training, and reporting procedures including, but not limited to:

- Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, and hot work restrictions
- All personnel visiting the Project site shall receive training on fire prevention procedures, the proper use of fire suppression equipment, and procedures to be followed in the event of a fire. Fire prevention and suppression training shall be included in the Project's Worker Environmental Awareness Program (WEAP) and discussed during morning tailboard meetings prior to the start of work
- Designation of on-site personnel to serve as fire watch during all hot work or other spark-generating activities
- Designation of an emergency services coordinator from among the full-time on-site personnel who shall perform routine patrols of the site during the fire season equipped with a portable fire extinguisher and communications equipment
- Fire containment and extinguishing equipment shall be kept on site and readily accessible during Project activities. The location and proper use of fire containment and extinguishing equipment shall be included in the WEAP
- All internal combustion engines used at the Project site shall be equipped with spark arrestors and spark arrestors shall be in good working order
- Curtailment of Project activities in the event of a fire or when fuel and weather conditions result in Red Flag Warnings and High to Extreme Fire Danger days, as determined by the National Weather Service and SDFD, with specific Project-related activities to be allowed during very high or extreme weather conditions at the discretion of SDFD. The Project would be subject to additional requirements/restrictions, as required by SDFD
- Equipment staging and parking areas shall be cleared of all flammable materials
- Emergency response and evacuation measures that would be required to be followed during emergency situations
- Smoking shall be prohibited in all vegetated areas and within 50 feet of combustible materials storage and shall be limited to paved areas or areas cleared of all vegetation
- Fires ignited on site shall be immediately reported to SDFD
- Fire rules shall be posted on the Project bulletin board at the contractor's field office and areas visible to employees

3.10.7 Level of Significance After Mitigation

Wildfire Risk

As outlined in Mitigation Measure (MM) WF-1, vegetation management requirements would be implemented at the start of and throughout all phases of construction and O&M, including clearance of flammable vegetation around all work and staging areas and the area around the sediment processing plant. Additionally, as detailed in MM-WF-2, a Fire Management and Prevention Plan outlining fire prevention procedures and training for on-site personnel would help to reduce the risk of fires. Gasoline-powered or diesel-powered machinery used during maintenance and repair activities would be equipped with standard exhaust controls and muffling devices that would also act as spark arrestors. Fire containment and extinguishing equipment would be located on site and would be accessible during Project activities. In addition, construction personnel would be trained to use fire suppression equipment and, in accordance with MM-AQ-1, would not be permitted to idle vehicles on the Project site when not in use.

Construction personnel would also be notified of work restrictions during red flag warnings or high to extreme fire danger days to reduce the chance of creating a spark that could result in a wildfire. Further, the Project would be subject to additional requirements, as required by SDFD, such as limiting or ceasing construction work during high-wind weather events. The Project would be required to comply with City, state, and SDFD requirements for construction activities in hazardous fire areas, including fire safety practices, to reduce the possibility of fires during construction activities. Additionally, the vegetation management activities outlined in MM-WF-1 would reduce the risk of wildfire ignition and spread on the Project site and to off-site fuel beds. With implementation of MM-AQ-1, MM-WF-1, and approval of Project plans by SDFD, construction and O&M activities are not anticipated to exacerbate wildfire risk such that Project workers would be exposed to the uncontrolled spread of a wildfire or pollutant concentrations from a wildfire. Therefore, impacts would be less than significant with mitigation incorporated.

Regarding Impact 3, fire prevention measures and best practices (MM-AQ-1, MM-WF-1 and MM-WF-2) that would be implemented throughout the Project would help to reduce the likelihood for sparks or ignition of plant material. Additionally, the plant palette selected for the site would consist of native species and would be approved by the City, County, Wildlife Agencies, and SDFD prior to implementation. Further, the coastal sage scrub plant community is native to Southern California and most of the species are adapted to the region's fire environment (Conlisk et al. 2016). Temporary irrigation would be installed to ensure newly planted vegetation would retain moisture and establish successfully, precluding the likelihood for highly flammable invasive species to establish. Additionally, the site would be monitored to help establish the native plant habitats.

Monitoring of the site would occur over a 5-year period for each restoration phase that includes permanent vegetation. Maintenance activities would be conducted including weed control, irrigation regime, soil amending, drainage alterations, and/or reseeding any underperforming areas. Such activities would ensure the success of the restored native landscape, and highly flammable, non-native weed species, including but not limited to mustard, non-native annual grasses, thistles, filaree, Italian ryegrasses, clover, pampas grass, tree tobacco, castor bean and cheeseweed, would be controlled before seed-set (other species that appear may be added to this list if deemed necessary by the Project biologist). Proposed conditions would be similar to the surrounding natural landscape, which consists of fire-adapted species, and ongoing monitoring and maintenance of the site would control non-native species. As a result, with implementation of fire prevention measures (MM-AQ-1, MM-WF-1, and MM-WF-2) during Project construction, O&M, and monitoring, proposed revegetation of the Project site would not exacerbate wildfire risk, and impacts would be less than significant with mitigation incorporated.

Therefore, with implementation with MM-WF-1, MM-WF-2, and MM-AQ-1, compliance with state and local best practices for fire prevention, and with approval of the restoration plan by reviewing agencies, anticipated exacerbation of wildfire risk during site preparation and O&M of the Project (i.e., Impact 2) would be **less than significant**.

Infrastructure Contribution to Increased Wildfire Risk

With implementation of **MM-WF-1**, the area around the power line would be cleared of combustible vegetation in accordance with identified pre-construction vegetation clearance protocols and activities. Proposed irrigation and electrical lines would be temporary features and would be removed following the completion of Project activities (except for poles, which would be abandoned in place). In addition, the improved driveway is necessary for Project development but would also facilitate improved access by fire agencies. Additionally, as these features would be installed as part of Project construction and O&M, MM-WF-2 would ensure that fire prevention procedures are in place and all construction and maintenance personnel on site are trained in fire prevention best practices. With implementation of appropriate fire prevention measures, access, and vegetation management activities as required by the SDFD, City code, and state requirements, and with implementation of MM-WF-1 and MM-WF-2, the installation and maintenance of Project roads, service utilities, drainage and water quality improvements, and other associated infrastructure would not exacerbate wildfire risks.

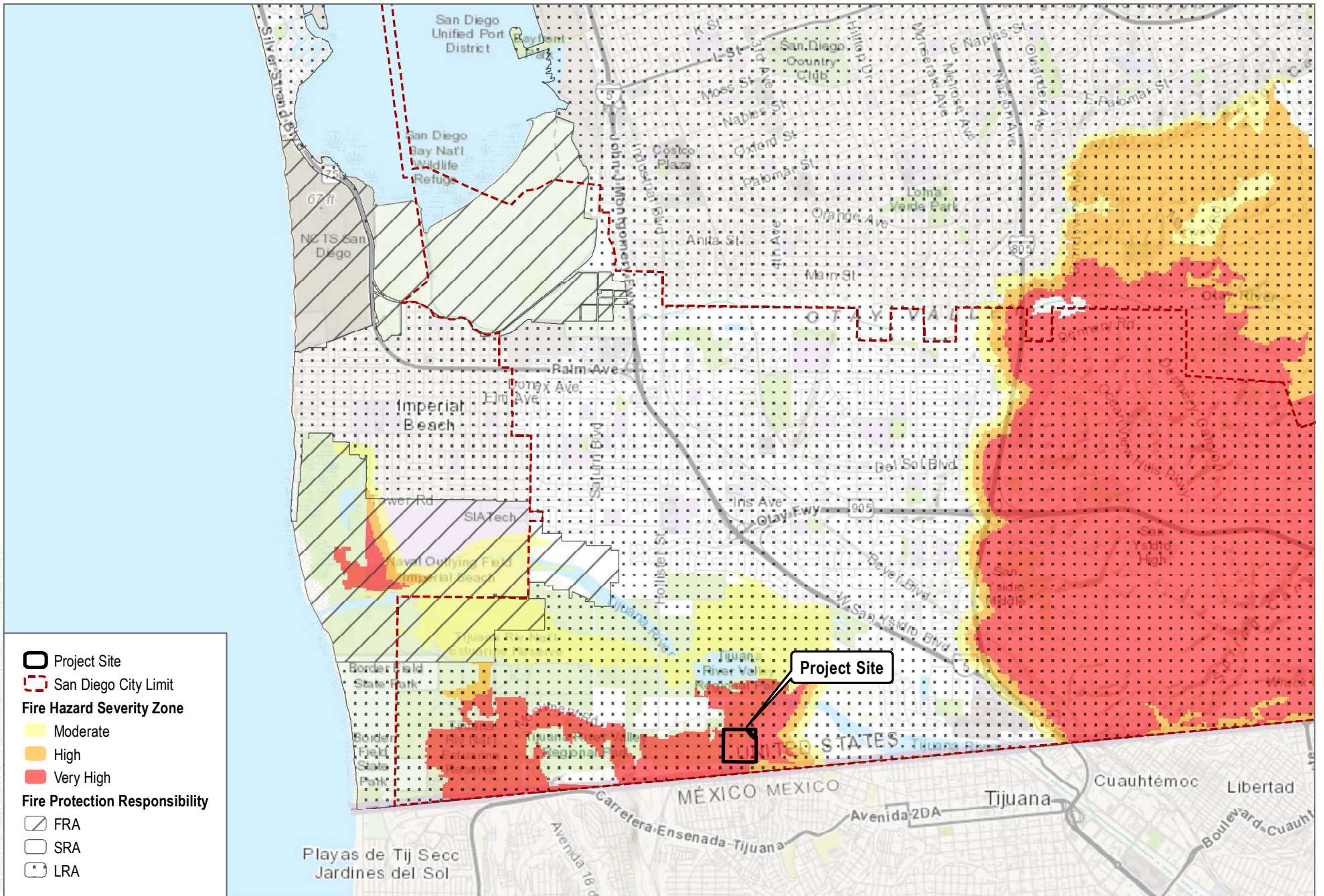
Given that the activities involved with installation or maintenance of associated infrastructure would require ground disturbance and the use of heavy machinery associated with trenching, grading, site work, and other construction and maintenance activities, the installation of related infrastructure could potentially result in temporary or ongoing impacts to the environment. On the Project site, the installation of a connection to the existing water line would impact established vegetation on flat “floor” area of APN 664-011-0500. The impact area overlies the Phase 1 disturbance area and would be reseeded following the completion of Phase 6 grading activities. Extension of an existing electrical distribution line would be carried out in accordance with applicable guidelines and regulations and most of the alignment would occur over previously disturbed areas supporting limited vegetation, which would be cleared in accordance with MM-WF-1. The installation and maintenance of roads, service utilities, drainage and water quality improvements, and vegetation management activities are part of the Project analyzed herein. As such, any potential temporary or ongoing environmental impacts related to these components of the Project have been accounted for and analyzed in this EIR as part of the impact assessment conducted for the entirety of the Project. Additionally, the Project would be required to comply with all regulatory requirements and mitigation measures outlined within this EIR for the purposes of mitigating impacts to the environment associated with trenching, grading, site work, and the use of heavy machinery. No adverse physical effects beyond those already disclosed in this EIR would occur as a result of implementation of the Project’s associated infrastructure.

Therefore, with implementation of MM-WF-1, MM-WF-2 and appropriate fire prevention, access, and vegetation management activities as required by the SDFD, City code, and state requirements, the installation and maintenance of associated infrastructure would not exacerbate wildfire risk or result in impacts to the environment beyond those already disclosed in this EIR, and Impact 3 would be **less than significant**.

3.10.8 References

- CAL FIRE (California Department of Forestry and Fire Protection). 2009a. "Fire Hazard Severity Zones Maps." Accessed July 28, 2020. <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>.
- CAL FIRE. 2009b. "Very High Fire Hazard Severity Zones in Local Responsibility Areas (LRA) as recommended by CAL FIRE: City of San Diego." June 11, 2009. https://osfm.fire.ca.gov/media/5969/san_diego.pdf.
- CAL FIRE. 2016. "Fire Hazard Severity Zone Maps: State Responsibility Areas (SRAs)." <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>.
- CAL FIRE. 2018. *2018 Strategic Fire Plan for California*. August 22, 2018. https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf.
- CAL FIRE. 2019. "Fire Perimeters through 2020." Accessed September 13, 2021. <https://frap.fire.ca.gov/mapping/> (see FRAP MAPS).
- CDOC (California Department of Conservation). 1995. "Landslide Hazards in the Southern Part of the San Diego Metropolitan Area." ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_95-03/OFR_95-03_Text.pdf.
- City of San Diego. 2007. *Draft General Plan Final Program Environmental Impact Report*. September 2007.
- City of San Diego. 2008a. *General Plan EIR*. <https://www.sandiego.gov/planning/genplan/documents/peir>
- City of San Diego. 2008b. "Seismic Safety Study Geologic Hazards and Faults Map." April 3, 2008.
- City of San Diego. 2009. "Official Very High Fire Hazard Severity Zone Map. Grid Tile: 2." February 24, 2009. Accessed March 29, 2019. <https://www.sandiego.gov/fire/services/brush/severityzones>.
- City of San Diego. 2018. "Public Facilities, Services & Safety Element." In *City of San Diego General Plan*. June 2018. https://www.sandiego.gov/sites/default/files/pf_2018-_final.pdf.
- City of San Diego. 2019. "FY 2017 Station Responses." <https://www.sandiego.gov/sites/default/files/fy17-station-responses.pdf>.
- City of San Diego. 2021. "City of San Diego Fire Station." <https://webmaps.sandiego.gov/portal/apps/webappviewer/index.html?id=b43febf5dcc64089afd57e2ac828cc4f&extent=-13064610.8098%2C3847523.8421%2C-12996046.7954%2C3901106.199%2C102100>.
- Conlisk, E., R. Swab, A. Martínez-Berdeja, and M.P. Daugherty. 2016. *Post Fire Recovery in Coastal Sage Scrub: Seed Rain and Community Trajectory*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5029939/>.
- County of San Diego. 2011. "Safety Element." In *San Diego County General Plan*. August 2011. <https://www.sandiegocounty.gov/pds/generalplan.html>.
- County of San Diego. 2017. *Multi-Jurisdictional Hazard Mitigation Plan*, Section 5.16, City of San Diego. Office of Emergency Services. https://www.sandiegocounty.gov/oes/emergency_management/oes_jl_mitplan.html.

- County of San Diego 2018. *Unified San Diego County Emergency Services Organization. Emergency Operations Plan*. September 2018. Accessed August 220. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2018/2018-EOP-Complete-Plan.pdf.
- County of San Diego. 2019. "Ready San Diego Online Wildfire Hazard Map." Accessed March 29, 2019. <http://www.readysandiego.org/wildfire-hazard-map/>.
- County of San Diego. 2021. "San Diego County Emergency Operations Plan." Accessed September 12, 2021. https://www.sandiegocounty.gov/content/sdc/oes/emergency_management/oes_jl_oparea.html.
- DOI/USDA (Department of the Interior/U.S. Department of Agriculture). 2000. *Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000*. <https://www.forestsandrangelands.gov/documents/resources/reports/2001/8-20-en.pdf>.
- International Code Council. 2017. *2018 International Fire Code*. August 31, 2017. <https://codes.iccsafe.org/content/IFC2018P4>.
- KUSI. 2019. "Strong Santa Ana winds raise wildfire hazards in San Diego County." October 30, 2019. <https://www.kusi.com/strong-santa-ana-winds-raise-wildfire-hazards-in-san-diego-county/>.
- MTAS (Municipal Technical Advisory Service). 2021. *Institute for Public Service. Estimating Travel Time of Fire Apparatus*. <https://www.mtas.tennessee.edu/reference/estimating-travel-time-fire-apparatus>.
- National Wildfire Coordinating Group. 2009. *Guidance for Implementation of Federal Wildland Fire Management Policy*. February 13, 2009. https://www.nifc.gov/policies/policies_documents/GIFWFMP.pdf.
- TRNERR (Tijuana River National Estuarine Research Reserve). 2014. *Tijuana River Valley Existing Conditions Report*. http://trnerr.org/wp-content/uploads/2013/04/trv_existing_conditions.pdf.
- Weather Spark. 2020. "Average Weather in San Diego." Accessed July 28, 2020. <https://weatherspark.com/y/1816/Average-Weather-in-San-Diego-California-United-States-Year-Round>.

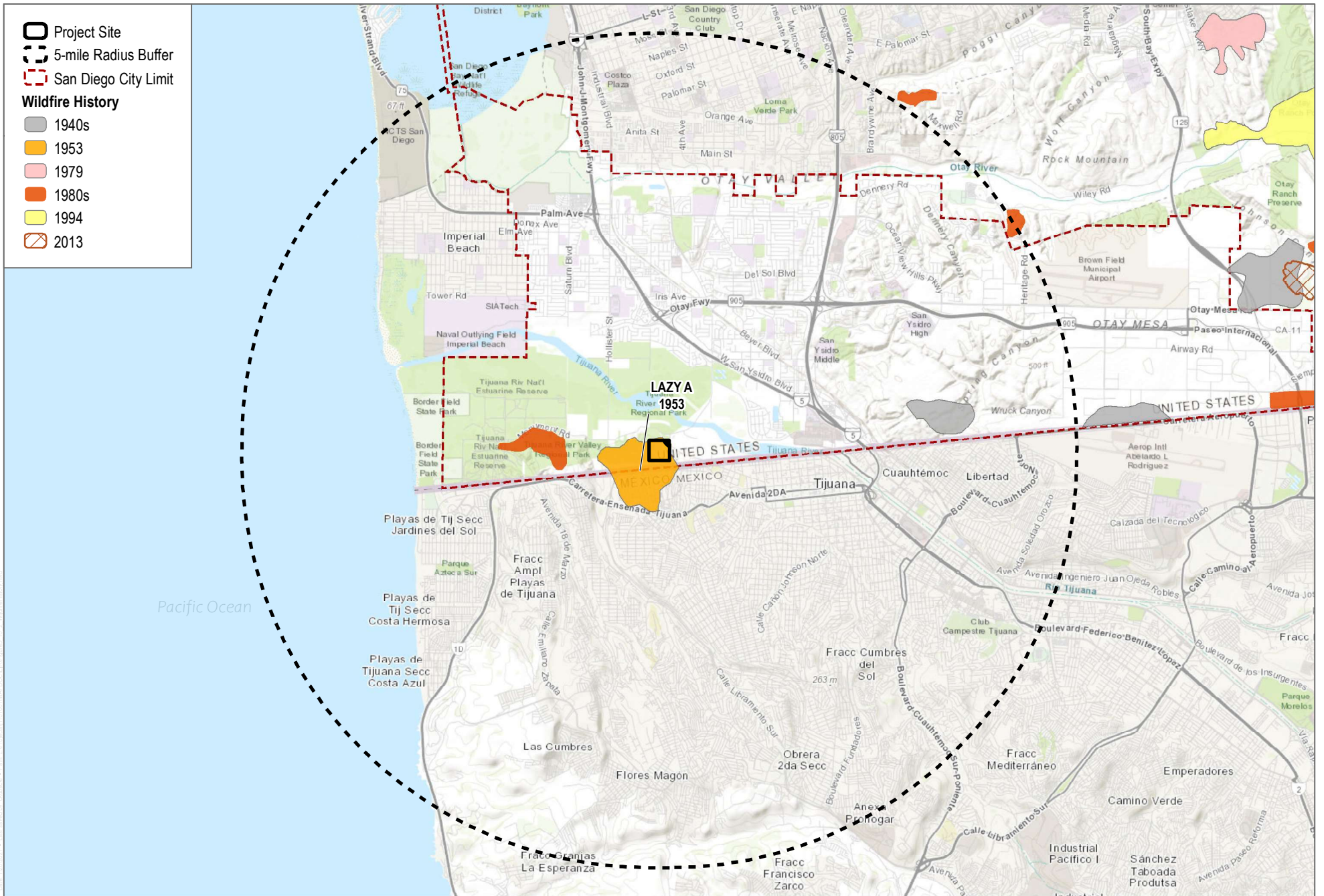


SOURCE: Esri, HERE, Garmin; CAL FIRE 2007, 2020; SanGIS 2009

FIGURE 3.10-1

Fire Hazard Severity Zones

INTENTIONALLY LEFT BLANK



SOURCE: Esri, HERE, Garmin; CAL FIRE 2020
 (Wildfire history in Mexico is not represented.)



FIGURE 3.10-2
Wildfire History

INTENTIONALLY LEFT BLANK

4 Effects Found Not to Be Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant, and the reasons for the conclusion of non-significance are discussed below.

4.1 Agriculture and Forestry Resources

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City of San Diego (City), and County of San Diego (County) significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to agriculture and forestry resources are based on CEQA Appendix G guidelines, County of San Diego Guidelines for Determining Significance (County of San Diego 2007), and City of San Diego significance determination thresholds (City of San Diego 2016). According to the most stringent County and City guidelines, a significant impact related to agriculture and forestry resources would occur if the Project would:

1. Convert a substantial amount of Prime Farmland, Unique Farmland or Farmland of statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use (City of San Diego).
2. Conflict with existing zoning for agricultural use, or Williamson Act contract (City of San Diego).
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).
4. Result in the loss of forest land or conversion of forest land to non-forest use.
5. Propose a non-agricultural land use within one-quarter mile of an active agricultural operation or land under a Williamson Act Contract (Contract) and as a result of the Project, land use conflicts between the agricultural operation or Contract land and the proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use (County of San Diego).
6. Propose a school, church, day care or other use that involves a concentration of people at certain times within one mile of an agricultural operation or land under Contract and as a result of the Project, land use conflicts between the agricultural operation or Contract land and the proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use (County of San Diego).
7. Involve other changes to the existing environment, which due to their location or nature, could result in the conversion of off-site agricultural resources to a non-agricultural use or could adversely impact the viability of agriculture on land under a Williamson Act Contract (County of San Diego).

Impact Analysis

1. ***Would the Project convert a substantial amount of Prime Farmland, Unique Farmland or Farmland of statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

The Project site and proposed haul routes do not contain agricultural resources and are not mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. According to the Department of Conservation California Important Farmland Finder, the Project site is mapped as “Other Land.” Other Land includes lands not included in any other farmlands mapping category and may include rural development; brush, timber, wetland and riparian areas not suitable for livestock grazing; and strip mines and borrow pits not suitable for livestock grazing (CDOC 2020). Further, vacant and nonagricultural land surrounded by urban development and greater than 40 acres is mapped as Other Land. Therefore, the Project would not convert mapped farmland to non-agricultural use and **no impacts** would occur.

2. ***Would the Project conflict with existing zoning for agricultural use, or Williamson Act contract?***

While located on lands owned by the County of San Diego Parks and Recreation Department, the Project site has not been zoned by the County. The Project site is mapped and zoned by the City, which has applied the AR-1-1 zone (City of San Diego 2020a). The AR-1-1 (Agricultural-Residential, minimum 10 acre lots) is intended to “accommodate a wide range of agricultural uses while also permitting the development of single dwelling unit homes at a very low density” (City of San Diego Municipal Code Section 131.0303). In addition, the AR-1-1 zone is applied to lands that are in agricultural use or that are undeveloped and not appropriate for more intense zoning. Residential development opportunities are permitted with a Planned Development Permit at various densities that will preserve land for open space or future development at urban intensities when and where appropriate (City of San Diego Municipal Code Section 131.0303).

Despite the agricultural zoning applied by the City, the Project site does not currently support agricultural uses. Further, historical aerial photographs of pre-quarry operation conditions (i.e., photographs from 1966 and 1970) included in the Project’s Phase I Environmental Site Assessment (Appendix H) do not indicate agricultural uses or development on the Project site. Rather, the pre-quarry operation aerial photographs depict undeveloped natural slopes that extend from the existing centrally located ridge to the eastern extents of the site. Also, pursuant to Table 131-03B, Use Regulations Table for Agricultural Zones, of the City’s Municipal Code, Open Space – Natural Resource Preservation is a permitted use in the AR-1-1 zone. While reclamation and restoration activities are not included as use categories in Table 131-03B, the Project does not propose any interim uses during the up-to-15-year reclamation and restoration timeframe and does not propose to introduce any permanent structures or other permanent improvements established by the development regulations for agricultural zones.

The California Department of Conservation has also mapped the site and surrounding lands to the west and north in the Tijuana River Valley as Other Land. The Other Land classification is applied to strip mines and borrow pits not suitable for livestock grazing. Also, vacant and nonagricultural land surrounded by urban development and greater than 40 acres is often mapped as Other Land. Permanent open space is the identified end use for the Project site and no agricultural uses currently (or historically) occurred on site. In addition, the Project site has not been developed for agricultural production and has not been placed into a Williamson Act contract by the County. Therefore, reclamation and restoration of the Project site would not conflict with existing agricultural zoning or a Williamson Act contract. Impacts would be **less than significant**.

3. ***Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?***

4. ***Would the Project result in the loss of forest land or conversion of forest land to non-forest use?***

The Project site is zoned by the City for Agricultural-Residential use (i.e., AR-1-1). The site does not support forest or timberland and does not encompass a Timberland Production area. On-site vegetation communities primarily consist of coastal sage scrub and disturbed lands/habitat. Because the Project site is not zoned for forest or timberland and would not result in the loss of forest land (or the conversion of forest land), **no impact** to these resources would occur.

5. ***Does the Project propose a non-agricultural land use within one-quarter mile of an active agricultural operation or land under a Williamson Act Contract (Contract) and as a result of the Project, land use conflicts between the agricultural operation or Contract land and the proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use?***

The nearest lands in active agricultural production are located over 0.5 miles northeast of the Project site. The Project site and these fields are separated by the Tijuana River and two water treatment facilities. Further, the Project site is not within 0.25 miles of land under a Williamson Act contract and construction activities associated with site reclamation and restoration and landform creation would not create land use conflicts between the nearest agricultural operations and/or Williamson Act contract lands. As such, the Project would have no direct or cumulative impacts to agriculture and forestry resources. **No impact** would occur.

6. ***Does the Project propose a school, church, day care or other use that involves a concentration of people at certain times within one mile of an agricultural operation or land under Contract and as a result of the Project, land use conflicts between the agricultural operation or Contract land and the proposed Project would likely occur and could result in conversion of agricultural resources to a non-agricultural use?***

The Project does not propose a school, church, or day care. During construction, a small, seasonal workforce would be active on site; however, the Project would not create land use conflicts with the nearest lands in active agricultural production (located over 0.5 miles northeast of the Project site). The Project would include typical earthmoving and landform creation construction activities and the Project site is separated from the nearest lands in active agricultural production by the Tijuana River and two active water treatment facilities. Therefore, no land use conflicts between agricultural operations and the Project would occur. **No impact** would occur.

7. ***Does the Project involve other changes to the existing environment, which due to their location or nature, could result in the conversion of off-site agricultural resources to a non-agricultural use or could adversely impact the viability of agriculture on land under a Williamson Act Contract?***

Reclamation and restoration activities, and landform re-creation, would not convert off-site in-valley agricultural resources and/or operations to non-agricultural use. Further, seasonal activities on the Project site and at sediment extraction source locations managed by the California Department of Parks and Recreation, City, County, and other land managers would not adversely impact the viability of existing agricultural operations on Williamson Act contract lands. Sediment extraction occurs seasonally in the

valley under existing conditions and the creation of terrain and eventual restoration of the Project site would not impact the viability of existing in-valley agriculture. Impacts would be **less than significant**.

4.2 Energy

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to energy are based on City of San Diego significance determination thresholds. According to the most stringent CEQA Appendix G and City guidelines, a significant impact related to energy would occur if the Project would:

1. Result in the use of excessive amounts of fuel or energy (e.g., natural gas) (City of San Diego).
2. Result in the use of excessive amounts of power (City of San Diego).
3. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impacts Analysis

1. *Would the Project result in the use of excessive amounts of fuel or energy (e.g., natural gas)?*

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below. Any minor amounts of natural gas that may be consumed because of Project construction would be temporary and negligible and would not have an adverse effect; therefore, impacts would be **less than significant**.

Petroleum would be consumed throughout construction of the Project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and vehicle miles traveled (VMT) associated with the transportation of heavy equipment and vehicle use on site and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities, as well as haul trucks involved in moving dirt around the Project site, would rely on diesel fuel. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles.

The Project would be required to comply with the California Air Resources Board's Airborne Toxics Control Measure, which restricts heavy duty diesel vehicle idling time to 5 minutes. In addition, compared to the petroleum that would be consumed in California over the course of the Project's construction phase based on the 2019 California daily petroleum consumption estimate of approximately 78.6 million gallons per day (EIA 2021), the Project's petroleum use would be low. Therefore, because petroleum use during construction would be temporary and minimal and would not be wasteful or inefficient, impacts would be **less than significant**.

2. *Would the Project result in the use of excessive amounts of power?*

Temporary electric power for as-necessary lighting and electronic equipment (such as computers inside the operations trailer and heating, ventilation, and air conditioning) would be provided by San Diego Gas and Electric. While occurring over a 10- to 15-year timeframe, the amount of electricity used during construction would be minimal. In addition to electrically powered hand tools, typical demand would stem from the potential use of a construction trailer by managerial staff during the hours of construction activities. Most of the energy used during construction would be from petroleum. The electricity used for construction activities would be seasonal temporary and minimal; therefore, impacts would be **less than significant**.

3. *Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The Project would follow applicable energy standards and regulations during the construction phase. The Project would be constructed in accordance with all existing applicable energy standards and regulations. For the reasons stated, the Project would not conflict with local plans for renewable energy or energy efficiency or existing energy standards or regulations, and impacts would be **less than significant**.

4.3 Greenhouse Gas Emissions

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to greenhouse gas (GHG) emissions are based on City guidelines. According to the most stringent City guidelines, a significant impact related to GHG emissions would occur if the Project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (City of San Diego).
2. Conflict with the City's Climate Action Plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (City of San Diego).

Impact Analysis

1. ***Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (City of San Diego).***
2. ***Would the Project conflict with the City's Climate Action Plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (City of San Diego).***

The analysis presented below is applicable to both GHG significance criteria of the City utilized in this document.

The City adopted the final Climate Action Plan (CAP) in 2015, which was followed by the CAP Consistency Checklist Questions on July 12, 2016, which was updated in June 2017. The CAP Consistency Checklist includes the following three steps:

1. Step 1 consists of an evaluation to determine the project's consistency with the existing General Plan, Community Plan, and zoning designations for the site.
2. Step 2 evaluates how the project will implement the required specific measures delineated in the checklist under Step 2.¹
3. Step 3 evaluates the project's consistency with the CAP's transportation strategy.

Step 1 – Land Use Consistency

Projects that do not require a change in land use or zoning designation are generally considered to be consistent with Step 1 because the CAP's emissions were based on build out assumptions of the existing land uses at the time of the CAP's development. If a project would require a change in land use designation or zoning, the project may still be consistent with the CAP if the project is less GHG emissions intensive than assumed in the CAP.

The Project site is owned by the County but within the City's Tijuana River Valley Community Plan area. The site consists of Assessor's Parcel Nos. (APNs) 664-011-50-00 and 664-011-04-00, which total approximately 40 acres. The area of disturbance associated with the Project (i.e., Project Impact Area) is approximately 20 acres, with the majority encompassing APN 664-011-05-00. The site is situated in the southeast corner of Tijuana River Valley Regional Park. The site is bordered to the north and west by Monument Road and Old Dairy Mart Road and is bordered to the south by the U.S./Mexico international border.

Under the City of San Diego General Plan, the Project site is designated as Open Space Parks and is listed as Proposition A land. Proposition A land is characterized as "very low-density, residential, open space, natural resource-based park, and agricultural uses" (City of San Diego 2015a). Under the Tijuana River Valley Community Plan, the site is designated as Multiple Species Conservation Open Space, which prohibits any commercial recreation or urban residential land use designations (City of San Diego 1999). The Project site is zoned as AR-1-1, or Agricultural – Residential zones. Agricultural – Residential zones allow the development of single dwelling unit homes at a very low density (minimum 10-acre lots). The Project site's land use designation and zoning are not expected to change because of the Project. As such, the Project is consistent with the existing General Plan and Community Plan land use and zoning designations, does not require a change in land use or zoning designation, and is consistent with Step 1, Land Use Consistency Option A, of the Checklist.

Step 2 – Climate Action Plan Strategies Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable strategies and actions of the CAP. Step 2 only applies to development projects that involve permits that would require a certificate of occupancy from the Building Official or projects comprised of one and two family dwellings or townhouses as defined in the California Residential Code and their accessory structures (City of San Diego 2015b). As shown in the CAP Checklist (see Appendix F, Greenhouse Gas Emissions Analysis, of this EIR), most of the checklist items are not applicable to the Project. The Project would consist of the beneficial reuse of excess sediment managed by in-valley land managers and reclamation and restoration of the quarry site. The Project would not require a

¹ A complete CAP Consistency Checklist illustrating compliance with Step 2 is included as Attachment A to the Greenhouse Gas Emissions Analysis (Appendix F).

certificate of occupancy. In accordance with Step 2 of the CAP Checklist, all other development projects that would not require a certificate of occupancy from the Building Official shall implement best management practices for construction activities as set forth in the Greenbook (for public projects), which consists of standard public works specifications. Specifically, the following sections of the Greenbook are applicable to the Project: Section 117 – Bedding and Backfill Materials; Section 300 – Earthwork; Section 301 – Subgrade Preparation, Treated Materials, Placement of Base Materials; Section 800 – Materials; and Section 801 – Installation.

Step 3 – Project Climate Action Plan Conformance Evaluation

Consistent with City requirements, the third step of the CAP consistency review only applies if Step 1 is answered in the affirmative (i.e., if the project would result in a land use inconsistency). As detailed above in the Step 1 assessment, the Project would be consistent with existing General Plan and Community Plan land use and zoning designations and would not require a change in land use or zoning designation. Therefore, consideration of Step 3 is not required or necessary for the Project.

Based on the assessment above and as detailed in Appendix F, GHG emissions generated by Project activities would result in **less-than-significant impacts** in the context of applicable City significance thresholds.

4.4 Land Use and Planning

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to land use and planning are based on City Guidelines. According to the most stringent City guidelines, a significant impact related to land use and planning would occur if the Project would:

1. Physically divide an established community.
2. Result in a conflict with the environmental goals, objectives and recommendations of the community plan in which it is located.
3. Require a deviation or variance, and the deviation or variance would in turn result in a physical impact on the environment.
4. Conflict with the provisions of the City's Multiple Species Conservation Program Subarea Plan or other approved local, regional or state habitat conservation plan.
5. Result in land uses which are not compatible with an adopted airport Comprehensive Land Use Plan (CLUP).

Impact Analysis

1. *Would the Project physically divide an established community?*

The Project is located within the Tijuana River Valley in the southwestern portion of the County. The Project site primarily comprises a ridge, eroded hillside, and relatively flat terrain created by previous sand and gravel operations that occurred from approximately 1982 to 2002. The site also includes flatter lands to the west covered with disturbed vegetation communities and traversed by areas of visible areas of disturbance (e.g., dirt access roads). There are no homes or inhabited areas within the boundaries of the Project site. The closest development includes the City’s South Bay Water Reclamation Plant to the east, the Tijuana River Valley Regional Park Ranger Station to the north, and an animal feed business, equestrian uses, and rural residences to the northwest. Residential and commercial uses in the City of Tijuana, Mexico, are located to the south (i.e., south of the U.S./Mexico border) and within 1,000 feet of the Project site. The City’s San Ysidro neighborhood is located approximately 1 mile east of the Project site.

Reclamation and restoration activities over an approximate 15-year timeframe would not divide an established community. The Project site is located within the southeastern corner of the City’s lightly developed Tijuana River Valley planning area and is generally surrounded by undeveloped lands/hills and/or water and border facilities. While construction activities, including haul truck trips associated with sediment management from in-valley source locations to the Project site, would occur on City-maintained roads that currently receive the majority of use by rural residential uses, seasonal Project-related traffic would not physically divide an established community. Therefore, the Project would result in **less-than-significant impacts** regarding physical division of an established community.

2. *Would the Project result in a conflict with the environmental goals, objectives, and recommendations of the community plan in which it is located?*

As detailed in Table 4-1, the Project would be consistent with applicable goals, objectives, and recommendations of the Tijuana River Valley community plan and local coastal program (City of San Diego 1999). As such, impacts would be **less than significant**.

Table 4-1. Tijuana River Valley Local Coastal Program Land Use Plan Consistency Analysis

| Tijuana River Valley Local Coastal Program Land Use Plan | |
|---|--|
| Policy | Project Consistency with Policy |
| Overall Goal 3: To protect, preserve, and restore natural coastal resources. | The Project would be consistent with this policy. The Project would include a phased grading and revegetation approach to achieve landform reclamation and creation objectives and habitat restoration. This process would occur over a 10- to 15-year timeframe. As final elevations are achieved, new terrain would be revegetated with appropriate upland habitat to be included as open space in perpetuity within Tijuana River Valley Regional Park. The Project would also reduce potential for downstream erosion, runoff, and water quality impairment through disposal of excess sediments, regrading, and revegetation of disturbed slopes on the Project site, which would |

Table 4-1. Tijuana River Valley Local Coastal Program Land Use Plan Consistency Analysis

| Tijuana River Valley Local Coastal Program Land Use Plan | |
|---|---|
| Policy | Project Consistency with Policy |
| | further preserve and conserve unique San Diego open spaces. Additionally, temporary irrigation systems and/or water trucks would be used to maintain revegetated areas for at least a 2-year period following application of plant material. |
| MSC Open Space Goal 1: Restore the Tijuana River Valley to a broad natural floodplain containing riparian and wetland habitats, bounded by high mesas and deep canyons with chaparral, sage scrub, and grasslands. | The Project would be consistent with this policy. See Overall Goal 3. |
| MSC Open Space Goal 2: Intermix the natural habitat with compatible agricultural, recreational and water quality improvement activities, all functioning in concert to maintain and enhance natural ecosystems and the local quality of life and environment. | The Project would be consistent with this policy. See Overall Goal 3. |
| MSC Open Space Goal 5: Limit disturbance of natural open space to horseback riding, mountain biking and hiking trails and passive recreational uses such as photography, bird watching and natural study that are consistent with preservation of natural resources. | The Project would be consistent with this policy. No direct disturbance to trails and passive recreation would occur during phased grading and restoration activities. While grading and restoration activities would be visible from a limited number of trails in the regional park, opportunities for passive recreation throughout the park would remain available and plentiful. |

3. *Would the Project require a deviation or variance, and the deviation or variance would in turn result in a physical impact on the environment?*

A deviation or variance from City development standards is not proposed. Further, a deviation and/or variance is not required on site (zoned AR-1-1 by the City) because the Project does not propose traditional development on the Project site. Rather, the Project would entail landform reclamation, creation, and restoration on a vacant, approximately 20-acre site that was partially used as a sand and gravel quarry from (approximately) 1982 to 2002. While proposed development of the site would result in physical effects on the existing environment, such effects would not be the result of necessary or requested deviations or variances from City development standards. As such, impacts are **less than significant**.

4. *Would the Project conflict with the provisions of the City’s Multiple Species Conservation Program Subarea Plan or other approved local, regional or state habitat conservation plan?*

Potential impacts and/or conflicts with the City’s Multiple Species Conservation Program Subarea Plan are addressed fully in Section 3.3, Biological Resources, of this EIR.

5. *Would the Project result in land uses which are not compatible with an adopted airport Comprehensive Land Use Plan (CLUP)?*

The Project site is not within an adopted airport Comprehensive Land Use Plan. The nearest public airport, Brown Field Municipal Airport, is located approximately 5 miles northeast of the Project site. Further, the Project entails landform reclamation, creation, and restoration on a vacant, approximately 20-acre site that was partially used as a sand and gravel quarry from (approximately) 1982 to 2002. Accordingly, Project construction and long-term habitat protection, restoration, and open space would not present incompatibility issues with airport operations. As such, **no impact** would occur.

4.5 Population and Housing

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts are based on City significance determination thresholds. According to the most stringent City guidelines, a significant impact related to population and housing would occur if the Project would:

1. Induce substantial population growth in an area, (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the community plan).
2. Substantially alter the planned location, distribution, density, or growth rate of the population of an area.
3. Include extensions of roads or other infrastructure not assumed in the community plan or adopted Capital Improvements Project list, when such infrastructure exceeds the needs of the Project and could accommodate future developments.

Impact Analysis

1. *Would the Project induce substantial population growth in an area, (for example, by proposing new homes and commercial or industrial businesses beyond the land use density/intensity envisioned in the community plan)?*

The Project does not include a residential or recreational component that would cause permanent or temporary population increases. Therefore, the Project would not result in a direct impact to population and housing, including substantial population growth, in the Tijuana River Valley area. The Project would require a relatively small workforce that would commute daily into the area and return home at the end of the work day.

Because of the proximity of locally available workers in San Diego County and because ongoing construction/maintenance activities would not occur continuously throughout the year, workers are not expected to relocate to the area with their families. Once disposition and grading phases associated with the Project are completed, the property would be used solely for the purposes of habitat protection, restoration, and open space (in accordance with the terms of the Grant Deed and transfer of property from

the City to the County). While the property is located within the boundaries of the Tijuana River Valley Regional Park and was granted to the County for inclusion into the regional park, no County workers would be directly employed on the Project site.

Therefore, the Project would not induce substantial population growth and impacts would be **less than significant**.

2. *Would the Project substantially alter the planned location, distribution, density, or growth rate of the population of an area?*

The Project entails landform reclamation, restoration, and creation via beneficial reuse of excess sediment managed by in-valley land managers. While a small workforce would be required on site during seasonal construction activities, a long-term increase in the permanent population of the area is not anticipated. Once construction activities (i.e., sediment hauling, placement, landform creation, and restoration) are complete, the Project site would be used solely for the purposes of habitat protection, restoration, and open space (in accordance with the terms of the Grant Deed and transfer of property from the City to the County). Therefore, the Project would not substantially alter the planned location, distribution, density, or growth rate of the population of the area and impacts would be **less than significant**.

3. *Would the Project include extensions of roads or other infrastructure not assumed in the community plan or adopted Capital Improvements Project list, when such infrastructure exceeds the needs of the Project and could accommodate future developments?*

The Project requires improvements to the existing dirt driveway to the site off Monument Road and interior access roads to accommodate heavy haul trucks. In addition, extensions of existing water and electrical lines are needed for planned restoration of the site and to power the proposed operations trailer. At the end of Project construction, the improved driveway and access road would be removed, as would the extended water and electrical lines. As such, the proposed improvements and extensions needed by the Project would not accommodate any future development in the area and would solely support the Project. Impacts would be **less than significant**.

4.6 Public Services

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts are based on City guidelines. According to the most stringent City guidelines, a significant impact related to public services would occur if the Project would:

1. Have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Police protection; Parks or other recreational facilities; Fire/Life Safety protection; Libraries; Schools.

Impact Analysis

1. ***Would the Project have an effect upon, or result in a need for new or altered governmental services in any of the following areas: Police protection; Parks or other recreational facilities; Fire/Life Safety protection; Libraries; Schools?***

Police

It is not expected that construction workers would relocate to the area with their families during the temporary and seasonal construction period of the Project. Therefore, implementation of the Project is not expected to induce substantial population growth in the area. The Project does not propose any new buildings or structures that would require additional demands for police services.

As the Project is not expected to increase the demand for police protection and would not result in any increase to emergency response times, no adverse impacts to police protection services or facilities are anticipated, and impacts are determined to be **less than significant**.

Parks

The Project would not increase the permanent population of the local area. The temporary increase of workers in the area is not expected to increase the use of existing Tijuana River Valley Regional Park facilities. Implementation of the Project would not result in the need for new or expanded park facilities, and therefore impacts would be **less than significant**.

Fire

Construction and operation of the Project is not anticipated to generate a need for new or expanded fire protection services or facilities. The Project does not propose any new residences, buildings, structures, or facilities that would require additional demands for fire protection services. Construction workers are not anticipated to relocate to the area with their families during the temporary and seasonal construction period of the Project, and long-term operational employment because of the Project is not proposed. Therefore, implementation of the Project is not expected to induce substantial population growth in the area.

Considering the Project objectives, implementation of the Project is not expected to increase the demand for fire protection and would not result in any increase to emergency response times. Therefore, no adverse impacts to fire protection services or facilities are anticipated, and impacts are determined to be **less than significant**.

Other Public Facilities

The increase in temporary workers to the area during construction is not expected to cause a direct increase in demand for other public services or facilities, including libraries and hospitals. Considering the Project proposes to restore an abandoned quarry through the reuse of excess sediment deposited in flood control facilities and natural habitats in the Tijuana River Valley, no new public libraries or hospitals would need to be constructed that might result in physical environmental impacts as a result of Project activities. Implementation of the Project would not directly cause an increase in residential population or a substantial increase in workforce population resulting in the need for new or expanded public facilities. Therefore, impacts are determined to be **less than significant**.

Schools

The demand for new or expanded school facilities and services is determined by permanent increases to the local population. Implementation of the Project would not directly cause an increase in residential population or a substantial increase in workforce population that would require new or expanded schools. As outlined in Chapter 2, Project Description, of this EIR, construction activities may require 7–10 on-site workers. While dependent on the volume of sediment, excavation activities typically occur during the fall season. During this timeframe, activities could occur up to 5 days a week, 8 hours a day (or 4 days a week, 10 hours a day). Construction workers are not anticipated to temporarily relocate their families to the area and enroll their children in area schools, as Project construction is temporary and seasonal. No long-term operational workforce is proposed as part of the restoration Project. Restoration of the existing quarry would not result in an increase in population growth and would not require the construction of new school facilities. Therefore, impacts because of the Project would be **less than significant**.

4.7 Recreation

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts to recreation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to recreation would occur if the Project would:

1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
2. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact Analysis

1. *Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

The Project site is in the southeast corner of Tijuana River Valley Regional Park, which is open daily between 8:00 a.m. and sunset (County of San Diego Department of Parks and Recreation 2019). There are numerous unnamed trails located in Tijuana River Valley Regional Park, with the nearest mapped multi-use trail located within approximately 400 feet of the Project site (i.e., APN 664-011-0500). While the trail, which crosses the northern portion of APN 664-010-5000 located west of Monument Road and north of the Project site (i.e., APN 664-011-0500), was not relocated during a January 2019 site visit, the trail is shown on the park brochure for Tijuana River Valley Regional Park. An additional mapped trail is located within 800 feet of the elevated ridge on the Project site (i.e., APN 664-011-0400) and descends a nearby ridge to extend north towards the park ranger station, parking, and restroom.

Project construction activities would include sediment excavation, sorting, and processing; stockpile management; site and soil preparation; sediment placement and grading; and final revegetation and restoration. During these activities, construction equipment such as stackers, loaders, excavators, bulldozers, water and fuel trucks, power screens, and belt conveyors would likely be used on the Project site. The operation of construction equipment could create nuisances such as increased noise, vibration, and dust in the nearby area. However, these impacts would be temporary, seasonal, and minimized by standard best management practices including use of mufflers, shrouds and other readily available noise-control features, idling limitations, implementation of a traffic control plan, and application of water on disturbed areas of the site for dust control. Furthermore, sediment excavation, sorting, and processing currently occurs in the Tijuana River Valley on an annual basis and, as such, regular users of in-valley recreational resources would be accustomed to sediment activities including related noise and traffic.

The Project site would be secured against unauthorized access through the installation of temporary fencing around the site perimeter. In addition, appropriate signage would be installed and an access-controlled gate would be constructed off Monument Road at the site access driveway. In addition, the site operator may elect to employ security guards and, if so, security personnel may patrol the site to deter unauthorized access and prevent vandalism and theft. During reclamation and restoration activities, the local daily population would slightly increase due to the presence of construction workers on the Project site. In addition to haul truck operators that would transport sediments from in-valley source locations to the Project site, approximately seven workers are anticipated to access the Project site on a typical active day of Project activities. During reclamation and restoration activities, construction/site personnel would normally stay on site during workdays and would not utilize recreational resources at existing local or neighborhood parks in the area. If Project personnel elect to recreate at the Tijuana River Valley Regional Park during workdays, the daily addition of approximately seven persons to the more than 1,800-acre regional park would not result in substantial physical deterioration of recreational resources. The nearest park resources, multi-use trails, generally require limited regular maintenance beyond seasonal use restrictions during flooding events and can accommodate an additional seven persons per day. Therefore, potential use of recreational facilities during reclamation and restoration activities would not be significant and substantial physical deterioration (or accelerated deterioration) of facilities would not occur. Impacts would be **less than significant**.

The Project would not increase the permanent population of the local area. Once the reclamation and restoration activities are completed (i.e., over a 10- to 15-year timeframe) and all phase areas are revegetated, the site would primarily function as permanent open space. Therefore, use of existing recreational facilities in the area is not anticipated to increase once reclamation and restoration activities are complete. Impacts would be **less than significant**.

2. *Does the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?*

The Project does not include recreational facilities on site and would not require the construction or expansion of existing recreational facilities to accommodate Project-related use increase. However, per the conditions of the grant deed that transferred the site from private trust to the County, the County is required to complete a Management Plan that shall “provide specific management measures to address . . . public access and recreational needs, and public access improvements that can be made consistent with the protection of sensitive resources” (Nelson Family Trust 2002). Therefore, public access improvements that can be made consistent with sensitive biological resource protection may be constructed on site by the

County at a future date. Any such improvements would be subject to County park planning and CEQA review; however, improvements for recreational access are not proposed as part of this Project. As such, Project impacts would be **less than significant**.

4.8 Transportation

Thresholds of Significance

The significance criteria used to evaluate the Project impacts to transportation are based on Appendix G of the CEQA Guidelines, City guidelines, and County guidelines. According to Appendix G of the CEQA Guidelines and the most stringent County and City guidelines, a significant impact related to transportation would occur if the Project would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (City of San Diego).
2. Result in VMT exceeding thresholds identified in the City of San Diego Transportation Study Manual (City of San Diego).
3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (City of San Diego).
4. Result in inadequate emergency access (City of San Diego).
5. Generate over 2,400 ADT or 200 peak hour trips and therefore must comply with the traffic study requirements of SANDAG's Congestion Management Program. Trip distributions for these projects must also use the current regional computer traffic model. Projects that must prepare a CMP [Construction Management Program] analysis should also follow the CMP traffic impact analysis guidelines.

A Transportation Technical Memorandum for the Nelson Sloan Quarry Restoration Project was prepared to evaluate the Project's traffic effects using the County of San Diego Transportation Study Guidelines (County of San Diego 2020) and the City of San Diego Transportation Study Manual (City of San Diego 2020b). The Transportation Technical Memorandum is provided in Appendix I.

The analysis contained in the Transportation Technical Memorandum was prepared consistent with the current requirements of all applicable City and state regulations, including Senate Bill (SB) 743 requirements under CEQA. The Project site is in the County of San Diego and the surrounding roadway network is located within the City of San Diego. Both the lead agencies have adopted the new transportation criteria and thresholds to include VMT analysis requirements per CEQA Guidelines Section 15064.3(b) in their respective transportation analysis guidelines.

Impact Analysis

1. ***Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (City of San Diego).***

The Project's consistency with the City of San Diego's General Plan, CAP, and applicable Community Plan has been examined in this section.

City of San Diego General Plan Mobility Element

The level of service (LOS) guideline is established in the City of San Diego General Plan Mobility Element (City of San Diego 2015c). The following policy from the Mobility Element may apply to the Project:

- ME-C.9. Implement best practices for multi-modal quality/level of service analysis guidelines to evaluate potential transportation improvements from a multi-modal perspective in order to determine optimal improvements that balance the needs of all users of the right of way.

The City has not adopted a specific LOS standard and performance of signalized and unsignalized intersections is evaluated on a case-by-case basis. The Transportation Technical Memorandum (Appendix I) provides an LOS analysis for intersections in the vicinity of the Project for informational purposes. Based on the traffic analyses provided in the memorandum, traffic added from the Project would not cause an intersection in the study area to exceed an LOS standard or trigger any off-site improvements.

Climate Action Plan

The City of San Diego adopted its CAP in 2015 (City of San Diego 2015b). The CAP identifies a comprehensive set of goals, policies, and actions that the City can use to reduce GHG emissions. The CAP includes five strategies: (1) water- and energy-efficient buildings; (2) clean and renewable energy; (3) bicycling, walking, transit, and land use; (4) zero waste; and (5) climate resiliency.

Strategy 3 (bicycling, walking, transit, and land use) aligns closely with the legislative intent of SB 743 and the topic of transportation. Strategy 3 includes commute mode share goals for bicycling, walking, and transit use for workers who live in Transit Priority Areas, leading to commute VMT reductions. Additionally, Strategy 3 promotes effective land use to reduce VMT (specifically implementing transit-oriented development within Transit Priority Areas). Although the Project is not located within a Transit Priority Area and would not promote use of alternative modes such as bicycling, walking, and transit use, it would promote efficient land use strategy and overall reduction in VMT. As shown in the Transportation Technical Memorandum prepared for the Project (Appendix I), the sediment excavated from management sites that is hauled out of the valley under existing conditions would be re-used towards the restoration of the quarry and creation of natural landforms on the quarry site. Therefore, the Project would reduce the need to haul sediment from in-valley locations to landfill or construction sites located outside of the valley in the County of San Diego. Therefore, implementation of the Project would result in reduction in overall truck trips and VMT. This would lead to reduction in emissions related to transportation, consistent with the goals of City's CAP.

Tijuana River Valley Local Coastal Program Land Use Plan

The Project is located within the Tijuana River Valley Local Coastal Program Land Use Plan (City of San Diego 1999). Following are the goals, objectives and recommendations of the plan related to Circulation.

Goals and Objectives

- **Overall Goal 1:** To provide a system of circulation including both transit and surface streets to adequately transport people and goods to, from and within the Tijuana River Valley in an efficient, economical and convenient manner in keeping with environmental factors.

Circulation Element Specific Recommendations

- **Circulation Element Specific Recommendation 1:** Roads in the valley will be limited to those identified in the Tijuana River Valley Circulation Element except as necessary for temporary emergency access. Local streets should not cross the Multi-Habitat Planning Area (MHPA) except where shown on the Circulation Element and needed to access isolated development areas.
- **Circulation Element Specific Recommendation 2:** Avoid the development of roads in canyon bottoms whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA to minimize impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully functional wildlife movement capability. Bridges are the preferred method of providing for movement, although culverts in selected locations may be acceptable. Fencing, grading and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.
- **Circulation Element Specific Recommendation 3:** Where possible, new roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.

The Project does not propose to construct any new roadways and would be using existing roadways in the plan area. Therefore, the Project would not conflict with the Tijuana River Valley Local Coastal Program Land Use Plan. **The existing transit, bicycle, and pedestrian facilities in the vicinity of the Project are discussed in the Transportation Technical Memorandum prepared for the Project** (Appendix I). As such, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and impacts would be less than significant.

2. *Would the Project result in VMT exceeding thresholds identified in the City of San Diego Transportation Study Manual (City of San Diego).*

This threshold addresses the potential operation-related impacts of the Project based on CEQA Guidelines Section 15064.3(b), which focuses on VMT for determining the significance of transportation impacts. Pursuant to SB 743, the focus of transportation analysis changed from LOS or vehicle delay to VMT. The related updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. As stated in CEQA Guidelines Section 15064.3(c), the provisions of Section 15064.3 shall apply prospectively, and a lead agency may elect to be governed by the provision of Section 15064.3 immediately. The provisions were required to be implemented statewide by July 1, 2020.

A project's VMT analysis follows the process of first using screening criteria, identifying an efficiency metric, identifying the significance threshold, and lastly determining requirements for modeling and assessment. The City recommends that any Project generating 300 or less average daily trips may be presumed to have a less-than-significant impact and therefore be screened from a detailed VMT analysis.

The Project would generate 46 daily on-site worker trips, 17 AM peak hour trips (17 inbound and 0 outbound), and 17 PM peak hour trips (0 inbound and 17 outbound). See Table 3, Project Trip Generation, in Appendix I. With the application of passenger car equivalent (PCE) factors to truck trips, the Project would generate 79 total PCE daily trips, including 23 PCE trips during the AM peak hour (23 inbound and 0 outbound) and 23 PCE trips during the PM peak hour (0 inbound and 23 outbound).

Therefore, using the City's small project screening criteria, the Project would not result in VMT exceeding thresholds and impacts can be presumed to be **less than significant**.

3. *Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (City of San Diego).*

The access to the Project would be from Monument Road via the unsignalized intersection of Dairy Mart Road/Monument Road.

The section of Monument Road west of Dairy Mart Road/Monument Road has a posted speed limit of 30 mph. As shown in Figure 13 in Appendix I, there is adequate sight distance at the Dairy Mart Road/Monument Road intersection looking from the eastbound and westbound direction towards the northbound approach (i.e., the access to the proposed Project). It is recommended that any shrubs/vegetation at the northbound approach of the Dairy Mart Road/Monument Road intersection be maintained periodically. There is a pedestrian crossing sign placed along Monument Road 250 feet west of the Dairy Mart Road/Monument Road intersection to warn vehicular traffic of potential pedestrian traffic.

All worker and truck traffic will access the site via the Project access driveway off Monument Road. The cross-section of Monument Road that provides access to the Project varies between 26 feet to 40 feet wide. This section of Monument Road has an undivided travel way and no curb, gutter, or sidewalk. An unpaved meandering roadway on the Project site would generally provide a vehicular travel way to workers and trucks on the site for required sediment management related activities.

Worker and truck traffic from existing sediment management sites hauling sediment to off-site locations is seasonally present in the area. Therefore, the Project would not propose an incompatible use in the area. As such, the Project would not increase hazards due to a design feature or incompatible uses and impacts would be **less than significant**.

4. *Would the Project result in inadequate emergency access (City of San Diego).*

The access to the Project would be from Monument Road via the unsignalized intersection of Dairy Mart Road/Monument Road. Vehicular traffic would access the site via a driveway off Monument Road and the Project would comply with all requirements for emergency access. Construction and operational activities would occur on the Project site and no lane closures in the public right-of-way are anticipated that would impact adopted emergency response plans. However, prior to commencing work, if needed, all applicable encroachment and/or traffic control permits would be obtained by the applicant to ensure that adequate emergency access is maintained. As such, the Project would have a **less-than-significant impact** related to emergency access.

5. *Would the Project generate over 2,400 ADT or 200 peak hour trips and therefore must comply with the traffic study requirements of SANDAG's Congestion Management Program. Trip distributions for these projects must also use the current regional computer traffic model. Projects that must prepare a CMP analysis should also follow the CMP traffic impact analysis guidelines.*

As shown in the Project's trip generation table (Table 3 in Appendix I), the Project would generate 79 total PCE daily trips, including 23 PCE trips during the AM peak hour (23 inbound and 0 outbound) and 23 PCE trips during the PM peak hour (0 inbound and 23 outbound). Therefore, the Project would not meet the requirements of preparing a traffic study per the CMP. However, it should be noted that in October 2009, the San Diego region elected to be exempt from the state CMP and, since this decision, the San Diego

Association of Governments has been abiding by Title 23 of the Code of Federal Regulations Part 450.320 to ensure the region's continued compliance with the federal CMP. As such, the Project would have a **less-than-significant impact** related to CMP requirements.

4.9 Utilities and Service Systems

Thresholds of Significance

As described in Chapter 1, Introduction, of this EIR, a hybridized approach concerning CEQA Appendix G, City, and County significance guidelines is utilized in this document due to the overlapping jurisdiction and ownership of the Project. All relevant significance thresholds were reviewed, and the most stringent thresholds were identified for use in this analysis. The thresholds identified for use were reviewed and approved by City and County staff assigned to this Project.

The significance criteria used to evaluate the Project impacts are based on City guidelines and CEQA Appendix G Guidelines. According to the most stringent City and CEQA Appendix G Guidelines, a significant impact related to utilities and service systems would occur if the Project would:

1. Result in a need for new systems, or require substantial alterations to existing utilities, the construction of which would create physical impacts:
 - a. Natural gas
 - b. Water
 - c. Sewer
 - d. Communication systems
 - e. Solid waste disposal
2. Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.
3. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
4. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impact Analysis

1. ***Would the Project result in a need for new systems, or require substantial alterations to existing utilities, the construction of which would create physical impacts:***
 - a. ***Natural gas***
 - b. ***Water***
 - c. ***Sewer***
 - d. ***Communication systems***
 - e. ***Solid waste disposal***

Sediment management, reclamation, and revegetation activities on the Project site would not require the construction of new (or alterations to existing) natural gas, sewer, or communication system infrastructure.

As further discussed in Chapter 2 of this EIR, Project activities would require water for general dust suppression, surface watering of sediment loads placed on site, processing station screen deck dust suppression, and irrigation for permanent restoration vegetation. Water to the Project site would be provided through a new connection to an existing City 8-inch water main located along Monument Road. The proposed point of connection would be to the immediate south of the existing water main. A new 2-inch water meter and reduced pressure backflow preventer would be installed. Approximately 700 feet of new 2.5-inch PVC irrigation mainline would be installed and would extend from the master valve, turning right to parallel the access road onto the Project site. The new irrigation mainline would terminate near the Phase 1 sediment trap area. Irrigation valves and lateral lines would be installed when final grading is completed for each phase of restoration within the site area of disturbance. The proposed water meter would be aligned within the existing disturbed access road to the Project site and future irrigation lines associated with permanent revegetation would be installed within the area of disturbance associated with restoration and revegetation activities. As such, installation of water systems would not result in additional on-site physical impacts beyond those associated with site preparation and phased grading activities. Impacts would be **less than significant**.

New solid waste disposal systems would not be required to accommodate the solid waste generated during Project operations. Like existing sediment management activities in the Tijuana River Valley, sediment management and on-site processing may result in the need for solid waste disposal services for tires and miscellaneous trash. In addition, green waste, including removed vegetation, and other waste, including unsuitable sediment, may require disposal at an area landfill. Therefore, like existing sediment management activities, the Project would require solid waste disposal services and generate truck trips to haul solid waste and other material to appropriate area landfills. However, new systems or substantially altered systems would not be required to accommodate tire, trash, and other waste generated during operation of the Project. Impacts would be **less than significant**.

2. ***Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?***

The Project does not include the installation of sewers/wastewater systems and would not connect to an existing wastewater system. Therefore, the Project would not require the treatment of wastewater and would not impact a provider's existing commitments. **No impact** would occur.

3. ***Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?***

Implementation of the Project would not result in development of buildings, structures, or other facilities that would generate solid waste on an ongoing basis. The Project also would not involve conventional project construction or demolition activities that would generate solid waste requiring disposal.

Sediment from existing basin and channel maintenance activities in the Tijuana River Valley would be used on the Project site for mine reclamation and landform restoration. Basin and channel maintenance activities handle the following three primary types of materials requiring disposal: excavated spoil, vegetation, and trash/debris. While these materials would require appropriate disposal following regular waterways maintenance, activities within the in-valley facilities from which sediment for the Project would be sourced are covered by existing regulatory permits. Further, sediments are subject to existing screening,

sampling and testing (for spoils from areas of known contamination or where unexpected contamination is encountered), and vegetation and debris removal and these practices would continue during the life of the Project to ensure worker safety, protect downstream waters, control the spread of invasive plant species, and ensure proper disposal of contaminated soils and debris including tires and trash. Also, basin and channel maintenance activities in the Tijuana River Valley are existing, ongoing activities.

Although it is unknown how much solid waste would be generated and how much could be diverted during the approximate 15-year timeframe of the Project, the potential contribution of solid waste from Project activities would be limited and impacts would be **less than significant**. New or expanded solid waste disposal facilities would not be required to accommodate existing and Project needs.

4. *Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Assembly Bill 939 (California Integrated Waste Management Act) requires cities to prepare and adopt a source reduction and recycling element that focuses on the management of solid waste generated or handled in the jurisdiction, consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, (3) environmentally safe transformation, and (4) land disposal. These four methods of managing waste represent all acceptable modes of managing waste. Uncontained litter is not acceptable.

Sediment management activities and proposed sediment processing that may occur on the Project site would divert automotive tires and some separated metal materials. Soil, sand, and silt is and would be screened to remove waste debris and reused as fill material, aggregate, or other raw material usage unless conditions specified in the Operations and Maintenance Plan make the use of screening equipment inappropriate or infeasible. Once excavated material from source locations has been placed in stockpiles, it would be screened and separated with the use of a shaker or comparable equipment unless this process is found to be infeasible, per the specifications in the Operations and Maintenance Plan. A similar process would occur for unscreened sediments that may be transported to the Project site. Reusable materials (e.g., soil, sand, or silt) that have been separated out would be diverted to other sites within the City that need fill, aggregate, or other raw materials unless specific conditions provided in the Operations and Maintenance Plan indicate that reuse is not appropriate or feasible. Remaining waste would be transported to a permitted landfill. However, the waste being hauled to the landfill under the Project would not be generated by the Project activities themselves, but rather, the maintenance activities would involve handling waste that has already been generated and deposited within stormwater and other facilities throughout the Tijuana River Valley.

Project activities would comply with all applicable management and reduction regulations related to solid waste. While Project generation of solid waste would be limited over the approximate 15-year timeframe of seasonal sediment processing, grading, placement, and compaction activities, wastes would be managed appropriately and consistent with applicable regulations. As such, impacts would be **less than significant**.

4.10 References

- CDOC (California Department of Conservation). 2020. "Division of Land Resource Protection Important Farmland Finder." Accessed June 7, 2020. <https://maps.conservation.ca.gov/DLRP/CIFF/>.
- City of San Diego. 1999. *Tijuana River Valley Local Coastal Program Land Use Plan*. Approved December 1976, amended June 1, 1999.
- City of San Diego. 2015a. "Land Use and Community Planning Element." In *City of San Diego General Plan*. June 2015. <https://www.sandiego.gov/planning/genplan/>
- City of San Diego. 2015b. *Climate Action Plan*. December 2015. https://www.sandiego.gov/sites/default/files/final_july_2016_cap.pdf
- City of San Diego. 2015c. "Mobility Element." In *City of San Diego General Plan*. June 2015. <https://www.sandiego.gov/planning/genplan/>
- City of San Diego. 2016. *California Environmental Quality Act Significance Determination Thresholds*. July 2016.
- City of San Diego. 2020a. "Zoning and Parcel Information Portal (ZAPP)." Accessed August 26, 2020. <https://sandiego.maps.arcgis.com/apps/webappviewer/index.html?id=3057676023954a828ad92ef22b5ff349>.
- City of San Diego. 2020b. *Transportation Study Manual (TSM)*. September 2020.
- County of San Diego. 2007. *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Agricultural Resources*. June 23, 2015.
- County of San Diego. 2020. *Transportation Study Guidelines*. June 2020.
- County of San Diego Parks and Recreation. 2019. "Tijuana River Valley". Accessed April 12, 2019. <https://www.sdparks.org/content/sdparks/en/park-pages/TJRVRP.html.html>.
- EIA (U.S. Energy Information Administration). 2021. "Table F16: Total Petroleum Consumption Estimates, 2019." Accessed September 13, 2021. <https://www.eia.gov/state/> https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA.
- Nelson Family Trust. 2002. "Grant Deed: Assessor's Parcels Nos. 664-030-04, 664-020-02, and 664-011-03, -04, and -05." Revision 2, December 23, 2002.

5 Significant Irreversible Environmental Effects

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the project, (2) significant environmental effects that cannot be avoided if the project is implemented, (3) significant irreversible environmental changes that would result from implementation of the project, (4) growth-inducing impacts of the project, (5) energy consumption and conservation of the project, and (6) alternatives to the project (evaluated in Chapter 6, Alternatives).

5.1 Significant and Unavoidable Project Impacts

Sections 15126(b) and 15126.2(b) of the CEQA Guidelines require that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) on various aspects of the environment are discussed in detail in the technical sections contained in Chapter 3, Environmental Analysis, of this Draft EIR.

This EIR has identified no significant and unavoidable impacts. All potentially significant impacts are capable of being mitigated to a less-than-significant level.

5.2 Significant Irreversible Environmental Effects

California Public Resources Code, Section 21100(b)(2), requires that EIRs must include a discussion of significant irreversible environmental changes of project implementation. CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as:

Uses of nonrenewable resources during the initial and continued phases of development may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts, such as highway improvement that provides access to a previously inaccessible area, generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Adoption and implementation of the Project is expected to result in irreversible environmental effects consisting of the following:

- The energy consumed in the construction of restoration projects and associated infrastructure may be considered a permanent investment of resources. Implementation of the Project would be a relatively minor consumption of these supplies when compared to a regional context. However, use of these resources would represent an incremental effect on the regional consumption of these commodities. Implementation of the Project would involve an incremental increase in consumption of energy resources, derived in part from nonrenewable resources, such as fossil fuels.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by environmental accidents associated with the Project. While the Project would result in the use, transport, storage, and disposal of minor amounts of hazardous materials during Project construction, and would potentially include the on-site processing of sediments excavated from basins and channels in the Tijuana River Valley, all such activities would comply with applicable state and federal laws related to the use, storage, and transport of hazardous materials, which significantly reduces the likelihood and severity of accidents that could occur. The Project itself does not include any uniquely hazardous uses that would require any special handling or storage. Further, the Project does not contain any industrial uses that would use or store acutely hazardous materials.

5.3 Growth Inducement

Section 15126.2(d) of the CEQA Guidelines mandates that the growth-inducing nature of the proposed project be discussed. This CEQA Guidelines section states that the growth-inducement analysis is intended to address the potential for the project to “foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Furthermore, the CEQA Appendix G Checklist (Population and Housing) mandates that a CEQA document discuss the project’s likelihood to induce substantial population growth in an area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., through extension of roads or other infrastructure) (14 CCR 15000 et seq.).

A project may be distinguished as either facilitating planned growth or inducing unplanned growth. Facilitating growth is relating to the establishment of direct employment, population, or housing growth that would occur within a project site. Inducing growth is related to lowering or removing barriers to growth or by creating an amenity or facility that attracts new population and economic activity. However, the CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (CEQA Guidelines Section 15145).

According to the CEQA Guidelines, a project would have potential to induce growth if it would result in either of the following:

- Remove obstacles to population growth (e.g., through the expansion of public services into an area that does not currently receive these services), or through the provision of new access to an area, or a change in a restrictive zoning or General Plan land use designation.
- Result in economic expansion and population growth through employment opportunities and/or construction of new housing.

For the purposes of this EIR analysis, a significant growth-inducement impact would occur if the Project, and all associated infrastructure improvements, directly or indirectly removed physical or regulatory obstacles to growth such that the induced growth would significantly burden existing community services or impact the environment through economic expansion and population growth. A physical obstacle to population growth typically involves the lack of public service infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that currently do not have these services is expected to support new development. The potential growth-inducing impacts of the Project are discussed below.

Removal of Obstacles to Growth or Provision of New Access

The Project would include the reclamation and revegetation of an oversteepened, eroded slope and flat terrain created by previous sand and gravel mining that occurred on site from approximately 1982 to 2002. Specifically, the Project would restore the degraded site to historic (i.e., pre-quarry operations) and naturalistic conditions via

the gradual placement and compaction of excess sediment excavated from basins and channels in the Tijuana River Valley. Extension of an existing water main for restoration efforts and potentially extension of a reclaimed water line for on-site dust suppression and sediment processing purposes would be required during Project construction. No other infrastructure including water or sewer lines would be installed as part of the Project.

An improved access road would be required and used by light and heavy trucks to access the Project site. This improved road would be gated and would not be open to the public. The temporary road would be largely abandoned and revegetated in later phases of Project grading plans. A narrow access road from the gated entrance to the base of the new on-site slope and catch basin would be provided for City of San Diego stormwater maintenance staff. The internal access road and driveway would not be accessible to the general public and would not provide access into other areas that would be developed in the future. Therefore, the access road would not promote growth-inducing development. No other development is anticipated as a result of Project roads, and these roads would not extend outside of the Project site or provide connection points for off-site development. No other development would be anticipated as a result of these roads and as such, the Project would not remove obstacles to growth or provide new off-site access.

Economic, Population, and Housing Growth

Typically, the growth-inducing potential of a project is considered significant if it fosters growth or a concentration of population in a different location or in excess of what is assumed in pertinent general plans or land use plans, or projections made by local planning agencies, such as the City of San Diego and County of San Diego. With respect to employment, the Project would result in direct economic impacts to the area through employment and equipment rental, as well as secondary impacts from the purchases of goods and services by those employed by the Project. The Project would not directly or indirectly promote sufficient economic growth to result in a population that would exceed the projections of the City or County of San Diego. The Project would require approximately seven on-site (and non-haul truck driver) workers (most of whom are expected to reside in San Diego County) to run operations on the Project site, and seasonal operations are anticipated to occur over an approximate 3–4 month timeframe for duration of up to 15 years. During active construction/operations, up to seven full-time staff would be employed during Project operation. Haul trucks would be required to transport sediment from source sites to the Project site; however, as seasonal maintenance currently occurs in the Tijuana River Valley and the Project would essentially replace the existing end point destination for haul truck trips, the Project would not result in a net increase in haul truck trip workers/jobs. Therefore, the Project would not result in a large increase in employment that would significantly induce growth.

The Project does not include the construction or demolition of any housing, and would not have a direct impact on population or housing growth. Project-related operations would result in a short-term increase in construction-related job opportunities in San Diego County and the larger region. However, construction workers can be expected to be drawn from the existing construction employment labor force. Therefore, opportunities provided by Project construction would not likely result in the permanent relocation of construction workers to the area. Therefore, the employment opportunities provided by construction are not anticipated to induce indirect growth in the region.

5.4 Energy Conservation

In order to assure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of a project, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (see California Public Resources Code, Section 21100[b][3]). According to Appendix F of the CEQA Guidelines, the goal of conserving energy implies the wise and efficient use of

energy including (1) decreasing overall per capita energy consumption, (2) decreasing reliance on natural gas and oil, and (3) increasing reliance on renewable energy sources. Resources that would be consumed as a result of Project implementation include water, electricity, and fossil fuels during Project activities. The anticipated equipment, vehicles, and materials required for construction of the Project are detailed in Chapter 2, Project Description and Chapter 3. However, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources. No increases in inefficiencies or unnecessary energy consumption are expected to occur as a direct or indirect consequence of the Project. No mitigation measures would be necessary to offset energy consumption. Please see also Chapter 4, Effects Not Found to be Significant, which includes an assessment of energy use.

6 Alternatives

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a reasonable range of project alternatives that would feasibly attain most of the basic objectives of the project but would avoid or lessen any significant environmental impacts. EIRs are also required to evaluate the comparative merits of the alternatives. This chapter of the EIR describes and evaluates alternatives to the Nelson Sloan Quarry Restoration and Beneficial Reuse of Sediment Project (Project) and implements the requirements set forth in the CEQA Guidelines for alternatives analysis. This chapter also identifies the Environmentally Superior Project Alternative as required by CEQA Guidelines Section 15126.6(e)(2).

Sediment management activities currently occur within the Tijuana River Valley and are carried out on an annual basis by in-valley land managers. As previously stated in Chapter 1, Introduction, this document generally does not include an assessment of existing, ongoing, and permitted (or proposed) sediment management operations (existing land uses) at potential source locations, including the Goat Canyon Sedimentation Basins (managed by California Department of Parks and Recreation [CDPR]), Pilot Channel and Smuggler's Gulch (managed by City of San Diego [City]), Smuggler's Gulch (south of Monument Road; managed by County of San Diego [County]) and others. Rather, the purpose of the EIR is to focus the analysis on those potential effects on the environment resulting from implementation of the Project, which includes the reuse of excess sediment on the Project site towards historic landform reclamation and habitat restoration of the abandoned Nelson Sloan quarry as a first option for in-valley land managers. Therefore, this alternatives analysis involves alternatives relative to the Project and Project site only.

6.1 Alternatives Considered in this Analysis

The range of alternatives and methods for selection is governed by CEQA and applicable CEQA case law. As stated in CEQA Guidelines Section 15126.6(a), the lead agency is responsible for considering a reasonable range of potentially feasible project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. This chapter includes the range of project alternatives that have been selected by CDPR, as the lead agency for examination, as well as its reasoning for selecting these alternatives.

As stated in Section 15126.6(a) of the CEQA Guidelines, there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. This rule is described in Section 15126.6(f) of the CEQA Guidelines and requires the EIR to set forth only those alternatives necessary to foster informed decision making. As defined in Section 15126.6(f), the rule of reason limits alternatives analyzed to those that would avoid or substantially lessen one or more of the significant effects of a project. Of those alternatives, an EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. Other relevant provisions set forth in the CEQA Guidelines state that EIRs do not need to consider every conceivable alternative to a project, nor are they required to consider alternatives that are infeasible. When addressing feasibility, CEQA states that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites" (CEQA Guidelines, Section 15126.6). These considerations are unique for each project. The CEQA Guidelines also specify that the discussion of alternatives should not be remote or speculative; however, the assessment of alternatives need not be presented in the same level of detail as the assessment of the Project.

Accordingly, an EIR must describe a range of reasonable alternatives to the project or to its location but need not discuss every alternative to the project. An EIR should present "a reasonable range of potentially feasible alternatives." No set number of alternatives is necessary to constitute a legally adequate range of alternatives. Instead, the nature and scope of the alternatives to be studied in an EIR is governed by the rule of reason, which means that an EIR need only discuss those alternatives necessary to permit a reasoned choice in light of environmental considerations. The scope of alternatives comprising a reasonable range will vary depending on the nature of the project under review, the project's impacts, relevant agency policies, and other material facts. In some situations, no potentially feasible alternatives may be available that would achieve most project objectives (e.g., *Mount Shasta Bioregional Ecology Center v. County of Siskiyou* [2012] 210 Cal.App.4th 184). The lead agency has the discretion to determine, based on the nature of the project and its circumstances, how many alternatives will constitute a reasonable range.

As assessed in Chapter 3, Environmental Analysis, the Project would not result in significant and unavoidable effects to the environment. All impacts are capable of being mitigated to a less-than-significant level. However, as required by CEQA Guidelines, a range of alternatives has been selected for analysis in this EIR that includes alternatives that would result in reduced impacts when compared to those of the Project.

6.1.1 Project Overview

CDPR proposes the beneficial reuse of excess sediment excavated from managed sources (e.g., sediment basins, flood control facilities and conveyances) from a range of ongoing, approved, and/or permitted sediment management activities and proposed habitat restoration and enhancement projects in the Tijuana River Valley towards historic and naturalistic landform creation and habitat restoration in the abandoned Nelson Sloan quarry site.

As discussed in the Tijuana River Valley Historical Ecology Investigation, "estuarine habitats have undergone both loss (approximately 40% decrease in total area) and large-scale conversion . . . the most significant loss of salt marsh has occurred in the southern part of the estuary (i.e., south of Tijuana River Slough), [and is] related to elevation increases due to excess sedimentation from hillside erosion in Tijuana canyons and decreases in tidal prism since the mid-19th century" (SFEI 2017). These findings point toward the need for continued efforts to restore intertidal habitats, particularly in the heavily impacted southern arm of the estuary, to maintain desired functions. Restoration efforts may be aided by sediment management approaches (e.g., sediment catch basins and source control in the communities of Tijuana) and managing the tidal regime to increase tidal prism, which is estimated to have decreased by 55%–85% over time (SFEI 2017).

Currently, sediment management activities are undertaken by City, County, state, and federal entities and their partners in the Tijuana River Valley. These entities typically haul the excess sediment off site to regional landfills or construction sites. The Project would instead allow these entities to place approximately 1 million cubic yards (CY) of appropriate and processed sediment on the former quarry site as part of a phased and gradual landform reclamation, creation, and habitat restoration project. A phased approach would be used to seasonally reclaim previously mined portions of the Project site over an approximate duration of up to 15 years.

The initial phase of the Project includes regrading, implementing erosion control measures, and revegetating the slope west of the quarry floor to a stabilized condition. These first-phase activities are intended to satisfy previous Reclamation Plan requirements and release the site from regulatory requirements under the Surface Mining and Reclamation Act (SMARA). Beyond these initial activities, the Project includes phased restoration of terrain and natural coastal sage scrub vegetation. Interim phases would include application of erosion control vegetation

hydroseed mix and implementation of appropriate erosion control best management practices on slopes. Final revegetation of finished graded slopes would include coastal sage scrub container plant and seed mix application analogous to naturally occurring coastal sage scrub found on adjacent mesa slopes.

Proposed landform reclamation (and creation) and habitat restoration would occur on the Project site over an approximately 20-acre area (i.e., the Project Impact Area) and proposed activities are estimated to occur over an up to 15-year timeframe

Project Objectives

Specific objectives of the Project include the following:

- Consistent with Objective 3, Strategy 1 of the Tijuana River Valley Recovery Team Five-Year Action Plan, restore the landform, ecological functions, and values of the impacted habitats on the Project site that were significantly altered by past mining activity. As proposed, the Nelson Sloan Quarry would be restored and stabilized consistent with DMR reclamation standards.
- Divert sediment from landfills and reduce emissions associated with regional haul truck trips;
- Improve water quality within the watershed and reduce public health and safety hazards associated with cross-border flows.
- Reduce opportunities for downstream erosion, runoff, and water quality impairment through stabilization of the Project site. Implement interim and permanent design features to reduce erosion and stormwater runoff.
- Facilitate cost-effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley.
- Advance efforts to meet the intent of the recorded grant deed for the transfer of the property from the California Coastal Conservancy to the County of San Diego; the deed states that the property must be used for habitat protection, restoration, and open space in perpetuity.
- Release the existing Mine ID No. 91-37-0037 associated with Border Highlands, also known as the Border Area Borrow Pit or Nelson Sloan Quarry; City Project No. 308715 and CUP No. 497-PC.

6.1.2 Alternatives Considered But Rejected

One of the requirements for alternatives analysis that is set forth in the CEQA Guidelines is identification of alternatives that were considered by the lead agency but rejected as infeasible during the scoping process. As stated in Section 15126.6(c) of the CEQA Guidelines, the EIR should briefly explain the reasons underlying this determination. Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are (CEQA Guidelines Section 15126.6[c]):

- (i) Failure to meet most of the basic project objectives,
- (ii) Infeasibility, or
- (iii) Inability to avoid significant environmental impacts.

Section 15126.6(f)(1) of the CEQA Guidelines states that “among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the

proponent).” However, as stated in this subsection, no single factor establishes a fixed limit on the scope of reasonable alternatives.

100,000 Cubic Yards Alternative

This alternative would set a 100,000 CY goal for the beneficial reuse of excess sediment excavated from basins and channels in the Tijuana River Valley on the Project site. Like the Project, processing equipment would be staged on site; however, only a small portion of the Project’s grading footprint would be required to accommodate 100,000 CY. This alternative would allow for the implementation of Phase 1 of the grading plan (and release of the existing Mine ID No.) and the Project site would be utilized for the beneficial reuse of excess sediment excavated from in-valley basins and channels. Generally, this alternative would include Phases 1 and 2 of the Project’s grading plan. Implementation of the Project’s initial grading phases would result in the creation of new, naturalistic terrain that would be vegetated with coastal sage scrub vegetation consistent in color and texture with existing vegetation in the Border Highlands area. New terrain would extend east from the existing on-site slope near the southern boundary of the Project site. Based on estimated volume of sediment anticipated to be available, this alternative would require up to 2 years to construct new terrain. Similar to the Project, this alternative would result in significant, albeit temporary, impacts to biological resources associated with vegetation removal and temporary disturbance of habitat. However, due to the smaller overall footprint, total acreage impacts would be reduced compared to the Project.

As previously discussed, the 100,000 CY Alternative would essentially implement Phase 1 (6,500 CY) and Phase 2 (108,500 CY) of the Project’s phased grading plan. The proposed contours and focus of Phase 2 sediment placement activities is depicted in Figure 2-5b. As shown in the figure, a broad, naturalistic hillside would be constructed on top of the Phase 1 reclamation area and would be located towards the southern extent of the Project site. Assuming an average available sediment volume of 75,000 CY, the 100,000 CY Alternative would require up to 2 years to construct/build out, at which time, the new terrain would be vegetated with a habitat forming coastal sage scrub restoration sediment mix.

The 100,000 CY Alternative is not favorable for the various stakeholders, including CDPR. This alternative would provide the opportunity for beneficial reuse of excess sediment for up to 2 years (as opposed to the Project’s up to 15-year anticipated timeframe). Once the 100,000 CY target is achieved, sediment management activities are anticipated to revert to near-existing conditions in which haul trucks transport excess excavated sediment from in-valley basins and channels to appropriate area landfills such as Miramar Landfill for disposal. Thus, in the long-term, air quality emissions associated with this alternative have potential to be greater than the Project. Regarding archaeological, historical, and tribal cultural resources and geology and soils, this alternative would result in less total ground disturbance than the Project due to an overall lower sediment placement goal. Impacts to archaeological and tribal cultural resources would be reduced as an overall lower volume of excess sediment would be used on site and, thus, on-site activities would have reduced/lessened potential to encounter archaeological resources, human remains, and tribal cultural resources. Mitigation Measure (MM) ARCH-1 through MM-ARCH-3 would still be required under this alternative. In addition, potential impacts to paleontological resources under this alternative would be similar as those under the Project. Both the alternative and Project would entail excavation in geological units with moderate to high sensitivity. Thus, MM-PAL-1 would be required under this alternative.

Under the Project, MM-NOI-1 is required due to predicted average daily volumes of sediment haul truck traffic during later phases of grading (Phases 4, 5, and 6). Since this alternative would generally implement Phases 1 and 2 only, the potentially significant noise impacts associated with later phases of the Project would not occur. As such, this alternative would result in reduced noise impacts compared to the Project.

Because this alternative has a substantially reduced operational life compared to the Project, and because this alternative could result in greater long-term impacts to air quality and biological resources and potentially greater impacts to downstream water quality and sensitive habitat due to a reduced project timeline, it was determined that this alternative was not worthy of further consideration.

2,300,000 Cubic Yards Alternative

This alternative would set a 2,300,00 CY goal for the placement and compaction of excess sediment on the Project site. Based on an investigation of the capacity of the site performed by URS in 2010 it was estimated that the site could accommodate of up to 2,300,000 CY of sediment while still meeting the grading requirements (i.e., 2:1 slopes) of the former quarry's Reclamation Plan (URS 2010). As with the Project, this alternative would include release of the existing Mine ID No. and removal of the site from SMARA oversight. Given the assumption of 75,000 CY of excavated sediment available per year, the 2,300,000 CY fill quantity would be reached in approximately 30 years under this alternative. Proposed contours and final landform associated with this alternative are depicted in Nelson Sloan Management and Operations Plan and Cost Analysis prepared by AECOM for CDPR (AECOM 2016). As depicted in the 2016 document, proposed grading associated with this alternative would include (1) the partial filling of the drainage to the immediate west of the centrally located ridge on the Project site and (2) the creation of a broad and flat rectangular pad. Further, the proposed grading included the placement of fill on non-County lands to the south of the Project site, atop the northern of the two international border fences. These two issues (sediment placement within a drainage and sediment placement on federal lands) would require reconsideration and revisions to the grading plan for feasibility. Once placement and compaction activities are completed at the end of approximately 30 years, new terrain would be revegetated and monitored for a period of 5 years.

This alternative would provide future stakeholders with the greatest capacity for a nearby in-valley sediment placement location. However, since this alternative would increase the amount of fill used to reclaim the quarry compared to the previous quarry project's conditional use permit, a Reclamation Plan amendment would need to be submitted to the City/County to modify the contour/slope specifications of this alternative. If the City/County believes that this change is minor it can be approved without an in-depth review by the Division of Mine Reclamation (DMR). DMR would need to concur with this assessment. Given the uncertainty regarding decisions by the City/County and DMR, and because this alternative would result in greater (i.e., longer duration) construction-level impacts, including the generation of dust, haul truck traffic on local roads, air quality emissions, on- and off-site noise, potential stormwater quality impacts, and longer-duration temporary impacts to sensitive species and their habitat, this alternative was rejected from further consideration. This alternative would also result in longer-duration visual change associated with the creation of new terrain on the Project site.

Off-Site Alternative

An alternate site or off-site alternative was determined to be infeasible because CDPR and stakeholders are seeking an in-valley option for beneficial reuse of excess sediment to minimize regional truck traffic and related air quality and greenhouse gas impacts. Also, the Nelson Sloan quarry site has been previously identified as an optimal location for the potential reuse site due to its proximity to in-valley sediment management operations (resulting in fewer haul truck trips and associated generation of air quality and greenhouse gas emissions) and degraded on-site conditions (and need for topographical reclamation and revegetation). In addition, an in-valley option is sought to aid in-valley water quality objectives, including the reduced erosive potential on the Project site. An off-site alternative is also infeasible because no other previous, yet to be restored quarry sites are located in the Tijuana River Valley. Therefore, an off-site or alternate project location was dismissed from further evaluation.

6.2 Alternatives Carried Forward For Consideration

Pursuant to Section 15126.6 of the CEQA Guidelines, a reasonable range of alternatives was selected that would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen one or more of the significant effects of the Project. The comparative discussion of Project and Project alternative effects is limited to those resources which Chapter 3 of the EIR determined would experience potentially significant impacts. Therefore, the discussion is limited to air quality; biological resources; archaeological, historical, and tribal cultural resources; geology and soils; noise; and wildfire. Also, because of the limited number of significant impacts, the range of alternatives is limited to the required No Project/No Development Alternative, a Basic Reclamation (6,500 CY) Alternative that considers a reduced CY goal to fulfill the requirements of the previous quarry CUP Reclamation Plan and achieve mine closure, and a Reduced Capacity (500,000 CY) Alternative. For purposes of this analysis, excess sediment for the two action alternations (i.e., Basic Reclamation and Reduced Capacity) would be sourced from existing in-valley sediment management activities and proposed habitat restoration projects (i.e., Tijuana Estuary Tidal Restoration Program II)

In accordance with Section 15126.6(c) of the CEQA Guidelines, a reasonable range of alternatives was considered and are further analyzed below.

6.2.1 Alternative 1 - No Project/No Development Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate the specific alternative of “no project” along with its impact. As stated in this section of the CEQA Guidelines, the purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the proposed project. As specified in Section 15126.6(e)(3)(B) of the CEQA Guidelines, the No Project alternative for a project consists of the circumstance under which a proposed project does not proceed.

Accordingly, Alternative 1 assumes that existing sediment management activities by in-valley land managers would continue to occur as under current conditions (including regional haul truck trips between the Tijuana River Valley area and Miramar Landfill or other off-site placement location) and no sediment would be brought to the Project site. Under this alternative, no new activities would occur on the Project site.

Air Quality

The No Project/No Development Alternative would avoid all the significant and less-than-significant impacts associated with the proposed Project. Compared to the Project, this alternative would result in less on-site air quality emissions because no sediment processing, placement, and compaction activities would occur. In addition, no construction vehicles and/or equipment would operate on site. While mobile on-site sources of air quality emissions would not operate on site, truck trips associated with annual haul truck disposal of excess sediment at appropriate regional landfills, including Miramar Landfill or other off-site placement locations, would continue as under existing conditions. As such and compared to the Project, air quality emissions associated with regional truck traffic would be greater under this alternative.

Biological Resources

Under the No Project/No Development Alternative, the Project would not be implemented and no new activities would occur on the Project site. Temporary and permanent impacts to biological resources, including coastal sage scrub and sensitive wildlife species, would not occur under the No Project/No Development Alternative because

there would be no change to existing site conditions. However, scant vegetation conditions on the Project site would persist and the site would continue to function as degraded habitat for wildlife species. In addition, the No Project/No Development Alternative poses significant threats to biological resources throughout the Tijuana River Valley by reducing land managers' abilities to manage sediment in a cost-effective and sustainable manner and protect downstream sensitive habitat.

Archaeological, Historical, and Tribal Cultural Resources

As no new activities, including excavation, grading, and other ground disturbance, would occur on the Project site, the No Project/No Development would avoid all potential impacts to archaeological, historical, and tribal cultural resources. Thus, no impacts to archaeological, historical, tribal cultural resources, or human remains would occur. Compared to the Project, cultural resource impacts would be less under this alternative.

Geology and Soils

The No Project/No Development would avoid all potential Project impacts to geology and soils (see Section 3.5, Geology and Soils). As stated in Section 3.5, Project grading and other earth-moving activities would exceed City thresholds for excavation in areas with moderate and high geologic deposit/formation/rock unit resources. Because no activities would occur on the Project site, no impacts to geology and soils would occur. However, as the existing oversteepened east-facing slope on the Project site would not be addressed/reclaimed, the slope would continue to be subject to wind or water erosion and potential downstream water quality effects.

Noise

In addition to on-site activities, truck traffic between the Project site and sediment source locations would not occur under the No Project/No Development Alternative. While the Project site would not generate ongoing noise associated with sediment processing and placement, truck traffic and other activities assumed for the Project, including existing sediment management practices, would continue. Specifically, land managers in the Tijuana River Valley would continue to excavate and manage sediment on an annual (or more frequent) basis, which would necessitate haul truck traffic between the Tijuana River Valley and regional landfills including Miramar Landfill. Thus, while surrounding lands uses would not be subjected to noise associated with on-site activities (on-site activities for the Project were determined to result in less-than-significant noise impacts), they would continue to experience long-term (and seasonal) noise associated with haul truck traffic along local roads and processing equipment and excavators/dozers at staging areas (i.e., similar to existing conditions). Still, compared to the Project, this alternative would result in reduced noise impacts.

Wildfire

Under this alternative, excavated sediment from in-valley sources would not be brought to the Project site and processing and placement of sediment on site would not occur. As no construction equipment associated Project activities would operate on site, the potential wildfire impacts associated with the Project would not occur. The Project site would not experience increased risk of wildland fire associated with Project activities would not be experienced. Due to lack of activity on the Project site, the No Project/No Development Alternative would result in reduced potential wildfire impacts compared to the Project.

Ability to Meet Project Objectives

Under the No Project/No Development Alternative, none of the Project objectives would be met. Under this alternative, the oversteepened east-facing slope on the Project site would become further eroded overtime because it would not be reclaimed and the MINE ID No. would remain active, thus prolonging yearly documentation and related expenses of on-site conditions in accordance with the provisions of SMARA. Also, the historical topography (i.e., pre-mining activities topography) and vegetative cover of the Project site would not be restored and the site would continue to display the effects of mining operations that ceased nearly 20 years ago. Further, existing annual haul truck traffic from the Tijuana River Valley to regional landfills would persist as an in-valley placement location would not be available. Effective habitat protection, conservation, and restoration opportunities in areas impacted by sedimentation and flooding in the Tijuana River Valley would be significantly compromised and biological resources throughout the Tijuana River Valley would be threatened. Furthermore, opportunities to improve water quality and reduce public health and safety hazards would be compromised if the No Project/No Development Alternative was implemented.

6.2.2 Alternative 2 - Basic Reclamation (6,500 Cubic Yards) Alternative

This alternative is based on the anticipated minimum volume of sediment necessary to fulfill the requirements of the Reclamation Plan for the previous Nelson Sloan Quarry Project. This alternative, which generally consists of Phase 1 of the Project's grading plan, would (subject to DMR concurrence and installation of vegetation for erosion control purposes) release the existing Mine ID No. 91-37-0037 associated with the previous quarry operation and fulfill all reporting requirements in compliance with SMARA. Assuming an average available sediment volume of 75,000 CY, the duration of sediment placement activities on the Project site would be less than one season of in-valley sediment management. Further, based on the minimal sediment needs to reclaim the eroded, oversteepened slope centrally located on the Project site, participation from multiple land managers would not be necessary to achieve the sediment placement goal.

Air Quality

Under this alternative, sediment processing and placement activities could be completed in under 1 year (assuming an average available sediment volume of 75,000 CY). Thus, the up to 15-year duration of Project activities would not occur and on-site air quality emissions associated with sediment processing, placement, grading, and other activities would be reduced compared to the Project. In addition to reduced air quality emissions and health effects, the reduced duration of on-site activities would result in reduced potential for exposure of sensitive receptors to toxic air contaminants (TACs). As detailed in Section 3.2, Air Quality, exposure of sensitive receptors to TACs was determined to be potentially significant for the Project in part due to the up to 15-year exposure period of Project activities. However, similar to the Project and construction measures that would be implemented by MM-AQ-1, construction of the Basic Reclamation (6,500 CY) Alternative may result in the implementation of measures targeted towards reduced emissions of TACs from construction-related exhaust as a best practice.

While emissions and health effects including exposure of sensitive receptors to TACs would be less than the Project due to an overall reduced duration of on-site activities, annual sediment management activities in Tijuana River Valley would continue to occur. In absence of a longer-term solution for sediment placement, land managers would continue to haul excavated sediments to construction sites, beach replenishment sites (if sediments were found to

be appropriate based on testing), or regional landfills. Thus, emissions associated with seasonal haul truck traffic across the County would be greater under this alternative compared to the Project.

Biological Resources

Due to a shorter duration of on-site activities and a reduced footprint of disturbance, temporary impacts to biological resources would be reduced under this alternative. Compared to the Project, activities under this alternative (i.e., reclamation of the oversteepened, eroded slope on the Project site) would primarily occur within areas mapped as Disturbed Lands (see Figure 3.3-3a). Impacts to disturbed coastal sage scrub would be required to establish access to the slope from the staging area. The size of the staging area and related impacts to vegetation communities and plant and wildlife species would also be reduced and, due to the lower volume of sediment required to reclaim the oversteepened slope, stakeholders may determine that on-site processing is not necessary. Thus, processing may occur at the existing staging areas of participating land managers. Similar to the Project, implementation of this alternative is likely to result in potential impacts to sensitive species (coastal California gnatcatcher and Quino checkerspot butterfly) given the proximity of the slope to observed species locations. Thus, this alternative may experience similar mitigation and compliance measures for sensitive species as the Project. Indirect impacts to wildlife species due to construction equipment noise would be reduced to a shorter duration of on-site activities; however, construction activities would remain in close proximity to occupied coastal California gnatcatcher habitat and would likely require similar mitigation as the Project.

While this alternative would result in a net gain of habitat area for plants and wildlife (due to revegetation of the reclaimed slope and assumed revegetation of new access on site), the overall gain would be substantially less compared to the Project. In a similar manner, this alternative would result in a reduced extent and quality of suitable habitat for wildlife species compared to the Project. Furthermore, while this basic reclamation alternative results in reduced temporary impacts to biological resources, it poses significant threats to biological resources throughout the Tijuana River Valley by reducing land managers' abilities to manage sediment in a cost effective and sustainable manner and protect downstream habitat and species.

Archaeological, Historical, and Tribal Cultural Resources

Compared to the Project, which would result in impacts to an approximately 20-acre area, this alternative would have a reduced footprint of disturbance and would require a shorter timeframe to implement. While no known archaeological, historical, or tribal cultural resources would be impacted during construction associated with Basic Reclamation (6,500 CY) Alternative (implementation of the Project would similarly not impact known resources), unknown resources may be impacted during site preparation and grading activities. Similarly, human remains would not be anticipated to be impacted during construction but there is potential for previously undisturbed human remains to underlie the eroded, oversteepened slope. Overall impacts under this alternative would be reduced compared to the Project due to an overall smaller footprint and reduced extent of ground-disturbing activities. While the overall duration of activities capable of impacting previously unknown resources and human remains would be reduced under this alternative, similar mitigation measures as those required for the Project (updated archaeological survey, limited archaeological and Native American monitoring, and standard notification and halt work protocol should human remains be encountered) would be implemented.

Geology and Soils

With the exception of potential impacts to paleontological resources, impacts to geology and soil resources under the Project were determined to be less than significant or no impact. Regarding paleontological resources, Section

3.5 of this EIR discloses that the eroded, oversteepened slope area (i.e., where construction activities associated with the Basic Reclamation [6,500 CY] Alternative would be focused) is primarily underlain by geological units of moderate sensitivity with the northern extent of the slope extending into an area underlain by geological units of high sensitivity. As the northern extent of the slope is outside of the Phase 1 area (in other words, outside of the footprint of the Basic Reclamation [6,500 CY] Alternative), ground-disturbing activities associated with this alternative would primarily occur in areas underlain by geological units of moderate sensitivity. Reclamation activities associated with this alternative are likely to require over 2,000 cubic yards of excavation and, thus, impacts to paleontological resources would be potentially significant and require implementation of the standard mitigation measure that includes a pre-construction records search verification; presence of a paleontological monitor during grading, excavating, and trenching work; implementation of a discovery notification process; and post-construction preparation of a paleontological report. Compared to the Project and due to a smaller construction footprint, this alternative would experience a reduced potential for paleontological impacts. However, given the sensitivity of the Project site, including the footprint of the Basic Reclamation (6,500 CY) Alternative, similar mitigation would be implemented.

Noise

The Project was determined to result in a potentially significant impact related to the exposure of an off-site community receptor to noise levels exceeding the 60 A-weighted decibel (dBA) community noise equivalent level (CNEL) criterion due to substantial predicted truck traffic noise levels associated Phases 4, 5, and 6 haul truck traffic between in-valley sources and the Project site. This potential impact was determined to be less than significant with implementation of temporary haul truck speed restrictions (MM-NOI-1) on Monument Road between C DPR's Goat Canyon sedimentation basins and the Project site.

Compared to the Project, operational activities associated with this alternative would not result in the potential exposure of an off-site residence to noise levels exceeding the 60 dBA CNEL criterion. As this impact is associated with haul truck traffic from Phases 4, 5, and 6 of the Project and these phases would not occur under the Basic Reclamation (6,500 CY) Alternative, the potentially significant noise impact of the Project would not occur. Thus, noise impacts under the Basic Reclamation (6,500 CY) Alternative would be reduced compared to the Project.

Wildfire

Anticipated impacts to exacerbated fire risk and wildfire risk associated with Project-related activities would be less than significant with the implementation of the pre-construction vegetation management (MM-WF-1). As discussed in Section 3.10, Wildfire, the Project site lies within areas designated a Very High Fire Hazard Severity Zone by the California Department of Forestry and Fire Protection and in a Local Responsibility Area, as further discussed in Section 3.10.1. However, with incorporation of MM-AQ-1 and MM-WF-1, which prohibit idling vehicles on the Project site and require pre-construction vegetation maintenance, the Project would result in less-than-significant impacts related to wildfire.

The Basic Reclamation (6,500 CY) Alternative would result in generally similar mining activities compressed into a shorter timeframe (less than 1 year) and would be conducted on a portion of the same Project site. The Basic Reclamation (6,500 CY) Alternative would be subject to the same design features as the Project to reduce impacts related to wildfire. Impacts associated with the Basic Reclamation (6,500 CY) Alternative would be considered less than significant, the same as the proposed Project.

Ability to Meet Project Objectives

This alternative would partially address Project objectives including Objectives 2 (divert sediment from landfills), 3 (improved water quality), 4 (stabilization of the Project site and reduced opportunities for downstream erosion, runoff, and water quality impairment), 5 (implement cost-effective habitat protection), and 7 (release the existing MINE ID No.). However, compared to the Project, the Reduced Capacity (6,500 CY) Alternative fall significantly short of a meaningful achievement of these objectives. For example, 6,500 CY represents less than 10% of only 1 year of estimated sediment management need for land managers in the Tijuana River Valley. Although approximately 6,500 CY of excavated sediment would be diverted from landfills, following completion of this alternative, sediment placement and disposal would not change in any significant manner. In addition, Objective 1 would not be fully achieved as the site would not be restored to historic (pre-mining operations) landform and vegetative patterns.

6.2.3 Alternative 3 – Reduced Capacity (500,000 CY) Alternative

The Reduced Capacity (500,000 CY) Alternative proposes the placement of 500,000 CY of excess sediment from annual basin and channel maintenance activities for reclamation, landform creation, and habitat restoration efforts on the Project site. This alternative would entail half the intended placement volume of the Project and, thus, the duration of on-site activities would be approximately half that of the Project (7–8 years). Due to a reduced volume of sediment to be placed on the Project site, the landforms created under this alternative would have a smaller footprint than those associated with the Project. As such, this alternative would not fully restore the site to historic (pre-mining operations) topography and vegetative patterns. Similar to the Project, this alternative would include on-site sediment processing and placement, interim and permanent revegetation, and, once construction activities are complete, the Project site would be managed as restored open space.

Air Quality

Construction and operational emissions generated from the Project would result from criteria air pollutants from sediment, processing, and reclamation activities, as well as operation of off-road equipment, vendor trips, off-road trucks, over-the-highway trucks, and worker commuter trips.

The Reduced Capacity (500,000 CY) Alternative would result in fewer overall haul truck trips compared to the Project due to an overall reduction in sediment volume that would be hauled to the Project site for processing and placement. Therefore, the Reduced Capacity (500,000 CY) Alternative would result in reduced criteria air pollutant emissions and TAC emissions as compared to the Project. Under this alternative, the mobile processing screen and other on-site activities would operate for a shorter overall duration than the Project. Thus, the Reduced Capacity (500,000 CY) Alternative would result in reduced fugitive dust emissions and soil constituent TAC emissions comparative to the Project. However, implementation of MM-AQ-1 would be required to reduce emissions of TAC and diesel particulate matter emissions from the Reduced Capacity (500,000 CY) Alternative off-road diesel-powered equipment and associated health risk impacts, similar to the Project.

Similar Project design features and mitigation measures would be implemented under Alternative 3 to minimize criteria air pollutant and TAC emissions, including dust control measures and restrictions on vehicle idling on the Project site (MM-AQ-1). As a result, air quality impacts would be further reduced compared to the Project, and impacts would be less than significant with the implementation of mitigation measures and Project design features.

While mobile on-site sources of air quality emissions would be reduced compared to the Project, this reduced capacity alternative would utilize only 50% of the Project's sediment placement capacity. Therefore, truck trips

associated with haul truck disposal of excess sediment at appropriate regional landfills, including Miramar Landfill or other off-site placement locations, would continue as under existing conditions. As such and compared to the Project, air quality emissions associated with regional truck traffic over the operational life of the on-site activities would be greater under this alternative.

Biological Resources

Development activities associated with the Project would result in potentially significant direct and indirect impacts to special-status species and sensitive natural communities. Implementation of proposed mitigation measures would result in less-than-significant impacts.

The Reduced Capacity (500,000 CY) Alternative would result in similar ground-disturbing activities but, due to an overall smaller footprint and shorter duration of construction, would result in a reduction of impacts to biological resources. Total permanent and temporary impacts to vegetation communities and land cover types as a result of the Reduced Capacity (500,000 CY) Alternative would be less those of the Project. However, this alternative would be required to implement the same mitigation measures for biological resources as the proposed Project. Therefore, the Reduced Capacity (500,000 CY) Alternative would have reduced impacts to biological resources (compared to the Project) that would be reduced to less than significant through the implementation of mitigation measures.

While this Reduced Capacity (500,000 CY) Alternative would result in reduced permanent and temporary impacts to biological resources on site, it would pose a significant threats to biological resources throughout the Tijuana River Valley by reducing land managers' abilities to manage sediment in a cost effective and sustainable manner and protect sensitive downstream habitat.

Archaeological, Historical, and Tribal Cultural Resources

Because the area of disturbance would be reduced compared to the Project, potential impacts to archaeological, historical, and tribal cultural resources would generally be reduced under the Reduced Capacity (500,000 CY) Alternative. However, potential impacts resulting from inadvertent discovery of resources and remains would not be reduced. The significance determination of less than significant with mitigation incorporated would be similar to the Project.

Geology and Soils

The Project would not result in impacts to geology and soils resources, as the Project does not involve placing people or structures in areas subject to elevated seismic risks, ground failure, or other geologic-related hazards. Because the Project would not introduce people or permanent structures that would be used for human occupation to the Project site, the Project is less susceptible to impacts from seismic hazards. Additionally, the grading plans reflect recommendations from the geotechnical evaluation and address appropriate compacted fill, fill slope construction, and slope protection measures. The Project would minimize any potential impacts associated with slope stability.

Similar types of activities would occur on site under the Reduced Capacity (500,000 CY) Alternative, and operational activities would not involve placing people or structures in areas subject to seismic risk, ground failure, or other geologic-related hazards. This alternative would incorporate the same project design features as the Project, and impacts relative to geology and soils would be less than significant, similar to the proposed Project, although slightly reduced due to the overall reduced timeframe and shorter duration of on-site activities.

With regards to paleontological resources, the Project site's potential to contain paleontological resources is considered moderate to high. With the implementation of MM-PAL-1, which would include monitoring for paleontological resources, potential impacts to paleontological resources would be less than significant.

The Reduced Capacity (500,000 CY) Alternative would result in similar mining and reclamation activities occurring on site. Therefore, impacts to paleontological resources under Alternative 3 would be similar to those under the proposed Project, and impacts would be less than significant with mitigation incorporated.

Noise

Similar to the Project, operational activities associated with the Reduced Capacity (500,000 CY) Alternative could result in the potential exposure of an off-site residence to noise levels exceeding the 60 dBA CNEL criterion. The specific impact would likely occur during the last phase of grading and would be similar to that anticipated under Phase 4 of the Project. Similar to the Project, implementation of a speed restriction mitigation measure for haul truck traffic would be required to reduce equipment noise propagation and impacts would be reduced to a less-than-significant level.

Wildfire

The Reduced Capacity (500,000 CY) Alternative would result in similar mining activities extended over a reduced period of time (7 to 8 years) and would generally entail the implementation of Phases 1 through 4 of the Project to reach the sediment placement goal of 500,000 CY. The Reduced Capacity (500,000 CY) Alternative would be subject to the same design features required to reduce impacts related to wildfire. Impacts associated with this alternative would be considered less than significant, the same as the proposed Project.

Ability to Meet Project Objectives

This alternative would partially address Project objectives. However, it would not maximize use of the Project site for beneficial sediment reuse and would have a shorter operational lifespan compared to the Project. Once the sediment CY goal has been met and final elevations have been achieved, sediment placement and disposal would be reused on construction sites, for beach replenishment, or habitat protection/restoration projects. If a location for reuse is not located or secured, excavated sediment would be disposed of at an appropriate regional landfill.

6.3 Conclusions

Table 6-1 compares the potentially significant environmental impacts of the Project to each alternative. In addition, as discussed in Section 6.2, the comparative discussion of Project and project alternative effects in this section is limited to those resources that Chapter 3 of the EIR determined would experience potentially significant impacts (i.e., air quality, biological resources, cultural resources, geology and soils, noise, and wildfire).

Table 6-1. Comparison of Impacts of the Alternatives

| Environmental Issue Area | Project | Alternative 1 - No Project/No Development | Alternative 2 - Basic Reclamation (6,500 CY) Alternative | Alternative 3 - Reduced Capacity (500,000 CY) Alternative |
|---|---------|---|--|---|
| Air Quality ¹ | LTS/MM | ▼ ¹ | ▼ ¹ | ▼ ¹ |
| Biological Resources | LTS/MM | ▼ | ▼ | ▼ |
| Archaeological, Historical, and Tribal Cultural Resources | LTS/MM | ▼ | ▼ | ▼ |
| Geology and Soils | LTS/MM | ▼ | ▼ | ▼ |
| Noise | LTS/MM | ▼ | ▼ | ▼ |
| Wildfire | LTS/MM | ▼ | ▼ | ▼ |

Notes:

△ Alternative is likely to result in greater impacts to issue when compared to Project.

▬ Alternative is likely to result in similar impacts to issue when compared to Project.

▼ Alternative is likely to result in reduced impacts to issue when compared to Project.

LTS/MM = Less than significant impact with mitigation, LTS = Less than significant impact, SU=Significant and Unavoidable

¹ On-site activity air quality emissions would be avoided (No Project/No Development Alternative) or reduced (Alternatives 2 and 3) due to a reduced footprint and duration of construction activities relative to the Project

6.3.1 Environmentally Superior Alternative

Table 6-1 provides a summary of the alternatives impact analysis considered in the EIR, identifies the areas of potential environmental effects per CEQA, and ranks each alternative as better, the same, or worse than the Project with respect to each issue area.

As indicated in Table 6-1, Alternative 1, the No Project Alternative, would result in the fewest environmental impacts and subsequently would be considered the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Of the alternatives evaluated above, the Reduced Capacity (500,000 CY) Alternative was found to be the environmentally superior alternative because it is feasible to implement and reduces the severity of potentially significant impacts associated with the Project. The Reduced Capacity (500,000 CY) Alternative was found to have reduced impacts related to air quality, biological resources, cultural resources, geology and soils, noise, and wildlife. The Reduced Capacity (500,000 CY) Alternative also generally meets all the Project objectives, albeit with a reduced total capacity for beneficial reuse of sediment on the Project site. Although the Reduced Capacity (500,000 CY) Alternative is found to be the environmentally superior alternative from a site-based analysis, considering the Tijuana River Valley more broadly, this alternative does not maximize Project objectives and falls short of achieving potential environmental and public health benefits of the Project.

6.4 References

AECOM. 2016. *Nelson Sloan Management and Operations Plan and Cost Analysis*. Prepared for County of San Diego Department of Parks and Recreation. April 5, 2016.

SFEI (San Francisco Estuary Institute). 2017. *Tijuana River Valley Historical Ecology Investigation*. January 2017.

URS. 2010. *Land Use Options for the Nelson Sloan Property*. Final Report. June 30, 2010.

INTENTIONALLY LEFT BLANK

7 List of Preparers

7.1 California Department of Parks and Recreation (CDPR)

Chris Peregrin, Senior Environmental Scientist, California Department of Parks and Recreation (CDPR), Tijuana River National Estuarine Research Reserve (TRNERR)

Joanna Collier, Senior State Archaeologist, CDPR, Southern Service Center

Lorena Warner-Lara, Environmental Scientist, CDPR, TRNERR

Lucas Serna, Associate Park and Recreation Specialist, California Environmental Quality Act Review, CDPR, Southern Service Center

Nicole Turner, Associate State Archaeologist, CDPR, San Diego Coast District

7.2 Dudek

Shawn Shamlou, Principal in Charge

Josh Saunders, Project Manager

Bryn Evans, Water Infrastructure Senior Project Manager

Nicole Rieger, Water Infrastructure Senior Engineer

Brian Baker, Treatment Senior Designer

Paul Walsh, Senior Landscape Architect

Jonathan Martin, Hydrologist

Glenna McMahon, Principal Environmental Engineer

Audrey Hershberger, Environmental Engineer

Perry Russell, Geologist

Ryan Munnikhuis, Environmental Technical Analyst (Geology and Hydrology)

Brad Comeau, Archaeologist

Adam Poll, Environmental Specialist (Air Quality and Greenhouse Gas)

Vipul Joshi, Principal Biologist

Janice Wondolleck, Biologist

Erin Bergman, Biologist

Patricia Schuyler, Biologist

Callie Amoaku, Biologist

Mark Storm, Senior Acoustician

Mike Greene, Environmental Specialist/Acoustician

Sarah Siren, Paleontologist

Dennis Pascua, Senior Transportation Planner/Transportation Services Manager

Sabita Tewani, Transportation Planner

Mladen Popovic, Transportation Planner

Dana Link-Herrera, Environmental Planner

Carolyn Somvilay, Environmental Analyst

Brandon Whalen-Castellanos, Environmental Analyst

Steve Taffolla, Publications Manager

Hannah Wertheimer-Roberts, Technical Editor

Scott Graff, Technical Editor

Rachel Dobrolenski, Publications Specialist
Darlene Alilain-Horn, Publications Specialist
Mark McGinnis, GIS Group Manager
Andrew Greis, GIS Technician
Carrie Kubacki, GIS Technician

7.3 Subconsultants

Robert Scott and Catherine Ellis; Haley & Aldrich (Operations and Maintenance Plan, Project Description, Multi-jurisdictional Agreement Support, Preliminary Geotechnical Evaluation and Geologic Field Reconnaissance Report)

Dennis Fransway, Crystal Howard, and Warren Coalson; EnviroMINE (Operations and Maintenance Plan, Project Description, Multi-jurisdictional Agreement Support, Mineral Resources Valuation Memorandum)

Philip Jo, Kroner (Noise and Phase I Environmental Site Assessment Technical Reports)