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SUBSEQUENT ENVIRONMENTAL IMPACT REPORT TO ENVIRONMENTAL IMPACT REPORT NO. 575

AMENDMENT NO. 5 TO THE PRIMA DESHECHA LANDFILL GENERAL DEVELOPMENT PLAN FOR THE INCREASE IN MAXIMUM DAILY OPERATIONS AT PRIMA DESHECHA LANDFILL

COUNTY OF ORANGE



January 2026

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COUNTY OF ORANGE

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January 2026

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TABLE OF CONTENTS

TABLE OF CONTENTS i
FIGURES AND TABLES vii
LIST OF ABBREVIATIONS AND ACRONYMS ix
1.0 EXECUTIVE SUMMARY 1-1
1.1 Introduction 1-1
1.2 Summary of Project Description 1-3
1.3 Areas of Controversy 1-4
1.4 Significant Unavoidable impacts 1-5
1.4.1 Significant and Unavoidable Impacts Disclosed in Previous Environmental Documents 1-6
1.4.2 Significant and Unavoidable Impacts Identified in this Subsequent EIR 1-7
1.4.3 Alternatives 1-10
1.5 Summary of Impacts and Mitigation Measures 1-12
1.5.1 Secondary Effects of Mitigation Measures 1-13
2.0 INTRODUCTION 2-1
2.1 Purpose of this Subsequent Environmental Impact Report 2-1
2.1.1 General Background 2-1
2.1.2 Authority 2-4
2.1.3 Subsequent EIR 2-4
2.1.4 Previous Environmental Documents 2-6
2.1.5 Incorporation by Reference 2-8
2.2 Scoping Process 2-10
2.2.1 Notice of Preparation and Initial Study 2-10
2.2.2 Scoping Meeting 2-11
2.2.3 Areas of Controversy 2-11
2.3 Scope of This Subsequent EIR 2-12
2.3.1 Potentially Significant Impacts in the Initial Study 2-12
2.3.2 Impacts Considered Less than Significant in the Initial Study 2-13
2.4 Format of the Subsequent EIR 2-14
2.5 Public Review of the Draft Subsequent EIR 2-16
3.0 PROJECT DESCRIPTION 3-1
3.1 Project Overview 3-1
3.2 Environmental Setting and Surrounding Land Uses 3-1
3.2.1 Regional Location and Setting 3-1
3.2.2 Surrounding Land Uses 3-1
3.2.3 General Plan and Specific Plan Land Use Designations 3-2
3.3 Existing Project Site 3-2
3.3.1 General Development Plan 3-2
3.3.2 Landfill Site 3-3
3.3.3 Current Landfill Operations 3-3
3.4 Proposed Project 3-5
3.4.1 Project Purpose 3-5
3.4.2 Project Objectives 3-6
3.4.3 Project Components 3-7

3.4.4 Project Design Features and Mitigation Measures 3-8
3.4.5 Project Schedule and Phases 3-8
3.4.6 Changes in Land Use Controls 3-8
3.5 Required Permits and Approvals 3-9
3.5.1 Discretionary Actions 3-9
3.5.2 Other Ministerial Actions 3-9
3.5.3 Current and Probable Future Actions by Responsible Agencies 3-9
3.5.4 Other Related Actions 3-9
3.6 Cumulative Analysis 3-9

4.0 EXISTING ENVIRONMENTAL SETTING, ENVIRONMENTAL ANALYSIS, IMPACTS, AND MITIGATION MEASURES 4-1

4.1 Air Quality 4.1-1
4.1.1 Scoping Process 4.1-1
4.1.2 Summary of Previous Environmental Documents 4.1-2
4.1.3 Existing Environmental Setting 4.1-6
4.1.4 Regulatory Setting 4.1-23
4.1.5 Methodology 4.1-32
4.1.6 Thresholds of Significance 4.1-37
4.1.7 Project Impacts 4.1-39
4.1.8 Cumulative Impacts 4.1-53
4.1.9 Level of Significance Prior to Mitigation 4.1-54
4.1.10 Regulatory Compliance Measures and Mitigation Measures 4.1-54
4.1.11 Level of Significance after Mitigation 4.1-61
4.2 Greenhouse Gas Emissions 4.2-1
4.2.1 Scoping Process 4.2-1
4.2.2 Summary of Previous Environmental Documents 4.2-1
4.2.3 Existing Environmental Setting 4.2-1
4.2.4 Regulatory Setting 4.2-7
4.2.5 Methodology 4.2-18
4.2.6 Thresholds of Significance 4.2-21
4.2.7 Project Impacts 4.2-22
4.2.8 Cumulative Impacts 4.2-28
4.2.9 Level of Significance Prior to Mitigation 4.2-29
4.2.10 Regulatory Compliance Measures and Mitigation Measures 4.2-29
4.2.11 Level of Significance after Mitigation 4.2-32
4.3 Noise 4.3-1
4.3.1 Scoping Process 4.3-1
4.3.2 Summary of Previous Environmental Documents 4.3-1
4.3.3 Technical Background 4.3-4
4.3.4 Existing Environmental Setting 4.3-6
4.3.5 Regulatory Setting 4.3-13
4.3.6 Methodology 4.3-19
4.3.7 Thresholds of Significance 4.3-20
4.3.8 Project Impacts 4.3-20
4.3.9 Cumulative Impacts 4.3-35
4.3.10 Level of Significance Prior to Mitigation 4.3-36
4.3.11 Regulatory Compliance Measures and Mitigation Measures 4.3-36
4.3.12 Level of Significance after Mitigation 4.3-37

5.0 ENVIRONMENTAL ISSUES NOT REQUIRING SUBSTANTIAL ADDITIONAL ANALYSIS 5-1

5.1 Introduction 5-1
5.2 Summary of Issues Not Requiring Substantial Additional Analysis 5-1
5.2.1 Aesthetics 5-1
5.2.2 Agriculture and Forestry 5-4
5.2.3 Biological Resources 5-6
5.2.4 Cultural Resources 5-8
5.2.5 Energy 5-10
5.2.6 Geology and Soils 5-17
5.2.7 Hazards and Hazardous Materials 5-19
5.2.8 Hydrology and Water Quality 5-22
5.2.9 Land Use and Planning 5-25
5.2.10 Mineral Resources 5-27
5.2.11 Population and Housing 5-28
5.2.12 Public Services 5-28
5.2.13 Recreation 5-31
5.2.14 Utilities and Service Systems 5-32
5.2.15 Transportation 5-34
5.2.16 Tribal Cultural Resources 5-40
5.2.17 Wildfire 5-43

6.0 OTHER CEQA CONSIDERATIONS 6-1

6.1 Summary of Significant Unavoidable Impacts 6-1
6.1.1 Air Quality 6-1
6.1.2 Greenhouse Gas Emissions 6-2
6.2 Growth-Inducing Impacts 6-3
6.2.1 Removal of Obstacles to, or Otherwise Foster, Population Growth 6-3
6.2.2 Foster Economic Growth 6-4
6.2.3 Other Characteristics 6-4
6.3 Significant Irreversible Environmental Changes 6-4

7.0 ALTERNATIVES 7-1

7.1 Introduction 7-1
7.1.1 Scoping 7-2
7.2 Proposed Project 7-2
7.2.1 Project Characteristics 7-2
7.2.2 Project Objectives 7-3
7.2.3 Significant Unavoidable Impacts of the Proposed Project 7-4
7.3 Alternatives Previously Considered for Amendments to the 2001 GDP 7-6
7.3.1 Alternatives Previously Analyzed in the 2001 GDP EIR 7-6
7.3.2 Alternatives Previously Analyzed in the First Supplemental EIR to the 2001 GDP EIR 7-7
7.3.3 Alternatives Previously Analyzed in the Second Supplemental EIR to the 2001 GDP EIR 7-8
7.4 Alternatives Considered in this Subsequent EIR but Rejected from Further Consideration 7-9
7.4.1 Alternative Sites 7-9
7.4.2 Restrict Operational Hours 7-10
7.4.3 Waste Management Alternatives 7-11
7.4.4 Implement Alternative Haul Route 7-11

7.5 Range of Alternatives Being Evaluated 7-12
7.5.1 Overview of Alternatives 7-13
7.5.2 Alternative 1: No Project Alternative 7-14
7.5.3 Alternative 2: Reroute Greater Share of Olinda Alpha Landfill Waste to FRB Landfill 7-16
7.6 Identification of the Environmentally Superior Alternative 7-19
8.0 LIST OF PREPARERS AND PERSONS CONSULTED 8-1
8.1 List of Preparers 8-1
8.1.1 County of Orange 8-1
8.1.2 LSA Associates, Inc. 8-1
8.1.3 SCS Engineers 8-2
8.2 Agencies Consulted 8-2
9.0 REFERENCES 9-1

APPENDICES

A: NOTICE OF PREPARATION, INITIAL STUDY, SUMMARY OF COMMENTS RECEIVED DURING PUBLIC SCOPING, AND PUBLIC AGENCY COMMENTS RECEIVED ON THE NOTICE OF PREPARATION
B: AIR QUALITY MODELING
B-1 Air Quality Modeling Outputs
B-2 Health Risk Assessment (HRA) Outputs
B-3 Energy Calculations
C: ODOR STUDY
D: NOISE MODELING
E: TRANSPORTATION WHITE PAPER AND TRAFFIC STUDY
E-1 Transportation Regulatory Framework White Paper
E-2 Traffic Volume and Vehicle Miles Traveled Study
F: AMENDMENT NO. 5 TO THE 2001 PRIMA DESHECHA LANDFILL GENERAL DEVELOPMENT PLAN
G: MITIGATION MONITORING AND REPORTING PROGRAM

FIGURES AND TABLES

FIGURES

Figure 3.1: Project Location 3-11
Figure 3.2: Surrounding Land Use 3-13
Figure 3.3: Landfill Zones 3-15
Figure 3.4: General Land Use Designations 3-17
Figure 3.5: OCWR Landfills 3-19
Figure 4.0.1: Cumulative Projects 4-15
Figure 4.1.1: Project Area Wind Patterns 4.1-15
Figure 4.1.2: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context 4.1-19
Figure 4.1.3: Sensitive Receptor Grid 4.1-49
Figure 4.3.1: Surrounding Sensitive Receptors 4.3-7
Figure 4.3.2: Existing Noise Monitoring Locations 4.3-11
Figure 4.3.3: Operational Noise Levels 4.3-25

TABLES

Table 1.A: Significant and Unavoidable Impacts in Prior Environmental Documents 1-8
Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation 1-15
Table 2.A: EIR Addenda for the Prima Deshecha GDP 2-9
Table 3.A: Prima Deshecha Landfill Waste Stream 3-5
Table 3.B: Comparison of Current and Projected Maximum Daily Landfill Operations 3-7
Table 3.C: Anticipated Permits and Authorizations 3-10
Table 4.A: Cumulative Projects 4-7
Table 4.1.A: Sources and Health Effects of Air Pollutants 4.1-8
Table 4.1.B: Federal and State Ambient Air Quality Standards 4.1-12
Table 4.1.C: Attainment Status of the South Coast Air Basin 4.1-16
Table 4.1.D: Ambient Air Quality in the Project Vicinity 4.1-18
Table 4.1.E: Surrounding Sensitive Receptors 4.1-20
Table 4.1.F: Annual Baseline Emissions (tons/year) 4.1-22
Table 4.1.G: Annual Toxic Air Contaminant Emissions 4.1-23
Table 4.1.H: Proposed Project Equipment List 4.1-33
Table 4.1.I: South Coast Air Quality Management District Significance Thresholds 4.1-38
Table 4.1.J: Unmitigated Maximum Daily Operational Emissions (lbs/day) 4.1-42
Table 4.1.K: Mitigated Maximum Daily Operational Emissions (lbs/day) 4.1-43
Table 4.1.L: Previously Approved Project Emissions (lbs/day) 4.1-44
Table 4.1.M: Maximum Daily Project Operation Combined with Previously Approved Project Emissions (lbs/day) 4.1-44
Table 4.1.N: Maximum Long-Term Health Risk Impact from Project Operation 4.1-49
Table 4.2.A: Global Warming Potential of Greenhouse Gases 4.2-3
Table 4.2.B: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets 4.2-10
Table 4.2.C: Proposed Project Equipment List 4.2-20

Table 4.2.D: Greenhouse Gas Emissions (tons/year) 4.2-23
Table 4.3.A: Surrounding Noise-Sensitive Land Uses 4.3-6
Table 4.3.B: Existing Noise Level Measurements 4.3-9
Table 4.3.C: Existing Traffic Noise Levels 4.3-13
Table 4.3.D: Vibration Annoyance Criteria 4.3-14
Table 4.3.E: Vibration Damage Criteria 4.3-14
Table 4.3.F: City of San Juan Capistrano Interior and Exterior Noise Standards 4.3-16
Table 4.3.G: City of San Juan Capistrano Noise Standards for Stationary Noise Sources 4.3-17
Table 4.3.H: Typical Maximum Equipment Noise Levels (L_{max}) 4.3-21
Table 4.3.I: Potential Noise Impacts 4.3-22
Table 4.3.J: Summary of Zone 1 and Zone 4 Operational Noise Levels 4.3-23
Table 4.3.K: Existing (2023) Traffic Noise Levels Without and With Project 4.3-28
Table 4.3.L: Future Build-Out (2045) Traffic Noise Levels Without and With Project 4.3-30
Table 4.3.M: Future Build-Out (2045) with LPPE Traffic Noise Levels Without and With Project 4.3-32
Table 4.3.N: Summary of Zone 1 and Zone 4 Operational Vibration Levels 4.3-34
Table 5.A: Environmental Topics Evaluated in Prior CEQA Documentation 5-2
Table 5.B: Summary of Fuel Consumption (gallons per year) 5-14
Table 5.C: *State CEQA Guidelines* Appendix F Energy Conservation Consistency Analysis 5-16
Table 7.A: Consistency of Alternatives with Project Objectives 7-13
Table 7.B: Impacts of the Alternatives Compared with Impacts of the Proposed Project 7-13

LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
2024–2050 RTP/SCS	2024–2050 Regional Transportation Plan/Sustainable Communities Strategy
AAQS	ambient air quality standards
AB	Assembly Bill
ADT	average daily traffic
AER	Annual Emissions Report
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
Air District	Bay Area Air District (formerly Bay Area Air Quality Management District)
amsl	above mean sea level
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BMPs	best management practices
BOS	Board of Supervisors
Btu	British thermal unit
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
California Register	California Register of Historical Resources
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CAT	Climate Action Team

CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CHP	California Highway Patrol
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalents
County	County of Orange
CUSD	Capistrano United School District
D/T	dilutions to threshold
DAMP	Drainage Area Master Plan
dB	decibels
dBA	A-weighted decibels
DOE	United States Department of Energy
DPM	diesel particulate matter
DRS	Disposal Reporting System
EGR	exhaust gas recirculation
EIA	United States Energy Information Administration
EIR	Environmental Impact Report
EMFAC2021	California Emissions Factor Model, Version 2021
EO	Executive Order
EPA	United States Environmental Protection Agency
EV	electric vehicle
FCCA	federal Clean Air Act
FHSZ	Fire Hazard Severity Zone

FHWA	Federal Highway Administration
Final EIR No. 575	2001 GDP EIR
FRB Landfill	Frank R. Bowerman Landfill
FTA	Federal Transit Administration
FY	Fiscal Year
GDP	General Development Plan
GDP EIR	General Development Plan Environmental Impact Report
GHG	greenhouse gas
GHGRP	Greenhouse Gas Reporting Program
GTE	*gas to energy*
GWh	gigawatt-hours
GWP	Global Warming Potential
HBP	Harbors, Beaches, and Parks
HFCs	hydrofluorocarbons
HI	hazard index
HMMP	Habitat Mitigation and Monitoring Plan
hp	horsepower
HRA	health risk assessment
I-215	Interstate 215
I-5	Interstate 5
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
IS/NOP	Initial Study/Notice of Preparation
IWMD	Integrated Waste Management Department
JWA	John Wayne Airport
kWh	kilowatt-hours
Landfill	Prima Deshecha Landfill
lbs/day	pounds per day
LCFS	low carbon fuel standard
L_{dn}	day-night average level
LDR	Local Development Review

LEA	Local Enforcement Agency
L_{eq}	equivalent continuous sound level
LFG	landfill gas
LFG-ERF	landfill gas combustion energy recovery facility
L_{max}	maximum instantaneous noise level
LOS	level of service
LPG	liquefied petroleum gas
LPPE	Los Patrones Parkway Extension
LRA	Local Responsibility Area
MATES IV	Multiple Air Toxics Exposure Study IV
mcy	million cubic yards
MEI	maximally exposed individual
MICR	maximum individual cancer risk
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MMT CO_2e	million metric tons of CO_2e
MOU	Memorandum of Understanding
MPAH	Master Plan of Arterial Highways
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MRF	Materials Recovery Facility
MSW	municipal solid waste
MT CO_2e	metric tons of CO_2e
MT CO_2e/yr	metric tons of CO_2e per year
MT/yr	metric tons per year
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
NCHRP	National Cooperative Highway Research Program

NHTSA	National Highway Traffic Safety Administration
NMOC	non-methane organic compounds
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OCCP	Orange County Circulation Plan
OCFA	Orange County Fire Authority
OCPW	OC Public Works
OCTA	Orange County Transportation Authority
OCTAM	Orange County Transportation Analysis Model
OCWR	OC Waste & Recycling
OEHHA	California Office of Environmental Health Hazard Assessment
OEM	original equipment manufacturers
OPR	Governor's Office of Planning and Research (now known as the Office of Land Use and Climate Innovation)
Pb	lead
PCE	passenger car equivalent
PF&RD	Public Facilities and Resources Department
PFCs	perfluorocarbons
Plan	Excavation Management Plan
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
$PM_{2.5}$	particulate matter less than 2.5 microns in size
ppb	parts per billion
ppm	parts per million
ppmv	parts per million by volume
PPV	peak particle velocity
PRC	Public Resources Code
Proposed Project	Increase in Maximum Daily Operations at Prima Deshecha Landfill

RCM	Regulatory Compliance Measure
RCP	Regional Comprehensive Plan
RELOOC	Regional Landfill Options for Orange County Strategic Plan
RELs	reference exposure levels
RMP	Risk Management Policy
RMS	root-mean-square
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAE	Society of Automotive Engineers
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SDG&E	San Diego Gas and Electric
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SO_X	sulfur oxides
SR-74	State Route 74 (Ortega Highway)
SRA	State Responsibility Area
SSHCP	Southern Subregion Habitat Conservation Plan
State CEQA Guidelines	State Guidelines for the Implementation of CEQA of 1970
STIP	State Transportation Improvement Program
Strategic Plan	OC Waste & Recycling Strategic Plan
Subsequent EIR	Subsequent Environmental Impact Report
SUV	sport utility vehicle
SWFP	Solid Waste Facilities Permit

TACs	toxic air contaminants
TCR	tribal cultural resource
TOC	total organic carbon
TPD	tons per day
TRB	Transportation Research Board
URBEMIS	Urban Emissions Model
URF	unit risk factor
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
VdB	vibration velocity decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOCs	volatile organic compounds
vph	vehicles per hour
WMU1	Waste Management Unit 1
WMU2	Waste Management Unit 2
Working Group	GHG CEQA Significance Threshold Working Group
WRCC	Western Regional Climate Center
ZEV	zero emission vehicle

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This Subsequent Environmental Impact Report (Subsequent EIR) has been prepared to evaluate environmental impacts associated with the proposed amendment to the Prima Deshecha Landfill (Landfill) 2001 General Development Plan (GDP) to include the proposed Increase in Maximum Daily Operations at Prima Deshecha Landfill Project (Proposed Project). The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage.

The California Environmental Quality Act (CEQA), Public Resources Code (PRC) Section 21000 et seq., requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. A "discretionary approval" is an action taken by a government agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. An Environmental Impact Report (EIR) is a public document designed to provide the public, local, and State governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

Pursuant to CEQA Section 21067, the lead agency is "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." The County of Orange OC Waste & Recycling (OCWR) has the principal responsibility for approval of the Proposed Project. For this reason, the County of Orange (County) is the CEQA Lead Agency for this project.

A Subsequent EIR is prepared when an EIR has been certified or a negative declaration adopted for a project and the lead agency determines, on the basis of substantial evidence, that one or more of the criteria listed under Section 15162 of the *State CEQA Guidelines*, Title 14 California Code of Regulations (CCR), Section 15000 et seq. (*State CEQA Guidelines*)[1] are met. The County, as Lead Agency, has determined that preparation of a Subsequent EIR is appropriate. This Subsequent EIR has been prepared pursuant to the requirements of CEQA and the County's *2020 Local CEQA Procedures Manual* (November 2020).

Prior environmental documents adopted for the project include one certified EIR, two certified Supplemental EIRs, and several addenda. These documents are described in more detail in Section 2.1.4 and are incorporated by reference into this Subsequent EIR. The certified EIRs include:

- Final EIR No. 575 for the Prima Deshecha Landfill General Development Plan (State Clearinghouse [SCH] #1999041035), 2001; referred to herein as the 2001 GDP EIR

[1] The *State CEQA Guidelines* provide guidance for implementing CEQA based on relevant provisions in the CEQA Statute in PRC Section 21000 et seq. In most cases, unless there is something particular in the CEQA Statute that is not reflected in the *State CEQA Guidelines*, this Subsequent EIR includes citations for the applicable section of the *State CEQA Guidelines*.

- Final Supplemental EIR No. 597 for the Second Amendment to the Prima Deshecha Landfill General Development Plan (SCH #1999041035), 2006; referred to herein as the First Supplemental EIR to the 2001 GDP EIR

- Supplemental EIR No. 2 to Final EIR No. 575 for the Prima Deshecha General Development Plan (SCH #1999041035), 2021; referred to herein as the Second Supplemental EIR to the 2001 GDP EIR

This Subsequent EIR will be used to evaluate the impacts associated with implementing the Proposed Project. Use of a Subsequent EIR provides the County, as Lead Agency, with the opportunity to consider the environmental impacts that are reasonably anticipated for the Proposed Project and its alternatives as well as mitigation measures that can reduce Proposed Project impacts to the extent possible or to below a level of significance.

A Subsequent or Supplemental EIR is prepared when an EIR has been certified or a negative declaration adopted for a project and the Lead Agency determines, on the basis of substantial evidence, that one or more of the criteria listed under *State CEQA Guidelines* Section 15163 are met. If major changes are required to make a previous EIR adequate, the Lead Agency must prepare a Subsequent EIR (Section 15162). If only minor additions or changes are necessary to make the original EIR adequate, the Lead Agency may prepare a Supplemental EIR (Section 15162[a]).

State CEQA Guidelines Section 15163(b) states that a Supplemental EIR need only contain the information necessary to make the prior EIR adequate for the project as revised. Generally, a Supplemental EIR is required to evaluate only the changes in the project, changes in circumstances, or new information that led to the preparation of the further EIR. When evaluating whether changes to the project would result in new significant impacts, the Lead Agency must consider the incremental difference between the original (approved) project and the project as modified. The Lead Agency's review is limited to new effects not previously considered. As supplemental documents, the First Supplemental EIR to the 2001 GDP EIR and Second Supplemental EIR to the 2001 GDP EIR appropriately used the threshold questions in the 2001 GDP EIR and compared the incremental difference between the approved project and the project as modified.

Because this document is a Subsequent EIR (as described in Section 15162 of the *State CEQA Guidelines*), as opposed to a Supplemental EIR, the EIR evaluates the Proposed Project compared to the baseline conditions at the time the Notice of Preparation was issued (i.e., September 27, 2023) rather than evaluating the incremental difference between the previously approved project and the Proposed Project. As a Subsequent EIR, this document incorporates and relies on relevant analysis from prior environmental documents and incorporates previously approved mitigation measures that reduce the potential impacts of the Proposed Project. The thresholds of significance in this EIR reflect revisions made to the *State CEQA Guidelines* since the 2001 GDP EIR. Key revisions include the introduction of significance thresholds for greenhouse gas (GHG) emissions, energy, tribal cultural resources, and wildfire, and include the transition from a level of service (LOS) based approach to a vehicle miles traveled (VMT) based approach for evaluating transportation impacts. The County has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable County technical personnel from other departments and review of all technical subconsultant reports.

Data for this Subsequent EIR was obtained from on-site field observations; discussions with affected agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature; and technical studies prepared for the Proposed Project (e.g., air quality, noise, and greenhouse gases [GHG]).

This Executive Summary is intended to highlight the major areas of importance in the environmental analysis for the Proposed Project as required by *State CEQA Guidelines* Section 15123. This Executive Summary includes a brief description of the Proposed Project, areas of controversy known to the County, including issues raised by agencies and the public, and a summary of alternatives evaluated in the Subsequent EIR. This Executive Summary also provides a table summarizing: (a) the potential environmental impacts likely to occur as a result of Proposed Project implementation and operation; (b) the level of significance prior to implementation of mitigation measures; (c) regulatory compliance measures and mitigation measures that avoid or reduce the significant impacts of the Proposed Project; and (d) the level of significance after mitigation measures are implemented.

1.2 SUMMARY OF PROJECT DESCRIPTION

The Landfill is owned by the County and operated by OCWR. OCWR is a County department that is overseen by the Board of Supervisors. The Landfill encompasses 1,530 acres and is located in southeastern Orange County, partially within San Juan Capistrano (570 acres), San Clemente (133 acres), and unincorporated Orange County (827 acres). The Landfill is located at 32250 Avenida La Pata, and access is provided by Interstate 5 (I-5), Ortega Highway (State Route 74 [SR-74]), and Avenida La Pata. The Landfill site is divided into five zones, called Zones 1 through 5. Zone 1 is the current landfilling area, with an estimated closure date of approximately 2050. Zone 4 is the future landfill development area and is currently under construction, with an estimated closure date of approximately 2102. Development of the Landfill would continue in accordance with the approved 2001 GDP, as amended, which has been the subject of prior environmental review. The scope of the Proposed Project is limited to changes in permitted daily operations. The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents.

Specifically, the Proposed Project would increase the permitted daily maximum tonnage of waste received at the Landfill from 4,000 tons per day (TPD) to 8,000 TPD. The approval for the increased daily tonnage is anticipated to occur in 2026. However, the increase in daily tonnage is anticipated to take place gradually. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. The Proposed Project would allow for up to 36 operational emergency days on which the 8,000 TPD limit could be exceeded by up to 2,000 TPD (i.e., up to 10,000 TPD could be processed on operational emergency days). Such operational emergency days could occur if another OCWR facility is temporarily closed, thereby necessitating diversion of waste to the Landfill, or in the case of an emergency declared by the State or by the County Board of Supervisors. Changes associated with the increased permitted daily maximum tonnage may include additional truck and vehicle trips in the vicinity of the Landfill, the use of additional equipment on site for

processing a larger volume of waste, and an increase in the number of employees at the site. No changes to existing or approved Landfill facilities are required to accommodate additional employees or equipment.

While it is possible that the increase in daily capacity could contribute to earlier closure of the Landfill, no change to the permitted closure date of the Landfill is proposed. OCWR has extended the closure dates of the three landfills it operates in the past to account for average rates of waste that were less than anticipated; such closure date extensions are used to identify what time frame should be covered in the Landfill permits and do not represent a detailed forecast of anticipated waste. Daily tonnage received over the lifetime of a landfill fluctuates based on many factors, including existing regulations related to solid waste diversion, how effective these regulations are when they ultimately go into effect, actual closure dates of other facilities, the market and economic conditions (e.g., recessions, pandemics, periods of economic growth), and the unknown nature of future regulations and future technology. The forecast closure date is not directly tied to the maximum permitted tonnage per day, nor can it be reasonably assumed that a doubling in the permitted daily tonnage would directly result in a doubling of the actual amount of waste received over the next several decades. However, to the extent that the actual rate of waste received increases above the currently permitted 4,000 TPD, the remaining capacity of the Landfill would be reduced faster than in the absence of the Proposed Project.

1.3 AREAS OF CONTROVERSY

Pursuant to *State CEQA Guidelines* Section 15123, this Subsequent EIR acknowledges the areas of controversy and issues to be resolved that are known to the County or were raised during the scoping process. The County issued an Initial Study/Notice of Preparation (IS/NOP) on September 27, 2023, and held a public scoping meeting on October 4, 2023, to present the Proposed Project and to solicit input from interested parties regarding environmental issues that should be addressed in this Subsequent EIR. The material environmental issues and concerns raised in response to the NOP or at the scoping meeting included:

- **Traffic:** Concerns were expressed about additional traffic on Avenida La Pata and Ortega Highway (SR-74) and possible impacts related to increased truck traffic. It was suggested that the Subsequent EIR address the Proposed Project's traffic increase in conjunction with the existing traffic congestion during San Juan Hills High School pick-up and drop-off times.

- **Noise:** Concerns were expressed about noise generated from additional trucks on the surrounding roads and the beeping noise generated from back-up alarms on landfill equipment and trucks. It was suggested that the Subsequent EIR address the reduction or elimination of noisy back-up alarms.

- **Air Quality:** Concerns were expressed about odor control, dust suppression, and potential health risks for area residents, especially sensitive receptors. Commenters suggested that health assessments be conducted and air quality mitigation measures be implemented for the Proposed Project.

- **Hazards:** Concerns were expressed about falling debris from trucks going to and from the Landfill and the hazards that would be created along Avenida La Pata. There were also concerns about the Proposed Project's interference with emergency response in the area and the potential increased risk of wildfire. It was suggested that load covering be enforced to prevent falling debris.

- **Tribal Cultural Resources:** Concerns were expressed that potential effects to tribal cultural resources could occur and that this issue had not been addressed in prior environmental documentation.

- **Cumulative Impacts:** Concerns were expressed about potential cumulative impacts given the site's proximity to the Rancho Mission Viejo housing development, widening of Ortega Highway (SR-74), and the new location of a materials recovery facility.

The above list identifies only the key issues that were raised during the scoping process rather than every single issue raised. Some comments received were not related to the Proposed Project evaluated in this Subsequent EIR, such as concerns regarding the approved development of Zone 4 of the Landfill in accordance with the approved GDP (Zone 4 development was evaluated in previous CEQA documents and no changes are proposed as part of the Proposed Project); proximity of the Landfill to the Trampas Canyon Reservoir and Dam and notification to the Santa Margarita Water District; illegal dumping on trails in San Juan Capistrano; relocation of the recycling plant and subsequent increase in pollution, traffic, and noise; concern related to the cumulative impacts analysis in the 2001 GDP EIR; unrelated construction activities occurring in proximity to the Landfill; and general questions about the Landfill as a whole. This Subsequent EIR identifies areas of concern or controversy related to the Proposed Project, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures and/or alternatives designed to reduce or eliminate potentially significant impacts. **Appendix A** of this Subsequent EIR includes the NOP and Initial Study, the NOP distribution list, a summary of comments received during public scoping, and comment letters from Public Agencies.

1.4 SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the *State CEQA Guidelines* requires that an EIR describe significant environmental impacts that cannot be avoided, including those effects that can be mitigated but not reduced to a less than significant level. The following is a summary of the impacts that are considered significant, adverse, and unavoidable after all mitigation is applied. As described in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures, new and previously unidentified significant and unavoidable impacts associated with the Proposed Project are limited to one resource category. Specifically, the Proposed Project would result in new significant and unavoidable GHG emissions impacts that were not identified in prior CEQA documentation for the Landfill. Additionally, the Proposed Project would substantially increase the impacts related to air quality identified in prior CEQA documentation. Chapter 6.0, Other CEQA Considerations, provides a summary of those impacts that are considered significant, adverse, and unavoidable after all mitigation is applied. These impacts are also summarized below. Chapter 6.0, Other CEQA Considerations, provides a summary of those impacts that are considered

significant, adverse, and unavoidable after all mitigation is applied. These impacts are also summarized below.

As a Subsequent EIR, this document evaluates the Proposed Project in the context of impacts identified in previous environmental documents (refer to Section 2.1.4 for additional information). Section 1.4.1 includes a brief description of the "project" evaluated in each of the prior documents, followed by a summary of the significant unavoidable impacts identified. Significant and unavoidable impacts associated with the Proposed Project are presented in Section 1.4.2.

1.4.1 Significant and Unavoidable Impacts Disclosed in Previous Environmental Documents

The 2001 GDP EIR disclosed impacts associated with implementation of the 2001 GDP EIR. The two Supplemental EIRs concluded that new or substantially more severe impacts would not occur as a result of the changes to the 2001 GDP assessed in each document. As described below, a change in the *State CEQA Guidelines* later warranted an update to the significance conclusion reached in the 2001 GDP EIR; this was acknowledged in the First Supplemental EIR to the 2001 GDP EIR.

1.4.1.1 2001 GDP EIR

The project analyzed in the 2001 GDP EIR included the GDP for the Landfill, including the landfill, circulation, and recreation elements. The 2001 GDP EIR analyzed a total design capacity of approximately 53.1 million cubic yards (mcy) within 271 acres for Zone 1 and approximately 118.5 mcy within 409 acres for Zone 4. The maximum design elevation was 600 feet above mean sea level (amsl) for Zone 1 and 1,100 feet amsl for Zone 4. The project analyzed in this EIR reflected refinement of the Landfill development limits based on the Talega Settlement Agreement between the County and Rancho Mission Viejo.

1.4.1.2 First Supplemental EIR to the 2001 GDP EIR

The project analyzed in the First Supplemental EIR to the 2001 GDP EIR, prepared for the Second Amendment to the 2001 GDP, included increased grading disturbance and excavation limits for both the Zone 1 and Zone 4 landfills to allow for future landslide remediation projects, re-design of future desilting basins for the Zone 4 landfilling area, and more clearly defined biological mitigation to provide compensatory mitigation for the biological impacts associated with the future Zone 4 Landfill development. Additionally, it was determined that the Second Amendment to the 2001 GDP would not alter project emissions as covered by the 2001 GDP EIR.

A change in the *State CEQA Guidelines* warranted an update to the significance conclusion reached in the 2001 GDP EIR. Specifically, the 2001 GDP EIR had concluded that air emissions generated by the landfill component of the 2001 GDP exceeded South Coast Air Quality Management District (SCAQMD) thresholds of significance, and the Landfill implemented several mitigation measures to reduce potential air quality impacts. The air quality impact conclusion of "less than significant" in the 2001 GDP EIR was based upon the provisions contained within Section 15064(h) of the *State CEQA Guidelines*, which provided that an environmental impact is not significant if it complies with a standard adopted by a public agency for the purpose of environmental protection. The "standard" cited in the 2001 GDP EIR to support the conclusion of less than significant impact was conformity

with landfill-specific SCAQMD air quality standards, which the Landfill must meet as a part of its SCAQMD permit to continue operation.

However, on October 28, 2002 (after finalization of the 2001 GDP EIR), the California Court of Appeal invalidated this provision in Section 15064(h) in its decision in the case of *Citizens for a Better Environment et al. v. California Resources Agency* (2002) 103 Cal. App. 4th 98. Therefore, although the First Supplemental EIR to the 2001 GDP EIR emissions were not different than those analyzed for the 2001 GDP, the Second Supplemental EIR to the 2001 GDP EIR updated the impact conclusion for air quality effects associated with the original 2001 Prima Deshecha Landfill GDP to reflect a conclusion of "significant after mitigation" based upon this change to the *State CEQA Guidelines*.

1.4.1.3 Second Supplemental EIR to the 2001 GDP EIR

The Second Supplemental EIR to the 2001 GDP EIR addressed Amendment No. 4[2] to the 2001 GDP, which: (a) revised the phasing of operations between Zone 1 and Zone 4 of the Landfill to allow for concurrent operations and for activities to shift between the two zones based on seasonal environmental conditions; (b) allowed for blasting, excavation, on-site relocation, pulverizing into soil, soil stockpiling, and off-site soil removal of hard rock material in Zone 4; and (c) allowed for the import of approximately 8,108 cubic yards of soil for liner installation that occurred for all Zone 4 development phases. The Second Supplemental EIR to the 2001 GDP EIR addressed environmental topics including aesthetics, air quality, and noise.

In compliance with Senate Bill (SB) 743, the Second Supplemental EIR to the 2001 GDP EIR considered transportation impacts using the VMT metric, rather than LOS, and additionally included outreach to tribes consistent with Assembly Bill (AB) 52.

1.4.1.4 Summary of Significant and Unavoidable Impacts

Significant and unavoidable impacts identified in prior environmental documents are summarized in **Table 1.A**.

1.4.2 Significant and Unavoidable Impacts Identified in this Subsequent EIR

This Subsequent EIR finds that the Proposed Project would result in a new significant and unavoidable impact associated with one (1) environmental topic, GHG emissions, that was not identified in prior CEQA documentation for the Landfill. Additionally, the Proposed Project would substantially increase the impacts related to air quality identified in prior CEQA documentation. These impacts are associated with the increased number of trips to the Landfill (note that many of these represent trips that would have otherwise gone to the Olinda Alpha Landfill—that is, existing trips that would simply be redirected). Contracted waste haulers are expected to reroute their trips to the remaining open landfills in an efficient manner to minimize overall miles traveled; however, the number of trips in proximity to the Landfill would increase, and the reduced number of available landfills to accept waste is expected to increase the average hauling distance within the region.

[2] Amendment No. 3 to the 2001 GDP focused on the Los Patrones Parkway Extension and was the subject of an Addendum; refer to Section 2.1.4.4 for additional details.

Table 1.A: Significant and Unavoidable Impacts in Prior Environmental Documents

Topic	Description
2001 GDP EIR	
Topography	The 2001 GDP EIR concluded that the potential impacts of the on-site landfilling activities on topography would be significant in Zones 1 and 4 as a result of cutting and grading of the existing surface features of the site and filling Zones 1 and 4 with refuse. In addition, the 2001 GDP EIR determined that a portion of the existing Prima Deshecha Cañada stream channel required relocation south of Stockpile No. 1 because of an existing landslide that affected both hydrological and biological conditions of the stream. This diversion altered the naturally occurring alignment of the stream. These on-site impacts could not be mitigated to below a level of significance. Although the surface of the developed landfill would be molded to minimize an engineered appearance (manufactured slopes), the final topographic features constituted a significant change to the environment. The impacts identified for the 2001 GDP on topography could not be mitigated to a less than significant level.
Aesthetics	The 2001 GDP EIR concluded that the long-term GDP construction and site preparation activities would be highly visible from many vantage points around the site, particularly in San Clemente, thereby creating a permanent change in the overall landscape character of the area. Potentially significant aesthetic impacts of the 2001 GDP landfilling activities from vantage points within San Juan Capistrano would be reduced to a less than significant level through the implementation of mitigation measures (e.g., ensuring the Landfill is not visible from SR-74). However, potentially significant impacts from the landfilling activities within the San Clemente viewshed could not be reduced to a less than significant level, even with the implementation of mitigation. Therefore, these impacts remained significant and unavoidable.
Biological Resources	The 2001 GDP EIR concluded that implementation of the 2001 GDP would result in potentially significant adverse impacts on native plant communities and occupied California gnatcatcher habitat. The 2001 GDP EIR further concluded that there would be a significant, short-term loss of these native plant communities, including coastal sage scrub (California gnatcatcher) and riparian (least Bell's vireo) habitats, between the time when the plant materials are removed during construction and when the revegetation plantings are mature. This interim loss was a significant, unavoidable adverse impact that could not be mitigated to below a level of significance with a successful revegetation program implemented prior to impacts.
First Supplemental EIR to the 2001 GDP EIR	
Air Quality (revised conclusion)	The First Supplemental EIR to the 2001 GDP EIR concluded that the changes associated with the Second Amendment to the 2001 GDP would not change operational emissions associated with Landfill operations. The significance conclusion of air quality impacts in the 2001 GDP EIR was revised from “less than significant” to “significant after mitigation” pursuant to a change in the *State CEQA Guidelines*. The First Supplemental EIR to the 2001 GDP EIR identified updated mitigation measures described in Section 5.4.4 to further reduce air quality impacts that result from operations at the Landfill; however, even with implementation of all existing and recommended mitigation measures, operations at the Landfill would result in significant and unavoidable air quality impacts. Since the emissions associated with the Second Amendment to the 2001 GDP did not represent an increase from those disclosed in the 2001 GDP EIR, the change in the level of significance did not represent a “new” impact.
Second Supplemental EIR to the 2001 GDP EIR	
None	The Second Supplemental EIR to the 2001 GDP EIR determined that, with incorporation of mitigation measures contained in the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR, the project would not result in any significant and unavoidable impacts. Although the project included an increase in truck trips, based on an updated air quality analysis, operational emissions would remain at or below the levels disclosed in the 2001 GDP EIR. It was determined that the project would have a less than significant impact with mitigation incorporated related to criteria pollutant emissions and public views.

EIR = Environmental Impact Report GDP = General Development Plan

1.4.2.1 Air Quality

As described in Section 4.1, Air Quality, the Proposed Project would not exceed the SCAQMD thresholds for emissions of volatile organic compounds (VOCs), carbon monoxide (CO), sulfur oxides (SO_X), and particulate matter less than 10 microns (PM_{10}) or 2.5 microns ($PM_{2.5}$). However, the Proposed Project's emissions of nitrogen oxides (NO_X) would exceed the SCAQMD's thresholds. Additionally, the combined emissions associated with the Proposed Project and the operation and development of the Landfill consistent with the 2001 GDP, as amended, could result in a cumulatively considerable net increase of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$ for which the project region is nonattainment under applicable federal or State ambient air quality standards (AAQS). Further, as compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, all of which identified impacts due to exceeding SCAQMD thresholds, the Proposed Project would result in increased impacts, resulting in a cumulatively considerable net increase of VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$.

All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, and additional mitigation for the Proposed Project would include Mitigation Measure 4.1-1. While these mitigation measures would reduce criteria air pollutant emissions generated during construction and operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD regional significance thresholds and would exceed the quantity of emissions disclosed in previous environmental documents. Therefore, impacts remain significant and unavoidable and represent "a substantial increase in the severity of previously identified significant effects" as described in Section 15162 of the *State CEQA Guidelines*.

1.4.2.2 Greenhouse Gas Emissions

As described in Section 4.2, Greenhouse Gas Emissions, the Proposed Project's GHG emissions would exceed the SCAQMD's numerical screening thresholds for GHGs. Additionally, it is likely that emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would collectively exceed the SCAQMD thresholds. Although mitigation would reduce emissions, the Proposed Project would result in significant impacts and cumulative impacts associated with the generation of GHG emissions, either directly or indirectly, that may have a significant effect on the environment (see Threshold 4.2.1 in Section 4.2). Additionally, due to the exceedance of SCAQMD thresholds, the Proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, Executive Order (EO) B-30-15,[3] and Assembly Bill (AB) 197[4] and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, although mitigation would reduce emissions, the Proposed Project would result in significant impacts and cumulative impacts associated with GHG emissions and associated conflicts with

[3] EO B-30-15 added an immediate target reduction of GHG emissions to 40 percent below 1990 levels by 2030.

[4] AB 197, a companion bill to SB 32, provides additional direction to the California Air Resources Board (CARB) related to the adoption of strategies to reduce GHG emissions and provide easier public access to air emissions data collected by CARB.

applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs (see Threshold 4.2.2 in Section 4.2).

At the time the 2001 GDP EIR was certified in November 2001 and the First Supplemental EIR to the 2001 GDP EIR was certified in June 2007, the *State CEQA Guidelines* did not include GHGs, and no numeric thresholds for GHGs had formally been adopted. Therefore, the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR did not evaluate potential GHG impacts. However, the mitigation measures identified to address air quality impacts also reduce GHG impacts, as both are associated with emissions. Mitigation measures to reduce emissions from the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR continue to apply to the Proposed Project. In addition, Mitigation Measure 4.1-1, identified in this Subsequent EIR as a measure to further reduce air quality impacts, would likely also reduce GHG emissions. While mitigation measures would reduce the Proposed Project's GHG emissions, the Proposed Project would still exceed the SCAQMD thresholds. Therefore, impacts would be significant and unavoidable and represent "new significant environmental effects" as described in Section 15162 of the *State CEQA Guidelines*.

1.4.3 Alternatives

1.4.3.1 Alternatives Evaluated in this Subsequent EIR

Section 15162 of the *State CEQA Guidelines* requires an EIR to identify and discuss a No Project Alternative and a reasonable range of alternatives to the Proposed Project that would feasibly attain most of the basic objectives of the Proposed Project and would avoid or substantially lessen any of the significant environmental impacts. Several alternatives were considered for detailed analysis in the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and Second Supplemental EIR to the 2001 GDP EIR to reduce or avoid significant and unavoidable impacts; however, these alternatives were infeasible and therefore eliminated from further consideration. These alternatives are described in detail in Chapter 7.0, Alternatives.

Two alternatives have been selected to address the significant unavoidable air quality and GHG impacts resulting from the Proposed Project. The alternatives considered in this Subsequent EIR include the following:

- **Alternative 1: No Project.** Under this alternative, the increase in maximum daily operations (Proposed Project) would not be implemented on the project site, and Landfill operations would continue as planned under existing conditions in accordance with the 2001 GDP, as amended. Specifically, the Landfill would continue to accept a maximum amount of 4,000 TPD of waste on a daily basis. The permitted number of operational emergency days for increased tonnage that the Landfill could experience would remain zero. Development of Zones 1 and 4 and operation of the Capistrano Greenery would continue as approved under the 2001 GDP, as amended through Amendment 4. Waste currently processed at the Olinda Alpha Landfill would need to be diverted elsewhere, rather than to the Prima Deshecha Landfill, upon closure of that facility.

- **Alternative 2: Reroute Greater Share of Olinda Alpha Landfill Waste to Frank R. Bowerman Landfill.** Assuming consistent rates of disposal, an average daily waste stream[5] of 6,623 TPD will need to be diverted to OCWR's remaining active landfills (Frank R. Bowerman Landfill [FRB Landfill] and Prima Deshecha Landfill). This alternative would change the proportion of the tonnage divided between FRB Landfill and Prima Deshecha Landfill, increasing the amount diverted to the FRB Landfill. The FRB Landfill is permitted for a daily 11,500 TPD maximum and has an annual average limit of 8,500 TPD as part of a cooperative agreement with the City of Irvine. Under this alternative, OCWR would seek to remove the 8,500 TPD annual average limit at the FRB Landfill, allowing acceptance of the permitted 11,500 TPD without the annual average constraint. It is anticipated that this would accommodate the diversion of up to 4,336 TPD (annual daily average) of the Olinda Alpha Landfill waste stream upon closure of that facility, leaving approximately 2,287 TPD to be diverted to the Prima Deshecha Landfill. In combination with the daily average of 2,625 TPD at Prima Deshecha Landfill, capacity would need to be increased from 4,000 TPD to at least 4,912 TPD. Because the FRB Landfill does not accept waste from public haulers, and to account for fluctuations in the daily volume of waste, Alternative 2 would increase the daily permitted waste at Prima Deshecha Landfill by 2,000 TPD (compared with 4,000 TPD under the Proposed Project), for a total of 6,000 TPD.

1.4.3.2 Identification of the Environmentally Superior Alternative

CEQA requires the identification of an Environmentally Superior Alternative among the alternatives evaluated in an EIR. *State CEQA Guidelines* Section 15126.6(e)(2) provides that, if the No Project/No Build Alternative is the Environmentally Superior Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other alternatives.

Alternative 1, No Project Alternative, would reduce local transportation, odor, noise, falling debris, and health risk impacts (all of which would be less than significant with the Proposed Project), but would potentially increase significant impacts associated with regional air quality and GHG emissions because a longer hauling distance would be required to divert waste out of the County[6] or to more distant landfill locations within the County. While Alternative 1 would lessen local transportation, noise, odor, falling debris, and health risk impacts of the Proposed Project near the Prima Deshecha Landfill, the location of impacts would be shifted, rather than avoided, because there would be additional daily trips to the FRB Landfill and/or hauling trips removing waste elsewhere. The benefits of the Proposed Project—including OCWR's ability to maintain systemwide solid waste disposal capacity with the closure of the Olinda Alpha Landfill—would not occur, and only two of the four project objectives would be met.

Alternative 2, which would route a greater share of the Olinda Alpha Landfill waste to the FRB Landfill, with the remainder going to the Prima Deshecha Landfill, is anticipated to have similar or reduced localized impacts when compared to the Proposed Project. As with Alternative 1, it would

[5] All Fiscal Year 2022/2023 data are based on Disposal Reporting System (DRS) data provided by OCWR (2023).

[6] The feasibility of transporting waste out of the County is unknown; a facility with capacity would need to be identified and approval would be required from both the county of origin and the county of destination for the waste. No out of County waste transport is included within the Proposed Project.

reduce local transportation, odor, noise, falling debris, and health risk impacts (all of which would be less than significant with the Proposed Project) associated with hauling trips in proximity to the Prima Deshecha Landfill; however, trips near the FRB Landfill would increase and would result in similar localized effects for the FRB Landfill—essentially shifting the impacts to another geographic location. Reducing flexibility in redistributing the waste Olinda Alpha Landfill waste stream may result in less efficient routing of truck trips within the County, which could potentially increase air pollutant and GHG emissions. Alternative 2 would be equal to the Proposed Project in terms of meeting project objectives but would be less effective in supporting the goals in the Strategic Plan.

Therefore, based on the comparative analysis of alternatives presented above, the Proposed Project is the environmentally superior alternative in that its implementation would not result in any new significant adverse environmental impacts that would be eliminated under any of the other alternatives and would achieve all the project objectives and Strategic Plan goals.

1.5 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 1.B identifies the potentially significant project environmental impacts identified in this Subsequent EIR, regulatory compliance measures and/or mitigation measures, and level of significance after mitigation is incorporated into the Proposed Project.

As noted in Section 1.2, changes associated with the increased permitted daily maximum tonnage may include additional truck and vehicle trips in the vicinity of the Landfill, the use of additional equipment on site for processing a larger volume of waste, and an increase in the number of employees at the site. The additional truck and vehicle trips and the use of additional equipment on site have the potential to increase noise levels, result in increased pollutant emissions, and contribute to the volume of traffic in the vicinity of the Landfill, which could have the secondary effects of increasing the risk of falling debris on roadways and incrementally increasing the risk of wildfire.

As discussed in more detail in Section 5.2.15, consistent with the County's adopted Transportation Improvement Manual (County of Orange 1994 [as amended in 2021]) and the requirements of CEQA, transportation impacts for the Proposed Project are evaluated using VMT as the applicable metric. The Landfill is a public facility that is screened out from a VMT analysis under the relevant thresholds of significance established by the County's *2020 Local CEQA Procedures Manual*. Therefore, the Proposed Project is presumed to have a less than significant impact in accordance with CEQA Guidelines Section 15064.3 and the County's *2020 Local CEQA Procedures Manual*, and no mitigation is required.

Environmental topics that required additional technical analysis are addressed in Chapter 4.0 of this Subsequent EIR and include: air quality, GHGs, and noise. Other topics not requiring detailed analysis and that would not result in new significant impacts are addressed in Chapter 5.0 of this Subsequent EIR and include: aesthetics, agriculture and forestry, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, transportation, tribal cultural resources, and wildfire. These topics are not included in **Table 1.B** because no new significant impacts, changes to impact determinations, or

changes to mitigation presented in prior environmental documents are required. All mitigation commitments contained within the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, as well as the 2001 GDP (as amended), apply to the Proposed Project.[7]

1.5.1 Secondary Effects of Mitigation Measures

In accordance with *State CEQA Guidelines* Section 15126.4(a)(1)(D), if any mitigation measure would cause one or more significant effects in addition to those that would be caused by the Proposed Project, the effects of the mitigation measure shall be discussed. Potential secondary effects of the mitigation measures proposed in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR (as listed in **Table 1.B**) were evaluated during their respective approval processes. No secondary effects related to the additional proposed mitigation measures identified in this Subsequent EIR are expected to occur.

[7] The mitigation measure requirements in the 2001 GDP EIR refer to the Director of Public Facilities and Resources Department (PF&RD) and Harbor, Beaches, and Parks (HBP). These County departments have been renamed OC Public Works and OC Parks, respectively. Therefore, mitigation measure requirements would be addressed by the Director of OC Public Works and/or the Director of OC Parks as applicable. Additionally, the Integrated Waste Management District (IWMD) was renamed to OCWR; therefore, references to IWMD would now apply to OCWR.

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Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Regulatory Compliance Measures and Mitigation Measures	Level of Significance After Mitigation
4.1: Air Quality			
Threshold 4.1.1: The Proposed Project would result in operational NO_X emissions that would exceed the SCAQMD mass daily CEQA thresholds. Additionally, the combined emissions associated with the Proposed Project and the operation and development of the Landfill consistent with the 2001 GDP, as amended, would exceed the SCAQMD's operational CEQA thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project. The Proposed Project would also implement MM 4.1-1 requiring the use of Tier 4 Final equipment. Even with implementation of mitigation, the Proposed Project would still exceed the SCAQMD regional significance thresholds. The Proposed Project would not exceed the assumptions in the AQMP or increments based on the year of Proposed Project build out and phase. While the 2001 GDP EIR did not specifically analyze the potential for the GDP to conflict with or obstruct implementation of an applicable air quality plan, it did determine an impact would be significant if it exceeded the SCAQMD thresholds. The Proposed Project would result in an increase in air quality emissions beyond those identified in the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, despite the use of lower-emission vehicles and equipment. Therefore, Proposed Project impacts related to this threshold would be significant.	Potentially Significant	***Regulatory Compliance Measures*** **Regulatory Compliance Measure AQ-1**: South Coast Air Quality Management District (SCAQMD) Rule 402, Nuisance. This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. **Regulatory Compliance Measure AQ-2**: SCAQMD Rule 1150. The SCAQMD has adopted source-specific regulations to reduce and control fugitive emissions from landfills during excavation activities. SCAQMD Rule 1150, Excavation of Landfill Sites, states that excavation of an active or inactive landfill requires an Excavation Management Plan (Plan) approved by the SCAQMD Executive Officer. At a minimum, the Plan must describe the quantity and characteristics of the material to be excavated and transported, and identify mitigation measures to ensure that a public nuisance condition does not occur. Mitigation measures may include gas collection and disposal, baling, encapsulation, covering of the material, chemical neutralizing, or other actions approved by the Executive Officer (SCAQMD 1982). **Regulatory Compliance Measure AQ-3**: SCAQMD Rule 1150.1. The SCAQMD has also adopted source-specific regulations to limit gaseous emissions from municipal solid waste (MSW) landfills to prevent public nuisance and public health impacts. SCAQMD Rule 1150.1, Control of Gaseous Emissions from MSW Landfills, requires active landfills to have a collection and control system designed to handle the maximum expected gas flow rate and minimize migration of subsurface gas. The regulation was updated in 2011 to incorporate the California Air Resources Board (CARB) regulation that controls methane emissions from MSW landfills. Rule 1150.1 requires all collected gas to be routed to a treatment system that processes the collected gas for subsequent sale or use. The system must either reduce non-methane organic compounds (NMOC) by at least 98 percent by weight, or reduce the outlet NMOC concentration to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. In addition, the treatment system must achieve a methane emissions destruction efficiency of at least 99 percent, except for lean burn internal combustion engines, which must reduce outlet methane concentration to less than 3,000 ppm, dry basis, corrected to 15 percent oxygen. The system must also prevent the concentration of total organic carbon (TOC), measured as methane (CH4), from exceeding 5 percent by volume in subsurface refuse boundary sampling probes, 25 ppmv in samples taken on numbered 50,000-square-foot landfill grids, or 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill (except at the outlet of any control device) (SCAQMD 2011). ***Previously Adopted Mitigation Measures, 2001 GDP EIR*** **MM 4.9-1:** Landfill fee station personnel and/or landfill refuse inspectors shall reject extremely odorous loads for disposal in the landfill. **MM 4.9-2:** The active face of the landfill shall be covered daily. If the active face is in close proximity and upwind of on-site recreation uses, masking or neutralization agents may be added to exposed refuse to reduce the odor nuisance effects on the adjacent recreation uses. **MM 4.9-3:** The Integrated Waste Management District shall design, construct and operate new landfill areas in Zones 1 and 4 with landfill gas (LFG) systems to maximize the collection of LFG. The LFG systems will include continuous monitoring of the LFG collection system to maximize efficient collection of LFG generated in these areas. **MM 4.9-4:** During landfill operations, the Integrated Waste Management Department (IWMD) shall continue regular visual inspections of the landfill cover and monitoring of LFG emissions throughout the entire refuse fill areas. The purpose of these inspections is to locate cracks or other defects or flaws in the landfill cover, which may allow LFG to escape. When such areas are identified, the IWMD will implement the appropriate corrective action as soon as feasible. These corrective actions may include application and compaction of additional cover material, adjustment of the existing LFG control system and/or installation of new LFG control facilities. **MM 4.9-5:** During landfill operations, the IWMD shall conduct periodic odor surveys on the landfill site and at various points in the area surrounding the site. The IWMD shall conduct odor surveys if any odors from the landfill are detected off site and reported by nearby residents. When the source of these odors is identified, the IWMD will implement the appropriate corrective action as soon as feasible. These corrective actions may include application and compaction of additional cover material, use of masking or neutralizing agents, adjustment of the existing LFG control system and/or installation of new LFG control facilities. **MM 4.9-6:** During landfill operations, the IWMD shall ensure that landfill operations areas that are to be left exposed temporarily, including top deck and excavation slopes, are sprayed periodically with water, as needed.	Significant and Unavoidable Impact – The Proposed Project would result in a "substantial increase in the severity of previously identified significant effects" because emissions would exceed SCAQMD significance thresholds at greater levels than existing permitted operations

Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Regulatory Compliance Measures and Mitigation Measures	Level of Significance After Mitigation
		MM 4.9-7: On landfilled areas that are no longer in use, the IWMD will, as appropriate, incorporate dust control systems or vegetative covers, consistent with the Final Closure Plans and with IWMD's approved Rule 403 Compliance Plan for landfilling Zones 1 and 4. **MM 4.9-8:** During landfill operations, the landfill fee station personnel and/or landfill refuse inspectors shall refrain from accepting dusty loads of refuse for disposal in either landfilling Zone 1 or 4. Alternatively, at the discretion of landfill personnel, dusty loads of refuse may be accepted for disposal, if they are sprayed with water prior to leaving the fee station and accessing the active face of the landfill. **MM 4.9-9a:** During landfill operations, the IWMD shall maintain water trucks on site to spray water on on-site unpaved roads as needed to minimize the generation of dust as vehicles travel on these roads, as per IWMD's approved Rule 403 Compliance Plan. **MM 4.9-9b:** During landfill operations, the IWMD shall, to the extent feasible while still maintaining appropriate landfill operations, restrict vehicular travel on unpaved roads on the site. In the event that unpaved roads must be used, the IWMD shall spray water on these roads as needed. **MM 4.9-9c:** As unpaved on-site roads are removed from active service, the IWMD will spray these areas with a hydromulch solution or synthetic binder. **MM 4.9-10:** During landfill operations, the IWMD will use the on-site water trucks to spray water on graded areas or areas where the vegetation has been removed or severely disturbed as a result of landfilling activities, as per IWMD's approved Rule 403 Compliance Plan. ***Previously Adopted Mitigation Measures, First Supplemental EIR to the 2001 GDP EIR*** **MM 5.4-1:** IWMD and its contractors shall be required to comply with regional rules to reduce air pollutant emissions. SCAQMD Rule 401 sets limits on the opacity of visible plumes of dust resulting from activities at the Landfill. SCAQMD Rule 402 requires that air pollutant emissions generated at the Landfill not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Two options are presented in Rule 403: monitoring of particulate concentrations, or active control. Monitoring involves a sampling network around the project with no additional control measures unless specified concentrations are exceeded. The active control option does not require any monitoring, but requires that a list of measures be implemented on a daily basis. SCAQMD Rule 403 requires that "best available control measures" be utilized whenever a dust-generating activity occurs in the Basin. These measures are listed in Table 1 of Rule 403 and called out in Table 5.4-6 below [Table 5.4-6 has been moved to follow Table 1.A to enhance readability]. It is important to note that all applicable measures from Table 5.4-6 should be implemented to achieve the required PM_{10} emissions reductions. Rule 403 requires that "Large projects" implement additional measures. A Large project is defined as any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cy) or more than three times during the most recent 365-day period. The Prima Deshecha Landfill would be considered a Large project under Rule 403. Therefore, the Landfill is required to implement the applicable actions specified in Table 2 of the Rule. Table 2 from Rule 403 is presented below as Table 5.4-7 [Table 5.4-7 has been moved to follow Table 5.4-6 at the end of this section to enhance readability]. As a Large Operation, the Landfill will also be required to: • Submit a fully executed Large Operation Notification (SCAQMD Form 403N) to the SCAQMD Executive Officer within 7 days of qualifying as a Large Operation; • Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site; • Maintain daily records to document the specific dust-control actions taken, maintain such records for a period of not less than 3 years, and make such records available to the Executive Officer upon request; • Install and maintain project signage with project contact signage that meets the minimum standards of the *Rule 403 Implementation Handbook*, prior to initiating any earthmoving activities; and • Identify a dust control supervisor that is employed by or contracted with the property owner or developer, is on the site or available on-site within 30 minutes during working hours, has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements, and has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and • Notify the SCAQMD Executive Officer in writing within 30 days after the site no longer qualifies as a large operation. **MM 5.4-2:** To reduce equipment emissions, the following measures shall be implemented when feasible:	

Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Regulatory Compliance Measures and Mitigation Measures	Level of Significance After Mitigation
		• Use low emission mobile construction equipment. "CARB Certified" heavy construction equipment conforms to the latest off-road CARB emission standards and is the lowest polluting equipment available. The use of this equipment would reduce heavy equipment NO_X emissions by approximately 30 percent and heavy equipment PM_{10} emissions by approximately 50 percent from the emissions levels shown in Tables 5.4-3 through 5.4-5. This is a substantial reduction but will not reduce emissions to less than the significance thresholds. • Maintain construction equipment engines by keeping them tuned. • Use low-sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2. • Utilize existing power sources (i.e., power poles) when feasible. This measure would minimize the use of higher polluting gas or diesel generators. • Use aqueous diesel fuel where feasible and reasonably commercially available. • Use cooled exhaust gas recirculation (EGR) where feasible and reasonably commercially available. Several of the mitigation measures listed above are advanced emission control technologies that are currently not commercially available. For example, aqueous diesel fuel reduces NO_X formation by reducing combustion temperatures, resulting in lower NO_X emissions. According to SCAQMD, the current availability of this fuel technology is limited, and it may not be available for use at the Landfill. In addition, with EGR diesel engines, a small amount of hot exhaust gas is routed through a cooler and is mixed with fresh air entering the engine. The exhaust gas helps reduce the temperature during combustion, which lowers the formation of thermal NO_X. EGR technology is in the development phase and has not been fully commercialized. To the extent that the advanced emissions-control technologies become reasonably commercially available, or are required by the CARB from grading contractors, then such advanced emissions-control technologies will be used. • Furthermore, a requirement to install diesel particulate filters on construction equipment used at the Landfill was considered to further reduce emissions. However, the availability of construction equipment retrofitted with diesel particulate filters is limited. This is a result of operational problems in diesel engines equipped with these filters. Therefore, this potential mitigation measure for construction is considered infeasible. ***Additional Mitigation*** **MM 4.1-1:** All off-road diesel-powered equipment of used during project operation shall have engines that meet or exceed the California Air Resources Board Tier 4 Final emissions standards.	
Threshold 4.1.2: The emissions of criteria pollutants generated from construction activities would not exceed the corresponding SCAQMD daily emission CEQA thresholds. However, as discussed in Threshold 4.1.1, the Proposed Project's operational emissions would exceed the SCAQMD's CEQA threshold for NO_X. Additionally, the combined emissions associated with the Proposed Project and the operation and development of the Landfill consistent with the 2001 GDP, as amended, would exceed the SCAQMD's operational CEQA thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. Even with implementation of all mitigation measures from the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and MM 4.1-1, the Proposed Project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State AAQS. Further, as compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would result in an increase of significant impacts related to a cumulatively considerable net increase of any criteria pollutants. Impacts would be significant.	Potentially Significant	See Mitigation Measures 4.9-1 through 4.9-10 from the 2001 GDP EIR, Mitigation Measures 5.4-1 and 5.4-2 from the First Supplemental EIR to the 2001 GDP EIR, and additional Mitigation Measure 4.1-1 above.	Significant and Unavoidable
Threshold 4.1.3: As shown in Table 4.1.O, the Proposed Project would not result in a significant increased cancer risk to nearby residential receptors, school receptors, or worker receptors, and would not expose sensitive receptors to substantial pollutant concentrations. The Proposed Project would also not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day; therefore, a CO hot spot is not anticipated to occur, and associated impacts would be less than significant. With incorporation of applicable mitigation commitments contained within the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR, no additional mitigation is required for the Proposed Project. As compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would not result in an increase in significant impacts	Less Than Significant	See Mitigation Measures 4.9-1 through 4.9-10 from the 2001 GDP EIR and Mitigation Measures 5.4-1 and 5.4-2 from the First Supplemental EIR to the 2001 GDP EIR above.	Less Than Significant

Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Regulatory Compliance Measures and Mitigation Measures	Level of Significance After Mitigation
related to the exposure of sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant. Nevertheless, all mitigation commitments contained within the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR would apply to the Proposed Project.			
Threshold 4.1.4: Based on the Odor Analysis (included in Appendix C) prepared for the Proposed Project, the Proposed Project would not cause significant off-site nuisance odor impacts at nearby sensitive receptors. Additionally, as planned in the 2001 GDP and analyzed and approved in the Second Supplemental EIR to the 2001 GDP EIR, OCWR is actively expanding into Zone 4 of the Landfill property. Zone 4 is located east of Avenida La Pata, which gives OCWR the ability to conduct waste operations further away from the closest homes in Rancho San Juan during weather conditions that exacerbate odors. Further, OCWR has developed and implemented an Odor Control Management Plan and would comply with SCAQMD Rule 402. Therefore, for the reasons listed above, the Proposed Project would not result in odors adversely affecting a substantial number of people the Proposed Project would not result in an increase of significant impacts related to odors, and impacts would be less than significant. Nevertheless, all mitigation commitments contained within the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR would apply to the Proposed Project.	Less Than Significant	See Mitigation Measures 4.9-1 through 4.9-10 from the 2001 GDP EIR and Mitigation Measures 5.4-1 and 5.4-2 from the First Supplemental EIR to the 2001 GDP EIR above.	Less Than Significant
Cumulative Impact Related to Air Quality: The Proposed Project's NO_X emissions would exceed the SCAQMD's thresholds even with the implementation of additional mitigation measure MM 4.4-1. Additionally, the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. The 2001 GDP EIR concluded that air emissions generated by the Landfill component of the 2001 GDP exceeded SCAQMD thresholds of significance, and included several mitigation measures to reduce potential air quality impacts. As compared to the findings of the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would result in an increase of significant criteria pollutant impacts. All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project. While these mitigation measures would reduce criteria air pollutant emissions generated during operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD regional significance thresholds. Therefore, operational activities would be considered significant at the cumulative level.	Potentially Significant	See Mitigation Measures 4.9-1 through 4.9-10 from the 2001 GDP EIR, Mitigation Measures 5.4-1 and 5.4-2 from the First Supplemental EIR to the 2001 GDP EIR, and additional Mitigation Measure 4.1-1 above.	Significant and Unavoidable
4.2: Greenhouse Gas Emissions			
Threshold 4.2.1: As discussed in Section 4.2, long-term Landfill operational GHG emissions associated with the Proposed Project would exceed the SCAQMD thresholds due to the increase in primarily heavy-duty truck vehicle trips to the site. Additionally, it is expected that the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds. Applicable mitigation measures that would reduce GHG emissions from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project. While these mitigation measures would reduce GHG emissions generated by the Proposed Project, the Proposed Project would still exceed the SCAQMD thresholds. Therefore, the Proposed Project would result in new and significant impacts not previously identified in the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and Second Supplemental EIR to the 2001 GDP EIR. Impacts related to GHG emissions would be significant.	Potentially Significant	See Mitigation Measures 4.9-3 and 4.9-4 from the 2001 GDP EIR and Mitigation Measures 5.4-1 and 5.4-2 from the First Supplemental EIR to the 2001 GDP EIR, above.	Significant and Unavoidable

Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Regulatory Compliance Measures and Mitigation Measures	Level of Significance After Mitigation
Threshold 4.2.2: Although the Proposed Project would be consistent with the 2022 Scoping Plan and 2024–2050 RTP/SCS, the Proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the Proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Applicable mitigation measures that would reduce GHG emissions from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project. While these mitigation measures would reduce GHG emissions generated by the Proposed Project, the Proposed Project would still exceed the SCAQMD thresholds. Therefore, the Proposed Project would result in new and significant impacts not previously identified in the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and Second Supplemental EIR to the 2001 GDP EIR. Due to the exceedance of the SCAQMD thresholds, impacts related to conflict with a plan, policy, or regulation adopted for the purpose of reducing GHG emissions would be significant.	Potentially Significant	See Mitigation Measures 4.9-3 and 4.9-4 from the 2001 GDP EIR and Mitigation Measures 5.4-1 and 5.4-2 from the First Supplemental EIR to the 2001 GDP EIR, above.	Significant and Unavoidable
4.3: Noise			
Threshold 4.3.1: The Proposed Project would not result in significant noise impacts with implementation of Regulatory Compliance Measures. Based on noise modeling performed at each surrounding receptor, noise levels associated with operation of Zones 1 and 4 would not exceed thresholds. Additionally, Project-related traffic noise would increase by up to 1.1 dBA along Avenida La Pata which would not be perceptible to the human ear in an outdoor environment. Therefore, as compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would not result in any new or significant impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Proposed Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, and impacts would be less than significant. Nevertheless, all mitigation commitments contained within 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and Second Supplemental EIR to the 2001 GDP EIR would apply to the Proposed Project.	Less Than Significant	***Regulatory Compliance Measures*** **Regulatory Compliance Measure NOI-1**: As presented in Section 4.3.5.2, the County of Orange Noise Ordinance, the County's Standard Conditions of Approval require that all heavy vehicles or equipment, fixed or mobile, operated within 1,000 ft of a dwelling shall be equipped with properly operating and maintained mufflers. Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings. **Regulatory Compliance Measure NOI-2**: Construction activities shall be limited to between the hours of 7:00 a.m. and 6:00 p.m. on Monday through Friday and between the hours of 8:30 a.m. and 4:30 p.m. on Saturday and at no time on a Sunday or national- or city-recognized holiday pursuant to Section 9-3.531(d)(4) of the City of San Juan Capistrano Municipal Code, Section 8.48.090(E) of the City of San Clemente Noise Control Ordinance, and Section 4-6-7(e) the County of Orange Noise Ordinance. ***Previously Adopted Mitigation*** **MM 4.10-1:** Although the construction associated with landfilling under the GDP is not anticipated to result in significant noise impacts on residential uses adjacent to the site, the IWMD shall reduce landfill operations noise impacts to the extent feasible based on available funds through the use of landscaping, berms at the face of each landfill lift, phased construction of the landfill areas and the use of buffer areas between noise sources and sensitive recreation receptors. **MM 4.10-2:** During final design, the Director PF&RD shall mitigate traffic noise impacts through the use of landscaping buffers and setbacks from the street right-of-way by incorporating these features in the design of the street improvements. **MM 4.10-3:** During construction operations, the Director PF&RD shall mitigate noise levels associated with the construction of on-site roadways adjacent to sensitive receptors through the use of limited construction hours, landscape buffers and sound barriers as determined appropriate. **MM 4.10-4:** The PF&RD/HBP shall mitigate noise levels associated with the construction of recreation uses adjacent to sensitive receptors through the use of limited construction hours and landscape buffers as determined appropriate.	Less Than Significant
Threshold 4.3.2: It is extremely unlikely that maximum vibration levels associated with Proposed Project operations would be generated from each piece of heavy equipment simultaneously because impacts associated with vibration are generally very local to the operation. In the event that maximum vibration levels are generated by multiple pieces of heavy equipment simultaneously, each individual vibration impact level at any given receptor would be well below the most sensitive criteria of 0.12 PPV in/sec for structures that are fragile, and the combined effect would be well below the most sensitive criteria. Therefore, vibration levels associated with the Proposed Project operation would be below the applicable thresholds. Utilizing the same criteria used in the previous 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second	Less Than Significant	None	Less Than Significant

Table 1.B: Summary of Potentially Significant Project Impacts, Regulatory Compliance Measures, Mitigation Measures, and Level of Significance after Mitigation

Environmental Impact	Level of Significance Prior to Mitigation	Regulatory Compliance Measures and Mitigation Measures	Level of Significance After Mitigation
Supplemental EIR to the 2001 GDP EIR, and applicable Addenda, this analysis has determined there would be no new significant impacts related to vibration. Therefore, the Proposed Project would not result in the generation of excessive ground-borne vibration or ground-borne noise levels, and impacts would be less than significant.			
Threshold 4.3.3: The Proposed Project would not be located within the vicinity of a private airstrip, public airport, or an airport land use plan, and would not expose people residing or working in the project area to excessive noise levels. As compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would not result in any new or significant impacts related to proximity to a public or private airport or airstrip.	No Impact	None	No Impact
Cumulative Impacts to Noise and Vibration: Noise and vibration impacts associated with the Proposed Project are localized and rapidly attenuate with distance. Any cumulative projects would be located too far from the Landfill site to contribute to cumulative impacts related to noise levels due to typical construction or operational activities. The location of potential traffic noise impacts are located over 1.25 mi from Landfill operations and other construction activities. In addition to traffic noise generated by cumulative projects in the area, the La Pata Transfer Station, which is located over 0.5 mi north of Zone 4, would potentially generate noise impacts to surrounding uses. Based on information provided in *Addendum 10 to Final EIR Nos. 584 and 589 to The Ranch Plan – La Pata Transfer Station project* (OCPW 2019), exterior operations at the transfer station would generate minimal noise levels at the closest common receptor (i.e., San Juan Hills High School). The minimal noise level combined with the Proposed Project noise levels would still remain well below the applicable noise level standards. Therefore, the Proposed Project would not contribute substantially to cumulative noise impacts and would have a less than cumulatively considerable impact. The Proposed Project's contribution to cumulative impacts associated with noise and vibration would be less than significant.	Less Than Significant	None	Less Than Significant

AAQS = ambient air quality standards
AQMD = Air Quality Management District
AQMP = Air Quality Management Plan
CAAQS = California Ambient Air Quality Standards
CARB = California Air Resources Board
CCR = California Code of Regulations
CEQA = California Environmental Quality Act
CO = carbon monoxide
dBA = A-weighted decibels
EGR = exhaust gas recirculation
EIR = Environmental Impact Report
GDP = General Development Plan
in/sec = inches per second
IWMD = Integrated Waste Management Department (now known as OC Waste & Recycling)
LFG = landfill gas
MM = Mitigation Measure
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
NO_X = nitrogen oxides
OCWR = OC Waste & Recycling
PF&RD = Public Facilities and Resources Department (now known as OC Public Works)
PF&RD/HBP = Public Facilities and Resources Department/Harbor, Beaches, and Parks (now known as OC Parks)
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PPV = peak particle velocity
SCAQMD = South Coast Air Quality Management District
SEIR = Supplemental Environmental Impact Report
SO_X = sulfur oxides
VOC = volatile organic compounds

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Backfilling	
01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	• Mix backfill soil with water prior to moving • Dedicate water truck or high capacity hose to backfilling equipment • Empty loader bucket slowly so that no dust plumes are generated • Minimize drop height from loader bucket
Clearing and Grubbing	
02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	• Maintain live perennial vegetation where possible • Apply water in sufficient quantity to prevent generation of dust plumes
Clearing Forms	
03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	• Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	
04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	• Follow permit conditions for crushing equipment • Pre-water material prior to loading into crusher • Monitor crusher emissions opacity • Apply water to crushed material to prevent dust plumes
Cut and Fill	
05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	• For large sites, pre-water with sprinklers or water trucks and allow time for penetration • Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – Mechanical/Manual	
06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	• Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed Soil	
07-1 Stabilize disturbed soil throughout the construction site; and 07-02 Stabilize disturbed soil between structures	• Limit vehicular traffic and disturbances on soils where possible • If interior block walls are planned, install as early as possible • Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust • plumes
Earth-Moving Activities	
08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and	• Grade each project phase separately, timed to coincide with construction phase • Upwind fencing can prevent material movement on site • Apply water or a stabilizing agent in sufficient • quantities to prevent the generation of visible dust plumes

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
08-3 Stabilize soils once earth-moving activities are complete.	
Importing/Exporting of Bulk Materials	
09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	• Use tarps or other suitable enclosures on haul trucks • Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage • Comply with track-out prevention/mitigation requirements • Provide water while loading and unloading to reduce visible dust plumes
Landscaping	
10-1 Stabilize soils, materials, slopes	• Apply water to materials to stabilize Maintain materials in a crusted condition • Maintain effective cover over materials • Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes • Hydroseed prior to rain season
Road Shoulder Maintenance	
11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	• Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs • Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder • maintenance costs
Screening	
12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	• Dedicate water truck or high capacity hose to screening operation • Drop material through the screen slowly and minimize drop height • Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop • point
Staging Areas	
13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	• Limit size of staging area • Limit vehicle speeds to 15 miles per hour • Limit number and size of staging area entrances/exists
Stockpiles/Bulk Material Handling	
14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	• Add or remove material from the downwind portion of the storage pile • Maintain storage piles to avoid steep sides or faces

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Traffic Areas for Construction Activities	
15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	• Apply gravel/paving to all haul routes as soon as possible to all future roadway areas • Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	
16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16.2 Stabilize soils at the completion of trenching activities.	• Pre-watering of soils prior to trenching is an effective preventive measure. • For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching • Washing mud and soils from equipment at the • conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck Loading	
17-1 Pre-water material prior to loading; and 17.2 Ensure that freeboard exceeds six inches (CVC 23114)	• Empty loader bucket such that no visible dust plumes are created • Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	
18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	• Haul waste material immediately off site
Unpaved Roads/Parking Lots	
19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	• Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant Land	
20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 5.4-7 (from Mitigation Measure 5.4-1): Fugitive Dust Control Actions (SCAQMD Rule 403, Table 1)

Fugitive Dust Source Category Control Actions	
Earth-Moving (Except Construction Cutting and Filling Areas, and Mining Operations)	
(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by the ASTM [American Society for Testing and Materials] method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; **OR**
(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-Moving: Construction Fill Areas	
(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.
Earth-Moving: Construction Cut Areas and Mining Operations	
(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed Surface Areas (Except Completed Grading Areas)	
(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed Surface Areas: Completed Grading Areas	
(2c)	Apply chemical stabilizers within five working days of grading completion; **OR**
(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive Disturbed Surface Areas	
(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; **OR**
(3b) (3c)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; **OR**
(3d)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; **OR**
	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	
(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8-hour workday]; **OR**
(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; **OR**
(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.

Table 5.4-7 (from Mitigation Measure 5.4-1): Fugitive Dust Control Actions (SCAQMD Rule 403, Table 1)

Fugitive Dust Source Category Control Actions	
Open Storage Piles	
(5a)	Apply chemical stabilizers; **OR**
(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; **OR**
(5c)	Install temporary coverings; **OR**
(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	
(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

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2.0 INTRODUCTION

2.1 PURPOSE OF THIS SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

This Subsequent EIR has been prepared to evaluate environmental impacts associated with the Proposed Project. Section 2.1.3 provides an overview of the regulatory framework for subsequent CEQA documents.

2.1.1 General Background

In February 1973, the Board of Supervisors (BOS) established the Prima Deshecha Landfill (Landfill) as a concept for refuse disposal for residents of Orange County. The Landfill began accepting municipal waste in 1976 in an area now known as Waste Management Unit 2 (WMU2). In December 1976, a General Development Plan was initiated to combine both refuse disposal and plans to transform the Landfill into a wilderness park upon its closure.

An Interim Project Report/Environmental Impact Analysis for the Landfill site was submitted in August 1978 to the County of Orange Harbors, Beaches, and Parks (HBP) Commission. The report contained an Interim Plan and two ultimate Alternative Schematic Plans. Alternative 2 (an 81-million-cubic-yard [mcy] refuse plan covering 800 acres of Landfill area and 200 acres of borrow area) was recommended by the HBP Commission and subsequently adopted by the BOS in December 1978. That Alternative Schematic Plan was further refined and provided the basis for the 1979 Prima Deshecha General Development Plan (GDP) as well as the initial and current Solid Waste Facilities Permit (SWFP) No. 30-AB-0019 for the site. In 1980, the disposal operations were moved to a second active area known as Waste Management Unit 1 (WMU1).

In 1994, an updated draft GDP was prepared and analyzed in a Program Environmental Impact Report (EIR No. 548), which was circulated for public review and comment in September and October of 1995. On November 21, 1995, the BOS certified Final EIR No. 548 as adequately assessing potential environmental impacts associated with the 1994 GDP, but decided not to approve the 1994 GDP project in an effort to address viewshed concerns of the City of San Clemente. At Board direction, a revised plan was developed, and a Memorandum of Understanding (MOU) was executed between the City of San Clemente and the County for the Prima Deshecha property on July 1, 1997.

The negotiated design amendments and boundary constraints of the 1997 MOU were incorporated into the 2001 GDP and into Final EIR No. 575 (the 2001 GDP EIR), which was certified in November 2001, and the 2001 GDP now serves as the future planning guide for the Landfill site. The development limits of Zone 4 of the Landfill area were further refined through the Talega Settlement Agreement between the County and Rancho Mission Viejo, which was approved by the BOS on October 22, 2002.

The 2001 GDP, as amended, is the planning document for coordinated long-term implementation of both interim and ultimate site development uses. The GDP identifies the solid waste disposal needs as the most important function of the Landfill site; however, the GDP includes three elements: landfill, circulation, and recreation. These three elements are “considered together in the GDP in order to ensure compatibility of the existing, interim, and ultimate uses on the site as well as to

achieve the goals and objectives of approved local and regional plans and policies" (2001 GDP EIR, page 3-5). The 2001 GDP utilizes a five-zone concept to guide planning decisions at the Landfill site and to manage Landfill operations. Zones 1 and 4 are reserved for Landfill development, Zones 2 and 3 are reserved for habitat mitigation and open space, and Zone 5 was reserved for the La Pata Avenue Gap Closure project, which was completed in 2016. The 2001 GDP resembles the 1994 GDP but reflected the plan agreed to by the City of San Clemente and incorporates actions required for remediation of a landslide that occurred in May 1998 in a stockpile area south of the Prima Deshecha Cañada stream.

Solid waste disposal is the primary function of the Landfill for the foreseeable future and the first component of the GDP. The Landfill is currently permitted to accept up to 4,000 tons per day (TPD) of waste material. In 2001, when the GDP was prepared, the Landfill was projected to have remaining capacity for approximately 66 additional years (i.e., until 2067). This estimate has since been revised, and the Landfill is expected to have the capacity to serve residents and businesses of the County until approximately 2102.[1]

The second component of the GDP is circulation. The 2001 GDP EIR identified circulation and roadways as "improvements necessary to support the landfilling and recreation uses and to accommodate the arterial highway needs detailed in the Master Plan of Arterial Highways (MPAH), Orange County Circulation Plan (OCCP), and City Circulation Plans." The project description included the (then) future construction of the extensions of Avenida La Pata, Camino De Los Mares, and Camino Las Ramblas through the Landfill.[2] The 2001 GDP EIR also clarified that the roadways would not be built as part of the Landfill development but were included in the GDP so as not to preclude the future development of the roadway extensions.

The third component identified in the 2001 GDP is to provide interim opportunities and plan for the ultimate transition of the site to a future regional park. The GDP provides for the transition of Zone 1 to recreational use "when Landfill operations have ceased, all closure activities have been completed, satisfactory access has been established, sufficient settlement has occurred, and landfilling has begun in Zone 4. When landfilling operations in Zone 4 are complete, the ultimate recreational uses can be developed for that site after closure activities have been completed and sufficient settlement has occurred" (the 2001 GDP EIR, page 1-3).

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1 Changes in regulations requiring a greater amount of recycling and diversion of materials away from the Landfill, and more efficient methods have extended the forecast life of the Landfill. As a condition of the permit issued by the California Department of Resources Recycling and Recovery (CalRecycle), updates are provided every five years to discuss changes in site design, operations plan, and/or remaining life of the Landfill. The most current permit (issued April 19, 2019) identifies 2102 as the projected closure date.

2 The 2001 GDP EIR indicated that the City of San Juan Capistrano passed a resolution on December 14, 1999, that stipulates the City's intention of deleting the Camino Las Ramblas extension to Avenida La Pata. If the deletion from the MPAH is approved, it would necessitate an amendment to the 2001 Circulation Component of the GDP. Currently, the MPAH still depicts the Camino Las Rambles extension to Avenida La Pata as an unconstructed secondary arterial highway.

The 2001 GDP and the Master Plan of Riding and Hiking Trails Map of the Orange County General Plan designate a future riding and hiking trail and staging area located within Zone 2 of the Landfill site, on the east side of Avenida La Pata.

The 2001 GDP EIR, which was certified in November 2001, identified the following significant, unavoidable impacts associated with the GDP: (1) changes to topography, (2) short-term impacts to biological resources (coastal sage scrub and riparian habitat) until revegetation areas have matured, and (3) aesthetic impacts to the visual character especially from views in San Clemente.

Although the 2001 GDP EIR was certified prior to the approval of the Southern Subregion Habitat Conservation Plan (SSHCP), Final EIR No. 584 for the Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan incorporated the 2001 GDP EIR by reference to address the impacts associated with the 2001 GDP.

In June 2007, the BOS certified the First Supplemental EIR to the 2001 GDP EIR for the Second Amendment to the 2001 Prima Deshecha GDP. The Amendment includes the following elements:

1. A change in the area of disturbance for the two Landfill zones (1 and 4) from 800 acres (2001 GDP) to 1,078 acres to accommodate short-term impacts from installation of landslide remediation measures and landfill support features;

2. Redesign of the desilting basin for Zone 4;

3. Implementation of features to supplement water supply in the Prima Deshecha Cañada stream channel, including the potential for a subsurface water storage feature beneath one or more of the relocated desilting basins;

4. Modification of the potential excavation phasing limits for Zones 1 and 4 to construct landslide remediation features and updated fill phasing limits for Zone 1;

5. Coordination and implementation of a comprehensive pre-mitigation plan to mitigate for biological impacts through project build out; and

6. Development of a comprehensive conceptual plan identifying regional environmental enhancement opportunities on the site.

In 2022, the BOS certified the Second Supplemental EIR to the 2001 GDP EIR for the Prima Deshecha GDP. The Second Supplemental EIR included the following elements:

1. Revised the phasing of operations between Zone 1 and Zone 4 of the Landfill to allow for concurrent operations and for activities to shift between the two zones based on seasonal environmental conditions to minimize any potential noise, dust, and odor impacts that may occur to existing residences near the Landfill.

2. Allowed for blasting, excavation, on-site relocation, pulverizing into soil, soil stockpiling, and off-site soil removal of hard rock material in Zone 4, referred to as the San Onofre Breccia area.

3. Allowed for the import of approximately 8,108 cubic yards of soil for liner installation that occurred for all Zone 4 development phases.

The Proposed Project that is under consideration and that is being evaluated in this Subsequent EIR is the increase in permitted maximum daily tonnage accepted at the Landfill from 4,000 TPD to 8,000 TPD. This increase is needed to accommodate a portion of the waste stream currently processed at the Olinda Alpha Landfill when that facility is expected to close in approximately 2026. The approval for the increased daily tonnage is anticipated to occur in 2026. However, the increase in daily tonnage is anticipated to take place gradually. The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents.

2.1.2 Authority

CEQA, Public Resources Code (PRC) Section 21000 et seq., requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. A "discretionary approval" is an action taken by a government agency that calls for the exercise of judgment in deciding whether to approve or how to carry out a project. An EIR is a public document designed to provide the public, local, and state governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

Pursuant to *State CEQA Guidelines* Section 21067, the lead agency is "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." The County of Orange, OC Waste & Recycling (OCWR) has the principal responsibility for approval of the Proposed Project. For this reason, the County is the CEQA Lead Agency for this Proposed Project.

2.1.3 Subsequent EIR

Section 15162 of the *State CEQA Guidelines* states that when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the Lead Agency determines, on the basis of substantial evidence in the light of the whole record, that one or more of the following things have occurred:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due

to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR.

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR.

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative.

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Due to the potential for the Proposed Project to result in significant impacts not previously identified in prior environmental documents and significant effects previously examined that could be substantially more severe than shown in the previous EIR, the County, as Lead Agency under CEQA, has determined that preparation of a Subsequent EIR (*State CEQA Guidelines* Section 15162) is appropriate. This Subsequent EIR addresses the environmental effects associated with the implementation of the Proposed Project in the context of prior CEQA documentation for the Landfill.

This Subsequent EIR has been prepared in accordance with the requirements of:

- CEQA of 1970, as amended;
- *State CEQA Guidelines*, Section 15000 et seq. of Title 14 CCR; and
- The *2020 Local CEQA Procedures Manual* adopted by the County.

The overall purpose of this Subsequent EIR is to inform the Lead Agency, responsible agencies, decision-makers, and the general public of the environmental effects of the Increase in Maximum Daily Operations Project at the Landfill. This Subsequent EIR addresses the potential environmental effects of the Proposed Project, including effects that may be significant and adverse, evaluates two alternatives to the Proposed Project, and identifies mitigation measures to reduce or avoid adverse effects.

A Subsequent or Supplemental EIR is prepared when an EIR has been certified or a negative declaration adopted for a project and the Lead Agency determines, on the basis of substantial evidence, that one or more of the criteria listed under *State CEQA Guidelines* Section 15163 are met.

If major changes are required to make a previous EIR adequate, the Lead Agency must prepare a Subsequent EIR (Section 15162). If only minor additions or changes are necessary to make the original EIR adequate, the Lead Agency may prepare a Supplemental EIR (Section 15162[a]).

State CEQA Guidelines Section 15163(b) states that a Supplemental EIR need only contain the information necessary to make the prior EIR adequate for the project as revised. Generally, a Supplemental EIR is required to evaluate only the changes in the project, changes in circumstances, or new information that led to the preparation of the further EIR. When evaluating whether changes to the project would result in new significant impacts, the Lead Agency must consider the incremental difference between the original (approved) project and the project as modified. The Lead Agency's review is limited to new effects not previously considered. As supplemental documents, the First Supplemental EIR to the 2001 GDP EIR and Second Supplemental EIR to the 2001 GDP EIR appropriately used the threshold questions in the 2001 GDP EIR and compared the incremental difference between the approved project and the project as modified.

Because this document is a Subsequent EIR (as described in Section 15162 of the *State CEQA Guidelines*), as opposed to a Supplemental EIR, the EIR evaluates the Proposed Project compared to the baseline conditions at the time the Notice of Preparation was issued (i.e., September 27, 2023) rather than evaluating the incremental difference between the previously-approved project and the Proposed Project. As a Subsequent EIR, this document incorporates and relies on relevant analysis from prior environmental documents and incorporates previously approved mitigation measures that reduce the potential impacts of the Proposed Project. The thresholds of significance in this EIR reflect revisions made to the *State CEQA Guidelines* since the 2001 GDP EIR. Key revisions include the introduction of significance thresholds for greenhouse gas (GHG) emissions, energy, tribal cultural resources, and wildfire, and include the transition from a level of service (LOS) based approach to a vehicle miles traveled (VMT) based approach for evaluating transportation impacts.

2.1.4 Previous Environmental Documents

2.1.4.1 2001 GDP EIR (EIR No. 575)

On November 6, 2001, the BOS approved the 2001 GDP EIR, Final EIR No. 575 (State Clearinghouse [SCH] No. 199041035), for the implementation of the Prima Deshecha GDP and development of Zones 1 and 4 of the Landfill.

The project analyzed in the 2001 GDP EIR included the following elements:

- The EIR analyzed the GDP for the Prima Deshecha site, which included a landfill element, a circulation element, and a recreation element. To provide for all three elements, the Prima Deshecha property was divided into five zones. Zones 1 and 4 are reserved for Landfill development, Zones 2 and 3 are reserved for habitat mitigation and open space, and Zone 5 is reserved for the La Pata Avenue Gap Closure project. (The La Pata Avenue Gap Closure project was completed in 2016; La Pata Avenue was renamed Avenida La Pata.)

- For the landfill element of the Prima Deshecha GDP, the EIR analyzed a total design capacity of approximately 53.1 mcy for the Zone 1 Landfill development area on 271 acres at a maximum design elevation of 600 feet above mean sea level. In addition, for the Zone 4 Landfill

development area, the EIR analyzed a total design capacity of approximately 118.5 mcy on 409 acres at a maximum design elevation of 1,010 feet above mean sea level. Estimated closure dates of 2019 for the Zone 1 Landfill development area and 2067 for the Zone 4 Landfill development area were based on inflow rate assumptions of up to 4,000 TPD. The GDP noted that Landfill phasing and staging could be affected by increases or reductions in the rate of disposal.

- The Landfill development limits of the Zone 4 Landfill area were further refined through the Talega Settlement Agreement between the County and Rancho Mission Viejo that were approved by the BOS on October 22, 2002. As a result of the Talega Settlement Agreement, the horizontal development limits of the Zone 4 Landfill area were slightly reduced and, in order to assure a buffer between the Landfill and the Rancho Mission Viejo property, Rancho Mission Viejo agreed to not allow construction of any habitable buildings within a designated No-Build Area adjacent to the Landfill's eastern boundary in Zone 4.

2.1.4.2 First Supplemental EIR to the 2001 GDP EIR (Supplemental EIR No. 597)

On June 19, 2007, the BOS approved Final Supplemental EIR No. 597 for the Second Amendment to the Prima Deshecha GDP (SCH No. 199041035). This was the first Supplemental EIR to EIR No. 575, referred to herein as the First Supplemental EIR to the 2001 GDP EIR. The project analyzed in the First Supplemental EIR to the 2001 GDP EIR included the following elements:

- Increased grading disturbance and excavation limits for both the Zone 1 and Zone 4 landfills to allow for future landslide remediation projects; no change to the GDP, landfill depth of waste, or landfill final elevations that were analyzed in the 2001 GDP EIR.

- Re-design of future desilting basins for the Zone 4 landfilling area.

- More clearly defined biological mitigation to provide compensatory mitigation for the biological impacts associated with the future Zone 4 Landfill development.

Due to a change in the *State CEQA Guidelines*, the First Supplemental EIR to the 2001 GDP EIR revised the significance conclusion of the air quality section in the 2001 GDP EIR from "less than significant with mitigation" to "unavoidable significant adverse impact" to reflect that compliance with a standard adopted by a public agency for the purpose of environmental protection was no longer considered sufficient to demonstrate that impacts would be less than significant. The 2001 GDP EIR (Final EIR No. 575) had indicated that both the worst-case daily construction and operational emissions from a 4,000 TPD landfill that were analyzed in Final EIR No. 575 (OCWR 2001) would exceed both the daily construction and operational emission thresholds of significance included in the South Coast Air Quality Management District's (SCAQMD) 1993 *CEQA Air Quality Handbook* and associated updates and had relied on "conformity with landfill-specific SCAQMD air quality standards" to conclude that impacts could be mitigated to a level below significance.

2.1.4.3 Second Supplemental EIR to the 2001 GDP EIR

On January 25, 2022, the BOS approved the Second Supplemental EIR to Final EIR No. 575 for the Prima Deshecha GDP (SCH No. 1999041035), referred to herein as the Second Supplemental EIR to the 2001 GDP EIR. The EIR addressed the following changes to the GDP:

- Revised the phasing of operations between Zone 1 and Zone 4 of the Landfill to allow for concurrent operations and for activities to shift between the two zones based on seasonal environmental conditions to minimize any potential noise, dust, and odor impacts that may occur to existing residences near the Landfill.

- Allowed for blasting, excavation, on-site relocation, pulverizing into soil, soil stockpiling, and off-site soil removal of hard rock material in Zone 4, referred to as the San Onofre Breccia area.

- Allowed for the import of approximately 8,108 cubic yards of soil for liner installation that occurred for all Zone 4 development phases.

These changes were reflected in the Fourth Amendment to the 2001 Prima Deshecha GDP. In compliance with Senate Bill (SB) 743, the Second Supplemental EIR to the 2001 GDP EIR considered transportation impacts using the VMT metric, rather than LOS, and additionally included outreach to tribes consistent with Assembly Bill (AB) 52.

2.1.4.4 EIR Addenda (Addenda to the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR)

Since the certification of the 2001 GDP, multiple addenda have been approved for various construction projects and changes in operations, some reflected in amendments to the 2001 GDP. The 13 addenda to the 2001 GDP EIR (EIR No. 575) and the 3 addenda that accompany the First Supplemental EIR to the 2001 GDP EIR (Supplemental EIR No. 597) are shown in **Table 2.A**, below.

2.1.5 Incorporation by Reference

Pursuant to Section 15150 of the *State CEQA Guidelines*, this Subsequent EIR has incorporated by reference the entirety of the 2001 GDP (as previously amended), the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, the Addenda, as well as relevant technical studies, analyses, and reports. Information from these documents has been briefly summarized in the appropriate section(s) that follow.

This Subsequent EIR also incorporates by reference all stated project objectives, overall project information, environmental analyses, mitigation measures, and construction elements contained within the 2001 GDP EIR and its Addenda, the First Supplemental EIR to the 2001 GDP EIR and its Addenda, the Second Supplemental EIR to the 2001 GDP EIR, and all supporting documentation (collectively referred to as prior CEQA documentation for the Landfill). Analyses contained within the prior CEQA documentation will be summarized but will not be reiterated in detail unless relevant to impacts associated with the Proposed Project.

Table 2.A: EIR Addenda for the Prima Deshecha GDP

Addenda	Date	Project Components
Addenda to the 2001 GDP EIR (EIR No. 575)		
Addendum No. 1 to Final EIR No. 575	October 2003	• A minor (2 percent) increase in the Zone 1 disturbance footprint. • Expansion of the approved coastal sage scrub mitigation planting area.
Addendum No. 2 to Final EIR No. 575	March 2005	• An adjustment to project phasing to allow installation of the Phase A2 and B1 liner system. • Zone 1 desilting basin enlargement and upgrade. • Construction of a 60-foot-long rock gabion wall at the terminus of the realigned stream. • Construction of ancillary improvements, including paving of the service road, relocation of the bridge over the desilting basin, and trail accommodations.
Addendum No. 3 to Final EIR No. 575	November 2008	• Construction and operation of a materials recovery facility.
Addendum No. 4 to Final EIR No. 575	July 2013	• Revised the maximum daily importation tonnage from 700 TPD to 1,840 TPD.
Addendum No. 5 to Final EIR No. 575	March 2015	• Allowed construction and operation of a temporary marine vessel storage facility on approximately 7 acres of Waste Management Unit 1.
Addendum No. 6 to Final EIR No. 575	September 2018	• Revised the Landfill closure dates from 2019 to 2050 for Zone 1 and from 2067 to 2102 for Zone 4. • Reduced the Zone 1 Landfill development footprint by 1.8 acres.
Addendum No. 7 to Final EIR No. 575	June 2015	• Allowed acceptance of out-of-County waste through June 30, 2025.
Addendum No. 8 to Final EIR No. 575	November 2018	• Approved implementation of an on- and off-site riparian mitigation plan to provide full compensatory mitigation for development of the Zone 4 Landfill area at build out of the Landfill.
Addendum No. 9 to Final EIR No. 575	June 2019	• Approved implementation of an on- and off-site riparian mitigation plan to provide full compensatory mitigation for development of the Zone 4 Landfill area at build out of the Landfill.
Addendum No. 10 to Final EIR No. 575	May 2020	• Allowed construction and operation of a temporary on-site auto dealership vehicle storage on a previously disturbed 5.28-acre area of the Landfill.
Addendum No. 11 to Final EIR No. 575	February 2021	• Allowed reconstruction of the fee booth, scales, and entrance way to the Landfill to facilitate improved traffic flow and management.
Addendum No. 12 to Final EIR No. 575	March 2021	• Modified the landfill gas (LFG) collection system by adding an additional flare to manage LFG when the gas to energy (GTE) facility at the site ceases to operate in 2022. • Evaluated the minor change to the anticipated emissions for the Landfill gas collection system.
Los Patrones Parkway Extension Project – Addendum to Final EIR No. 5751	January 2021	• Amended the 2001 GDP to reflect the Los Patrones Parkway Extension Project (LPPE) roadway traversing portions of Zone 2 and Zone 4 as well as connecting to Avenida La Pata in Zone 5 of the Landfill.
Addenda to the First Supplemental EIR to the 2001 GDP EIR (Supplemental EIR No. 597)		
Addendum No. 1 to Final Supplemental EIR No. 597	April 2010	• Allowed blasting and rock crushing/processing operations associated with removal of the San Onofre Breccia Formation in Zone 4 of the Landfill.
Addendum No. 2 to Final Supplemental EIR No. 597	September 2018	• Revised the Landfill closure dates from 2019 to 2050 for Zone 1 and from 2067 to 2102 for Zone 4. • Reduced the Zone 1 Landfill development footprint by 1.8 acres.
Addendum No. 3 to Final Supplemental EIR No. 597	March 2021	• Evaluated a minor change to the anticipated emissions for the Landfill gas collection system.

Table 2.A: EIR Addenda for the Prima Deshecha GDP

Addenda	Date	Project Components
[1] The Los Patrones Parkway Extension Project – Addendum to Final EIR No. 575 is also an addendum to Final Program EIR No. 584 Southern Subregion Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan and an addendum to Final EIR No. 589 The Ranch Plan General Plan Amendment and Zone Change.		
EIR = Environmental Impact Report GDP = General Development Plan		

2.2 SCOPING PROCESS

In compliance with the *State CEQA Guidelines*, the County has taken steps to provide opportunities for the public and other public agencies to participate in the environmental review process.

The County conducted the scoping process, issued a Notice of Preparation (NOP), prepared an Initial Study for the Proposed Project, and determined that a Subsequent EIR was required to evaluate the potentially significant environmental effects of the Proposed Project and related actions. Outreach to Native American tribes was conducted in September 2023 in accordance with Assembly Bill (AB) 52 requirements; refer to Section 5.2.16 for additional details. Additionally, a public scoping session was conducted as discussed below.

2.2.1 Notice of Preparation and Initial Study

On September 25, 2023, the NOP for the Proposed Project was distributed by the County via the SCH. The SCH issued a project number for the Subsequent EIR (SCH No. 1999041035). In accordance with *State CEQA Guidelines* Section 15082, the NOP was circulated to the agencies and mailed to the individuals and organizations listed in **Appendix A** of this Subsequent EIR for a period of 30 days, during which time written comments were solicited pertaining to environmental issues that the Subsequent EIR should evaluate. The NOP was also filed with the Orange County Clerk-Recorder and placed in the legal notices section of the *Orange County Register* on September 25, 2023.

The NOP was mailed to an extensive list of recipients, including adjacent property owners and occupants of the properties located within 1.5 miles of the Landfill. The NOP was also mailed to several homeowner's associations, businesses, community groups, elected officials, and State, local, and federal agencies. **Appendix A** includes the NOP and Initial Study, the NOP distribution list, a summary of comments received during public scoping, and copies of written comments provided by Public Agencies. OCWR received comment letters from the following Public Agencies:

- Native American Heritage Commission
- California Department of Resources Recycling and Recovery (CalRecycle)
- Capistrano Unified School District
- City of San Clemente
- California Highway Patrol
- City of San Juan Capistrano
- Local Enforcement Agency (LEA; i.e., the Orange County Health Care Agency, Environmental Health Department, acting as the LEA for CalRecycle)
- SCAQMD

Additionally, OCWR received 103 comment letters from individuals. The comments received from agencies and interested parties included the topics listed below, which are evaluated in Chapters 4.0 and 5.0 of this Subsequent EIR. Comments related to Alternatives are addressed in Chapter 7.0 of this Subsequent EIR.

- Air Quality
- Biological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services
- Transportation
- Tribal Cultural Resources
- Wildfire

2.2.2 Scoping Meeting

The County held a public scoping meeting on October 4, 2023, to solicit comments relative to the content of the information to be analyzed in this Subsequent EIR. **Appendix A** includes the NOP and Initial Study, the NOP distribution list, and a summary of comments received public during scoping.

2.2.3 Areas of Controversy

Key environmental issues and concerns raised in response to the NOP or at the scoping meeting included:

- **Traffic:** Concerns were expressed about additional traffic on Avenida La Pata and Ortega Highway (State Route 74, or SR-74) and possible impacts related to increased truck traffic. It was suggested that the Subsequent EIR address the Proposed Project's traffic increase in conjunction with the existing traffic congestion during San Juan Hills High School pick-up and drop-off times.

- **Noise:** Concerns were expressed about noise generated from additional trucks on the surrounding roads and the beeping noise generated from back-up alarms on landfill equipment and trucks. It was suggested that the Subsequent EIR address the reduction or elimination of noisy back-up alarms.

- **Air Quality:** Concerns were expressed about odor control, dust suppression, and potential health risks for area residents, especially sensitive receptors. Commenters suggested that health assessments be conducted and air quality mitigation measures be implemented for the Proposed Project.

- **Hazards:** Concerns were expressed about falling debris from trucks going to and from the Landfill and the hazards that would be created along Avenida La Pata. There were also concerns about the Proposed Project's interference with emergency response in the area and potential increased risk of wildfire. It was suggested that load covering be enforced to prevent falling debris.

- **Tribal Cultural Resources:** Concerns were expressed that potential effects to tribal cultural resources could occur and that this issue had not been addressed in prior environmental documentation.

- **Cumulative Impacts:** Concerns were expressed about potential cumulative impacts given the site's proximity to the Rancho Mission Viejo housing development, the widening of Ortega Highway (SR-74), and the new location of a materials recovery facility.

The above list identifies only the key issues that were raised during the scoping process rather than every single issue raised. Some comments received were not related to the Proposed Project evaluated in this Subsequent EIR, such as concerns regarding the approved development of Zone 4 of the Landfill in accordance with the approved GDP (Zone 4 development was evaluated in previous CEQA documents and no changes are proposed as part of the Proposed Project); proximity of the Landfill to the Trampas Canyon Reservoir and Dam and notification to the Santa Margarita Water District; illegal dumping on trails in San Juan Capistrano; relocation of the recycling plant and subsequent increase in pollution, traffic, and noise; concern related to the cumulative impacts analysis in the 2001 GDP EIR; unrelated construction activities occurring in proximity to the Landfill; and general questions about the Landfill as a whole.

This Subsequent EIR identifies each of these areas of concern or controversy, examines Project-related and cumulative environmental impacts, identifies significant adverse environmental impacts, and proposes mitigation measures designed to reduce or eliminate potentially significant impacts. **Appendix A** includes the NOP and Initial Study, the NOP distribution list, a summary of comments received during public scoping, and copies of written comments received from Public Agencies.

2.3 SCOPE OF THIS SUBSEQUENT EIR

Based upon the Initial Study and Environmental Checklist Form, County staff determined that a Subsequent EIR should be prepared for the Proposed Project. The scope of the Subsequent EIR was determined based upon the County's Initial Study, comments received in response to the NOP, and comments received at the scoping meeting conducted by the County.

2.3.1 Potentially Significant Impacts in the Initial Study

Pursuant to Sections 15126.2 and 15126.4 of the *State CEQA Guidelines,* the Subsequent EIR should identify any new potentially significant adverse impacts or impacts that are substantially increased from those previously identified significant effects and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance. The following environmental topics were identified during the scoping process as new potentially significant impacts and/or previously identified impacts that may be substantially increased that may result if the Proposed Project is implemented:

- Air Quality (including Health Risk)
- Energy (not evaluated in prior environmental documents)
- Greenhouse Gas Emissions (not evaluated in prior environmental documents)
- Hazards (falling debris)
- Noise
- Transportation
- Cumulative impacts related to the above topics

Refer to Chapter 4.0 of this Subsequent EIR for analysis pertaining to topics that required substantial analysis (air quality, GHG emissions, and noise). Energy, hazards, and transportation are evaluated in Chapter 5.0. Chapters 4.0 and 5.0 include the evaluation of cumulative impacts for each topic. This Subsequent EIR identified GHGs as having new significant unavoidable impacts that were not identified in the prior CEQA documentation for the Landfill. This impact is considered new since at the time the 2001 GDP EIR was certified in November 2001 and the First Supplemental EIR to the 2001 GDP EIR was certified in June 2007, the *State CEQA Guidelines* did not include GHGs, and no numeric thresholds for GHGs had formally been adopted. Therefore, prior environmental documentation did not evaluate potential GHG impacts. Refer to Section 4.2, Greenhouse Gas Emissions, for this analysis. Additionally, the Proposed Project would substantially increase the impacts related to air quality compared to the impacts identified in prior CEQA documentation in that the emissions associated with the Proposed Project would exceed applicable SCAQMD thresholds of significance. Refer to Section 4.1, Air Quality, for this analysis. As discussed in Section 4.3, Noise, and Chapter 5.0, impacts associated with noise, hazards, energy, and transportation were determined to be less than significant.

2.3.2 Impacts Considered Less than Significant in the Initial Study

In addition to identifying potentially significant impacts of the Proposed Project that require additional study, the Initial Study also identified effects that were determined not to be significant consistent with *State CEQA Guidelines* Section 15063(c)(3)(B). A copy of the Initial Study and Environmental Checklist for the Proposed Project is included in **Appendix A**. Chapter 5.0 discusses the topics listed below, where the Initial Study analysis determined that the Proposed Project would not have the potential to cause new significant impacts or impacts that are substantially increased in severity from those previously identified for the following areas:

- Aesthetics
- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems
- Tribal Cultural Resources
- Wildfire

In addition to the topics listed above, energy, hazards, and transportation are also discussed in Chapter 5.0 as these topics did not require substantial new analysis to determine that there would not be a potentially significant impact. Although the Initial Study determined that the Proposed Project may result in potentially significant impacts related to energy, hazards, and transportation as demonstrated in Chapter 5.0, impacts associated with these topics were found to be less than significant based upon further analysis.

2.4 FORMAT OF THE SUBSEQUENT EIR

Pursuant to *State CEQA Guidelines* Section 15120(c), this Subsequent EIR contains the information and analysis required by Sections 15122 through 15131. Each of the required elements is covered in one of the following Subsequent EIR chapters:

- **Chapter 1.0: Executive Summary.** Chapter 1.0 contains the Executive Summary of this Subsequent EIR document, listing all potentially significant impacts of the Proposed Project, mitigation measures that have been recommended to reduce any potentially significant impacts of the Proposed Project, and the level of significance of each impact following implementation or incorporation of mitigation.

- **Chapter 2.0: Introduction.** Chapter 2.0 contains a discussion of the purpose and intended use of this Subsequent EIR, background on initiation of the CEQA process, the NOP and scoping, and areas of controversy known to the Lead Agency, including issues raised by the public.

- **Chapter 3.0: Project Description.** Chapter 3.0 includes discussion of the Proposed Project's geographical setting; the site's existing use as a landfill; and the Proposed Project's goals, objectives, characteristics, components, and phasing.

- **Chapter 4.0: Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures.** Chapter 4.0 is organized into topical sections, including Section 4.1, Air Quality; Section 4.2, Greenhouse Gas Emissions; and Section 4.3, Noise. Chapter 4.0 provides a general description for how each topical section is organized as well as a list of projects that were considered in the cumulative analysis. Generally, each topic section includes a discussion of the existing setting, methodology, thresholds of significance, analysis of potential Proposed Project impacts, analysis of potential cumulative impacts, mitigation measures, and level of significance after the incorporation of mitigation measures.

  The environmental setting discussions describe the "existing conditions" of the environment on the Landfill site and in the vicinity of the Landfill as it pertains to the environmental issues being analyzed (Section 15125 of the *State CEQA Guidelines*).

  As discussed in Section 2.1.3, a Subsequent EIR is required to evaluate only the changes in the Proposed Project, changes in circumstances, or new information that led to preparation of the Subsequent EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The direct and indirect significant effects of the Proposed Project on the environment are identified and described, giving due consideration to both the short-term and long-term effects as necessary (Section 15126.2[a] of the *State CEQA Guidelines*). As the proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage and no new construction, off-site improvements, or modifications to previously approved Landfill development are proposed, the effects of the Proposed Project are generally characterized as long-term (that is, there would be no short-term effects that would substantially differ from the long-term effects); the effects of the Proposed Project are evaluated in the context of existing

conditions as well as future conditions with consideration of the combined effects of cumulative projects.

Chapter 4.0 also includes, within each environmental impact analyzed, a discussion of the cumulative effects of the Proposed Project when considered in combination with other projects, causing related impacts as required by Section 15130 of the *State CEQA Guidelines*. Cumulative impacts are based on the build out of the Proposed Project and the surrounding area, including all other known projects proposed in the surrounding area.

The discussions of mitigation measures identify and describe feasible measures that could minimize or lessen significant adverse impacts for each significant environmental effect identified in the EIR (Section 15126[c] of the *State CEQA Guidelines*). The level of significance before and after mitigation is reported in each section. Unavoidable adverse effects are identified where mitigation is not expected to reduce the effects to less than significant levels.

- **Chapter 5.0: Environmental Issues Not Requiring Substantial Additional Analysis.** In accordance with *State CEQA Guidelines* Section 15128, Chapter 5.0 includes a discussion of those topics that did not require substantial new analysis to determine whether there would be a potentially significant impact.

- **Chapter 6.0: Other CEQA Considerations.** Chapter 6.0 includes CEQA-mandated discussions on the following topics as required by Section 15126 of the *State CEQA Guidelines*: (1) significant adverse environmental impacts for which either no mitigation or only partial mitigation is feasible; (2) significant irreversible environmental changes that would result from implementation of the Proposed Project; and (3) growth-inducing impacts of the Proposed Project.

- **Chapter 7.0: Alternatives.** In accordance with CEQA, the alternatives discussion in Chapter 7.0 describes a reasonable range of alternatives that could feasibly attain the basic objectives of the Proposed Project, were not proposed in the original 2001 GDP EIR and are capable of eliminating any significant adverse environmental effects or reducing them to a less than significant level. The alternatives analyzed in Chapter 7.0 include: (1) the No Project Alternative, and (2) the Reroute Greater Share of Olinda Alpha Landfill Waste to Frank R. Bowerman Landfill Alternative. As specified in the *State CEQA Guidelines* Section 15126.6(f)(2), this chapter identifies and assesses whether potential alternative sites could accommodate the Proposed Project.

- **Chapter 8.0: List of Preparers and Persons Consulted.** In accordance with Section 15129 of the *State CEQA Guidelines*, this chapter includes information about the preparers of this Subsequent Draft EIR and persons and agencies consulted in support of this effort.

- **Appendices**

    - **Appendix A:** Notice of Preparation, Initial Study, Summary of Comments received during Public Scoping, and Public Agency Comments Received on the Notice of Preparation

- **Appendix B:** Air Quality Modeling
- **Appendix C:** Odor Study
- **Appendix D:** Noise Modeling
- **Appendix E:** Transportation White Paper and Traffic Study
- **Appendix F:** Amendment No. 5 to the 2001 Prima Deshecha Landfill General Development Plan
- **Appendix G:** Mitigation Monitoring and Reporting Program (MMRP)

2.5 PUBLIC REVIEW OF THE DRAFT SUBSEQUENT EIR

All agencies, organizations, and individuals are invited to comment on the information presented in the Draft Subsequent EIR during the public review period. Specifically, comments are requested on the scope and adequacy of the environmental analysis. Respondents are also asked to provide or identify additional environmental information that is germane but that may not have been used in the analysis. Any parties interested in reviewing this Subsequent EIR and/or the documents incorporated by reference may do so at the following location:

OC Waste & Recycling
601 North Ross Street, 5th Floor
Santa Ana, CA 92701

This Subsequent EIR is also available on the County's website at: www.oclandfills.com/Prima SubsequentEIR. In compliance with CEQA, all comments received from agencies and individuals on this Subsequent EIR will be accepted during the 45-day public review period from February 2, 2026, to March 19, 2026, with the comment period closing at 5:00 p.m. on March 19, 2026. Comments on the Draft Subsequent EIR may be submitted to:

Leila Barker, CEQA Manager
OC Waste & Recycling
601 North Ross Street, 5th Floor
Santa Ana, CA 92701
Email: OCWR-CEQAReview@ocwr.ocgov.com

Please include your name, address, and contact information in your correspondence. All comments on this Subsequent EIR become part of the public record.

Following the close of the review period, the County will prepare responses to all comments and will compile these comments and responses into a Final Subsequent EIR, which will be available online for public access prior to final action. All responses to comments submitted on the Draft Subsequent EIR by agencies will be provided to those agencies at least 10 days prior to final action on the Proposed Project. The BOS will make findings regarding the extent and nature of the impacts as presented in the Final Subsequent EIR. The Final Subsequent EIR will need to be certified as complete by the County prior to making a decision to approve or deny the Proposed Project. Public input is encouraged at all public hearings before the County.

3.0 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

Prima Deshecha Landfill (Landfill) is owned by the County and operated by OCWR, a County department that is overseen by the Board of Supervisors (BOS). The Proposed Project would increase the maximum daily tonnage receipt capacity of the Landfill from 4,000 tons per day (TPD) to 8,000 TPD. The Proposed Project would also allow for up to 36 operational emergency days during which the 8,000 TPD limit could be exceeded by up to 2,000 TPD (i.e., up to a maximum of 10,000 TPD could be processed on operational emergency days). This increase in daily tonnage is anticipated to take place gradually, and would be reflected in proposed Amendment No. 5 to the 2001 Prima Deshecha General Development Plan (GDP). The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents.

3.2 ENVIRONMENTAL SETTING AND SURROUNDING LAND USES

3.2.1 Regional Location and Setting

The Landfill encompasses 1,530 acres and is located in southeastern Orange County, partially within San Juan Capistrano (570 acres), San Clemente (133 acres), and unincorporated Orange County (827 acres) (see **Figure 3.1, Project Location**; all figures are provided at the end of the chapter). The Landfill is located at 32250 Avenida La Pata, and access is provided by Interstate 5 (I-5), Ortega Highway (State Route 74 [SR-74]), and Avenida La Pata.

Geographically, the Landfill is located in the western foothills of the Santa Ana Mountains. Ground elevations range from 230 feet above mean sea level (amsl) at the southwestern boundary of the site to a maximum elevation of 1,125 feet amsl at the northeastern boundary of the site. Bedrock materials exposed in the area consist of predominantly Tertiary marine sediments composed of, from oldest to youngest, the San Onofre Breccia, the Monterey Formation, and the Capistrano Formation. The Prima Deshecha Cañada watercourse traverses the site from the northeast to the southwest.

3.2.2 Surrounding Land Uses

Existing land uses within the Landfill and the surrounding vicinity are shown on **Figure 3.2, Surrounding Land Use**. Avenida La Pata is a divided north-south roadway that provides access to the Landfill and also bisects the Landfill. Avenida La Pata has four to six travel lanes, and on-street (Class II) bicycle lanes are located on both sides of the street. Curbside parking is not permitted. Land uses surrounding the Landfill include a mix of open space and residential uses, as follows:

- **North:** North of the Landfill is residential development, a church, San Juan Hills High School, and open space.
- **East:** In the existing condition, there is open space and Lapeyre Industrial Sands, Inc. to the east of the Landfill.
- **South:** To the south, the City of San Clemente includes areas of open space and low- to medium-density residential development.
- **West:** To the west, there are areas of Public Open Space and residential development.

3.2.3 General Plan and Specific Plan Land Use Designations

The Orange County General Plan designation for the unincorporated eastern portion of the Landfill is 4(LS), Public Facilities with a Landfill Site Overlay. The City of San Juan Capistrano has designated the western portion of the Landfill within its limits for Regional Park uses, and the City of San Clemente has designated the southern portion of the Landfill within its limits for Public Open Space uses. The Landfill is consistent with the applicable land use designations.

General Plan land use designations directly surrounding the Landfill (within 1 mile) can be characterized as follows (refer to **Figure 3.3, Landfill Zones,** for a map showing the General Plan Land Use designations for the Landfill and surrounding areas):

- To the northeast, unincorporated Orange County includes areas designated Open Space.
- To the east, unincorporated Orange County includes areas designated Suburban Residential.
- To the northwest, the City of San Juan Capistrano includes areas designated Planned Community.
- To the west, the City of San Juan Capistrano includes areas designated Natural Open Space.
- To the south, the City of San Clemente includes areas designated Public Open Space, Private, Open Space, and residential development ranging from Very Low Density to Medium Density Residential.

3.3 EXISTING PROJECT SITE

3.3.1 General Development Plan

In February 1973, the BOS established the Landfill as a multi-use concept for refuse disposal and recreation. The Landfill began accepting municipal waste in 1976 in an area now known as Waste Management Unit 2 (WMU2). In December 1976, a GDP was initiated to combine both refuse disposal and, ultimately, recreational plans for the site upon closure.

The 2001 GDP is the product of updates to previous GDPs (the 1979 GDP and the 1994 GDP) and was drafted to reflect a Landfill plan agreed to by the Cities of San Clemente and San Juan Capistrano. The 2001 GDP serves as the currently approved planning document that guides actions and activities at the Landfill. As discussed in Chapter 2.0 of this Subsequent EIR, mitigation measures adopted in

Final EIR No. 575 (OCWR 2001) for the 2001 GDP are currently being implemented, as coordinated with the State and Federal Resource Agencies. The 2001 GDP, as amended, provides the basis for the existing description of the site, with updates as appropriate to reflect recent on-site information. The 2001 GDP operations are the baseline for existing operations in the analyses contained within this Subsequent EIR. The Proposed Project activities analyzed in this Subsequent EIR are proposed to be included in Amendment No. 5 to the 2001 GDP.

3.3.2 Landfill Site

The Landfill is a Class III solid waste landfill that has been in continuous operation since 1976. The Landfill site is divided into five zones, called Zones 1 through 5, as shown on **Figure 3.4, General Land Use Designations**. Zone 1 is the current landfilling area, with an estimated closure date of approximately 2050. Construction of Zone 4 started in fall 2023, with a future closure date of approximately 2102. Zones 1 and 4, the designated landfilling areas, are located within San Juan Capistrano and unincorporated County. Two major utility easements, consisting of a 150-foot-wide San Diego Gas and Electric (SDG&E) easement and a 200-foot-wide Southern California Edison (SCE) easement, extend through the central portion of the site, separating the western Zone 1 area from the Zone 4 area. Zones 2 and 3 are open space and habitat mitigation areas, and Zone 5 is Avenida La Pata. There are existing uses (i.e., administrative offices/operations building and a household hazardous waste collection center) near the Landfill entrance that do not fall within a designated zone. An existing public use trail that crosses the Landfill site connects the San Clemente and San Juan Capistrano trail systems. OCWR has placed a 487-acre Conservation Easement over a large portion of the Landfill property on non-Landfill development areas (often falling within Zones 2 and 3) as a requirement of the Landfill's inclusion in the Orange County Southern Subregion Habitat Conservation Plan (SSHCP), a multi-species habitat mitigation and management plan for south Orange County.

3.3.3 Current Landfill Operations

Of the total 1,530 acres on the Landfill property, approximately 680 acres are currently permitted for waste disposal. The Landfill accepts solid waste from commercial waste haulers and the public. The Landfill is open from 7:00 a.m. to 5:00 p.m., Monday through Saturday, approximately 309 days per year (i.e., it is closed on Sundays and on six major holidays including New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day).

The Landfill is a deep-canyon, cut-and-cover facility. To determine the tipping fee, trucks are weighed by scales before entering the facility and are then directed to a designated area of the Landfill for waste disposal. OCWR heavy equipment operators use compactors, bulldozers, and large earthmovers to push and compact waste for ultimate burial and daily covering with soil or an approved alternative daily cover material, which includes geosynthetic tarps. Upon acceptance of waste for disposal at the scale house, the fee collector directs the haulers to the working face of the Landfill. Signs are posted along the on-site access road to guide customers to the unloading areas. Commercial vehicles are generally directed to an unloading area that is separate from the area used by members of the public.

The Landfill is permitted to accept up to 4,000 TPD of solid waste.[1] The Landfill is also permitted to accept up to 350 TPD of digested dewatered biosolids (i.e., wastewater treatment plant sludge). Current operations do not typically reach the maximum permitted amount, with variation in the amount of waste received daily. The Landfill accepted a daily average[2] of approximately 2,625 TPD of solid waste in Fiscal Year (FY) 2022/2023 (i.e., July 2022 to June 2023), with the average daily amount in each month ranging from a low of approximately 2,135 TPD in July 2022 to a maximum of 3,313 TPD in March 2023. Of the average total of 2,625 TPD in FY 2022/2023, an average of approximately 1,854 TPD was received from Orange County cities served by the Landfill, which include Aliso Viejo, Dana Point, Laguna Niguel, Mission Viejo, Rancho Santa Margarita, San Clemente, and San Juan Capistrano, as well as unincorporated Orange County. **Table 3.A** shows the types of waste received at the Landfill that originates from within and outside of Orange County. Solid waste materials are primarily delivered by commercial franchise waste haulers under contract to these cities. An average of approximately 772 TPD of solid waste was delivered to the Landfill by waste haulers hauling imported solid waste from outside Orange County, primarily from Los Angeles County. There are only three waste haulers (i.e., Burrtec, EDCO, and Republic) that are permitted to haul imported solid wastes to Orange County landfills, via importation contracts with the County.

In FY 2022/2023, the Landfill also accepted an average of approximately 399 TPD of exempt wastes, which include asphalt and soil for beneficial reuse at the Landfill. The County does not charge for exempt wastes since they are used in daily operations and not buried. Soil is used as daily cover and asphalt is used as a base for wet deck operations. Only municipal solid waste is accepted at the Landfill. No special wastes or liquid wastes other than treated wood waste are accepted at the Landfill. Hazardous materials, such as radioactive waste, asbestos, batteries, chemicals, paints, non-autoclaved medical wastes, and other substances considered hazardous, are not accepted at the Landfill. Recyclable materials found in the majority of the solid waste delivered to the Landfill, whether from in-County or out-of-County sources, are first processed and then removed for recycling.

The Landfill has state-of-the-art environmental control systems that include: (a) a hazardous waste control program; (b) a landfill gas (LFG) monitoring, recovery, and control system with plans to design and implement a new landfill gas-to-energy project in the near future, which will convert LFG into renewable clean energy in the form of electricity or renewable natural gas (RNG); (c) two flares for flaring of collected LFG; (d) a groundwater monitoring, extraction, and collection system; (e) a leachate collection and recovery system; (f) a radioactive waste detection program; and (g) fire, erosion, dust, odor, noise, bird, insect, rodent, and litter control. In addition, OCWR operates a household hazardous waste collection center at the Landfill. The gas recovery system collects all the LFG for subsequent destruction via flaring. The Landfill complies with all federal, State, and local requirements for the operation of a Class III (i.e., municipal solid waste) sanitary landfill.

[1] Impacts associated with the current permitted level of operations (4,000 TPD) were the subject of previous environmental documentation, including the 2001 GDP EIR (EIR No. 575), the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR. Refer to Section 2.1.4 for more information.

[2] All FY 2022/2023 data is based on Disposal Reporting System (DRS) data provided by OCWR (2023).

Table 3.A: Prima Deshecha Landfill Waste Stream

Description		Tonnage Accepted in FY 2022/2023
From Orange County		
Buried Green	Green/organic waste that is contaminated or taken to the Landfill for disposal	572,768
MRF Transfer	Waste that is brought into the landfill for burial from a Material Recovery Facility (MRF)	
General Waste	Waste that is from within Orange County that is brought to the Landfill for burial, that is outside of the other categories	
Sludge	Waste byproduct that is from wastewater treatment facilities	
Misc H to H (Hard to Handle Waste)	Includes bulky items that are not classified as white goods (large electrical goods used domestically such as refrigerators and washing machines), and are not recyclable that are for Landfill disposal	
Treated Wood	Wood products that are treated with and/or injected with a preservation material/treatment	
Salvage Material	Material (metal, paper, glass, e-waste, mattresses, cardboard) that is removed from the waste stream for Landfill disposal	
Outside of Orange County		
Import Waste	Total waste that was brought into all OCWR landfill facilities that originated outside of Orange County	238,395
Summary and Exempt		
All Buried	Total waste that is buried at the Landfill (includes imported waste and all waste received from Orange County)	811,163
LEA Reportable	Total waste that is buried that is reportable to the Local Enforcement Agency (LEA)	811,446
Dirt Exempt	Dirt that is brought in for beneficial use for stockpile or cover	92,632
Asphalt Exempt	Asphalt that is brought in for beneficial use as road base or wet deck operations	106,048

Source: Disposal Reporting System data, Tonnage by Commodity, November (OCWR 2023).
FY = Fiscal Year OCWR = OC Waste & Recycling

Site staff conduct daily inspections to ensure that the site is in compliance with all the permit conditions imposed by regulatory agencies having jurisdiction over landfills. Permitting and enforcement regulatory agencies for the Landfill's operation include the California Department of Resources Recycling and Recovery (CalRecycle); the California Regional Water Quality Control Board (RWQCB), San Diego Region; the South Coast Air Quality Management District (SCAQMD); and the Local Enforcement Agency (LEA; i.e., the Orange County Health Care Agency, Environmental Health Department, acting as the LEA for CalRecycle).

3.4 PROPOSED PROJECT

3.4.1 Project Purpose

As shown on **Figure 3.5, OCWR Landfills,** OCWR owns and operates three active landfills in Orange County, including the Prima Deshecha Landfill in San Juan Capistrano, the Frank R. Bowerman Landfill in Irvine, and the Olinda Alpha Landfill in Brea. OCWR's Olinda Alpha Landfill, which received a daily average of approximately 6,623 TPD in FY 2022/2023 (OCWR 2023) (but may receive up to 10,000 TPD during maximum demand periods [36 days per year]), has an approved closure date of 2030; however, based on updated engineering estimates, it will be closing earlier, potentially as early as the end of 2026 depending on various factors. Based on this anticipated acceptance reduction of

accepted waste and subsequent pending closure at Olinda Alpha Landfill, and in order to maintain systemwide capacity for Orange County, waste will need to be diverted to OCWR's other active landfills. Contracted waste haulers are expected to reroute their trips to the remaining open landfills in an efficient manner to minimize overall miles traveled. The Proposed Project includes increasing the daily permitted capacity of the Prima Deshecha Landfill to allow for this diversion of waste once the Olinda Alpha Landfill closes. This increase in the daily permitted capacity of the Prima Deshecha Landfill is anticipated to take place gradually.

3.4.1.1 Anticipated Landfill Closure Dates

As discussed in Section 2.1.4.4, EIR Addenda, Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the Second Supplemental EIR to the 2001 GDP EIR revised the closure dates for Zones 1 and 4 at the Landfill. The document stated that the Landfill received an average daily tonnage of 1,780 TPD from years 2002–2017. Because the Landfill was not receiving the permitted capacity of 4,000 TDP during that time period, Zone 1 had not reached its design capacity and had significant remaining disposal capacity. Due to this trend between 2002 and 2017, the closure date for the Zone 1 landfill development area was revised from 2019 to 2050, and the closure date for the future Zone 4 landfill development area was revised from 2067 to 2102.[3]

3.4.2 Project Objectives

OCWR has established specific solid waste management objectives for the Proposed Project, which would aid decision-makers in their review of the Proposed Project and its associated environmental impacts. The objectives identified below were utilized in the preparation of this Subsequent EIR, particularly with regard to the Landfill's operations:

- Support the goals established under the OC Waste & Recycling Strategic Plan (Strategic Plan) (formerly the Regional Landfill Options for Orange County Strategic Plan [RELOOC]) to ensure sufficient disposal system capacity for a 40-year period and beyond:
    - Maintain a financially sound, flexible long-term plan for local solid waste disposal and management services.
    - Maintain protection of Orange County's public health, safety and its environment (air, water and habitat).
    - Sustain the economic viability of the Orange County solid waste disposal system by ensuring consistent and reliable public fees/rates and adequate revenues to maintain efficient, cost effective, and high-quality OCWR operations.
    - Provide a fair, objective, open, planning process that is presented in non-technical, easily understood terms, applicable to an evaluation matrix, responsive to and involves stakeholders and the public, and results in public understanding.

[3] The closure date extensions serve as conservative, long-term estimates to identify what should be covered in the permit extensions and do not represent a detailed forecast of anticipated waste.

- Support the goal of the California Integrated Waste Management Act (Assembly Bill [AB] 939), which requires the County of Orange to demonstrate 15 years of countywide solid waste disposal/landfill capacity (or sufficient alternative strategies once 15 years of capacity no longer remains in-County).

- Optimize the use of the site as a long-term waste disposal facility.

- Maintain systemwide solid waste disposal capacity to manage solid waste for Orange County by accommodating a portion of the waste stream that will be diverted from the Olinda Alpha Landfill when that facility starts accepting less quantities of waste in preparation of closure as early as the end of 2026.

- Provide a long-term, regional solid waste management facility with appropriate safeguards, for each Landfill phase in order to protect public health and safety, as well as water, air, soil, and other important resources that exist on site and on surrounding property.

3.4.3 Project Components

The Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. The Proposed Project would also allow for up to 36 operational emergency days during which the 8,000 TPD limit could be exceeded by up to 2,000 TPD, with a maximum of 10,000 TPD. Such operational emergency days could occur if another OCWR facility is temporarily closed, which could occur as a result of a freeway closure or other unforeseen events, necessitating diversion of waste to another landfill. **Table 3.B** shows a comparison of current Landfill operations and projected operations (if operating at maximum capacity) after implementation of the Proposed Project. Although **Table 3.B** reflects current typical operations to present a basis of comparison to existing conditions, up to 4,000 TPD of waste disposal is permitted under existing conditions. Daily waste tonnage is variable; for example, in June 2023, the daily waste received ranged from a low of 1,435 tons to a high of 3,175 tons. Given the variable daily disposal amounts under the existing conditions, it is anticipated that typical daily operations would remain below the permitted maximum 8,000 TPD under the Proposed Project.

Table 3.B: Comparison of Current and Projected Maximum Daily Landfill Operations

Operations[1]	Permitted	Current Average[2]	Projected Maximum[3]
Employees on Site	N/A	45	80
Average Daily Vehicle Trips (PCEs)	N/A	2,555	4,126
Tons Per Day (TPD)	4,000	2,625	8,000[3]

Source 1: Kevin Oxford (OCWR), personal communication, August 2, 2023.
Source 2: Traffic Impact Analysis (LSA 2025).
Source 3: Disposal Reporting System data, Tonnage by Commodity, November (OCWR 2023).
[1] Averages calculated based on data from Fiscal Year 2022/2023.
[2] Current conditions based on data from Fiscal Year 2022/2023; the existing permitted capacity is 4,000 TPD. Daily rates vary substantially.
[3] Projected maximum TPD for the Proposed Project; this does not reflect operations on "emergency days."
LSA = LSA Associates, Inc. OCWR = OC Waste & Recycling
N/A = Not applicable PCE = Passenger Car Equivalents

As noted earlier, the proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents.

3.4.4 Project Design Features and Mitigation Measures

All mitigation measures and design features identified in the Mitigation Monitoring and Reporting Program (MMRP) (refer to **Appendix G** of this Subsequent EIR) would continue to be implemented. Based on the analysis of the Proposed Project impacts in this Subsequent EIR, additional measures have been identified and incorporated as appropriate.

3.4.5 Project Schedule and Phases

The project would increase the maximum permitted daily tonnage receipt capacity of the Landfill from 4,000 TPD to 8,000 TPD. The approval for the increased daily tonnage is anticipated to occur in 2026; however, the increase in daily tonnage is anticipated to take place gradually. The existing permitted capacity is 4,000 TPD. As noted in **Table 3.B,** the average TPD during FY 2022/2023 (OCWR 2022, 2023) was much lower at 2,625 TPD. The daily tonnage varies substantially and is based on demand, with some days of the week substantially busier than others. This Subsequent EIR evaluates the full effects of receiving the maximum permitted amount of 8,000 TPD; however, the daily tonnage is anticipated to vary and remain below the permitted capacity, similar to existing conditions. It would be speculative to identify a specific rate or time frame for the increase in daily waste due to the uncertainty associated with implementation of State and local regulations related to solid waste reduction and unforeseeable changes in demand (such as might occur due to damaging storms, the rate of construction-related waste generation, and changes in the regional waste stream). The closure of other OCWR landfills, namely the Olinda Alpha Landfill, will also be a major factor in increasing demand.

Increasing the daily tonnage permitted at the Landfill is likely to accelerate the completion of landfilling activities in Zone 1 and could accelerate the schedule for developing the Landfill set forth in the 2001 GDP, as amended. However, daily tonnage received over the lifetime of the Landfill is expected to fluctuate based on several factors in addition to the permitted daily tonnage, including existing regulations related to solid waste diversion, how effective these regulations are when they go into effect, actual closure dates of other landfills, the market and economic conditions (e.g., recessions, pandemics, and periods of economic growth), and the unknown nature of future regulations and future technology. As under the existing GDP, there is a potential for operations to be conducted in Zone 1 and Zone 4 simultaneously. As noted above, the amount of waste received is based on demand, and there is substantial uncertainty in predicting the rate of increase in demand. Therefore, no changes are proposed to the Landfill development schedule or closure dates at this time.

3.4.6 Changes in Land Use Controls

No changes to land use designations or zoning are anticipated. No land use changes are proposed.

3.5 REQUIRED PERMITS AND APPROVALS

3.5.1 Discretionary Actions

Implementation of the Proposed Project would require various approvals and permits from local, regional, and State agencies with jurisdiction over specific elements of the Proposed Project. The discretionary approvals by the County, as the Lead Agency, would include the following:

- Certification of the Subsequent EIR, adoption of Statement of Overriding Considerations, Statement of Findings of Fact, and the associated MMRP
- Approval of Amendment No. 5 to the 2001 Prima Deshecha GDP
- Approval of the Proposed Project to Increase Maximum Daily Operations at the Prima Deshecha Landfill

3.5.2 Other Ministerial Actions

Ministerial permits/approvals (e.g., grading permits and building permits) are not anticipated to be required for the increase in maximum daily operations.

3.5.3 Current and Probable Future Actions by Responsible Agencies

The Proposed Project, which includes operational changes that are administrative in nature, involves only an adjustment to the permitted daily tonnage; as such approvals, permits, or authorization from other agencies that are "Responsible Agencies" under CEQA are limited to the agencies identified in **Table 3.C**. Specifically, only the LEA, which will have discretionary approval authority related to the Proposed Project, will be a Responsible Agency, and the RWQCB and SCAQMD will be responsible for renewing existing permits and authorizations for ongoing operations and are also considered Resource Agencies. As the Proposed Project does not contemplate new construction, off-site improvements, or modifications to previously approved Landfill development, no local permits (e.g., grading, encroachment, or use permit) are anticipated to carry out the Proposed Project and, as such, no additional responsible local agencies have been identified.

3.5.4 Other Related Actions

No other related actions are anticipated to be required for the Proposed Project.

3.6 CUMULATIVE ANALYSIS

The cumulative impacts analysis in this Subsequent EIR evaluates the Proposed Project in the context of other related projects that could, in combination, contribute to cumulatively considerable environmental effects. Consistent with *State CEQA Guidelines* Section 15130, the analysis considers past, present, and reasonably foreseeable future projects that may overlap geographically or temporally with the Proposed Project and therefore have the potential to contribute to cumulative impacts. Consistent with Section 15130, the analysis considers past, present, and reasonably foreseeable future projects that may overlap geographically or temporally with the Proposed Project and therefore have the potential to contribute to cumulative impacts.

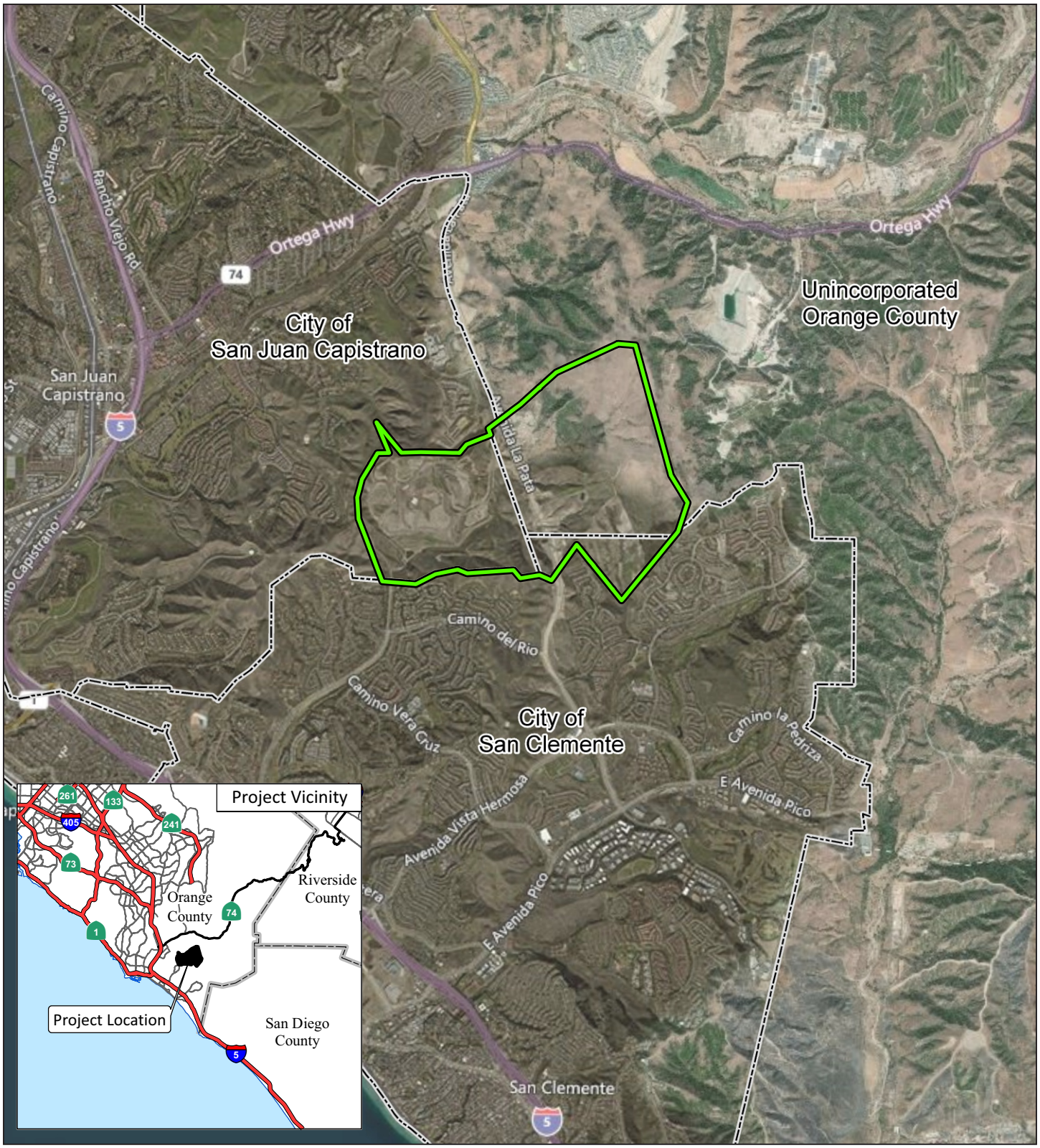
Table 3.C: Anticipated Permits and Authorizations

Agency	Permit/Authorization
Local Enforcement Agency (LEA) with Concurrence by the California Department of Resources Recycling and Recovery (CalRecycle)	• Solid Waste Facility Permit Revision • Amendment to the Joint Technical Document (JTD)
Regional Water Quality Control Board (RWQCB)	• Waste Discharge Requirements for the Prima Deshecha Landfill (Order No. R9-2003-0306) • General Permit for Storm Water Discharges Associated with Industrial Activities (Order 2014-0057-DWQ)
South Coast Air Quality Management District (SCAQMD)	• New Source Performance Standards/Emission Guidelines • Title V (1990 Clean Air Act) Permit • Rule 1150 (Excavation of Landfill Sites) • Rule 1150.1 (Landfill Gas Emissions) • Rule 431.1 (Sulfur Content of Gaseous Fuels) • Rule 431.2 (Sulfur Content of Liquid Fuels)

Source: Compiled by LSA (2025).

To develop the cumulative scenario, OCWR coordinated with nearby jurisdictions—including the Cities of San Juan Capistrano and San Clemente—as well as relevant County departments to identify planned development, infrastructure improvements, and other agency actions expected to occur in the region. This includes projects that, if implemented, would improve circulation and regional mobility, such as the Los Patrones Parkway Extension (LPPE), the lower Ortega Highway (SR-74) widening, and other roadway or transportation system enhancements identified by local agencies. Information on these projects was compiled and reviewed, and the full list is summarized in Chapter 4.0 of this Subsequent EIR.

Related projects also include other OCWR operational actions, anticipated programmatic changes, and the planned closure or transition of other County landfills, such as the Olinda Alpha Landfill. These projects are included because they inform regional waste flow patterns and may influence background environmental conditions, even though they are independent of the Proposed Project. The cumulative analysis evaluates whether, when considered in combination with these related projects, the Proposed Project would result in any cumulatively significant environmental impacts.



LSA

FIGURE 3.1

LEGEND

Prima Deshecha Landfill Boundary

N

0 2500 5000

FEET

SOURCE: Bing Maps

Increase in Maximum Daily Operations at Prima Deshecha Landfill

Project Location

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LSA

LEGEND

- Prima Deshecha Landfill (PDLF) Boundary
- Designated Landfilling Areas (Zones 1 and 4)

0 550 1100
FEET

SOURCE: OCWR (2001, 2005, 2010, 2017, 6/2020); Nearmap (6/2023)

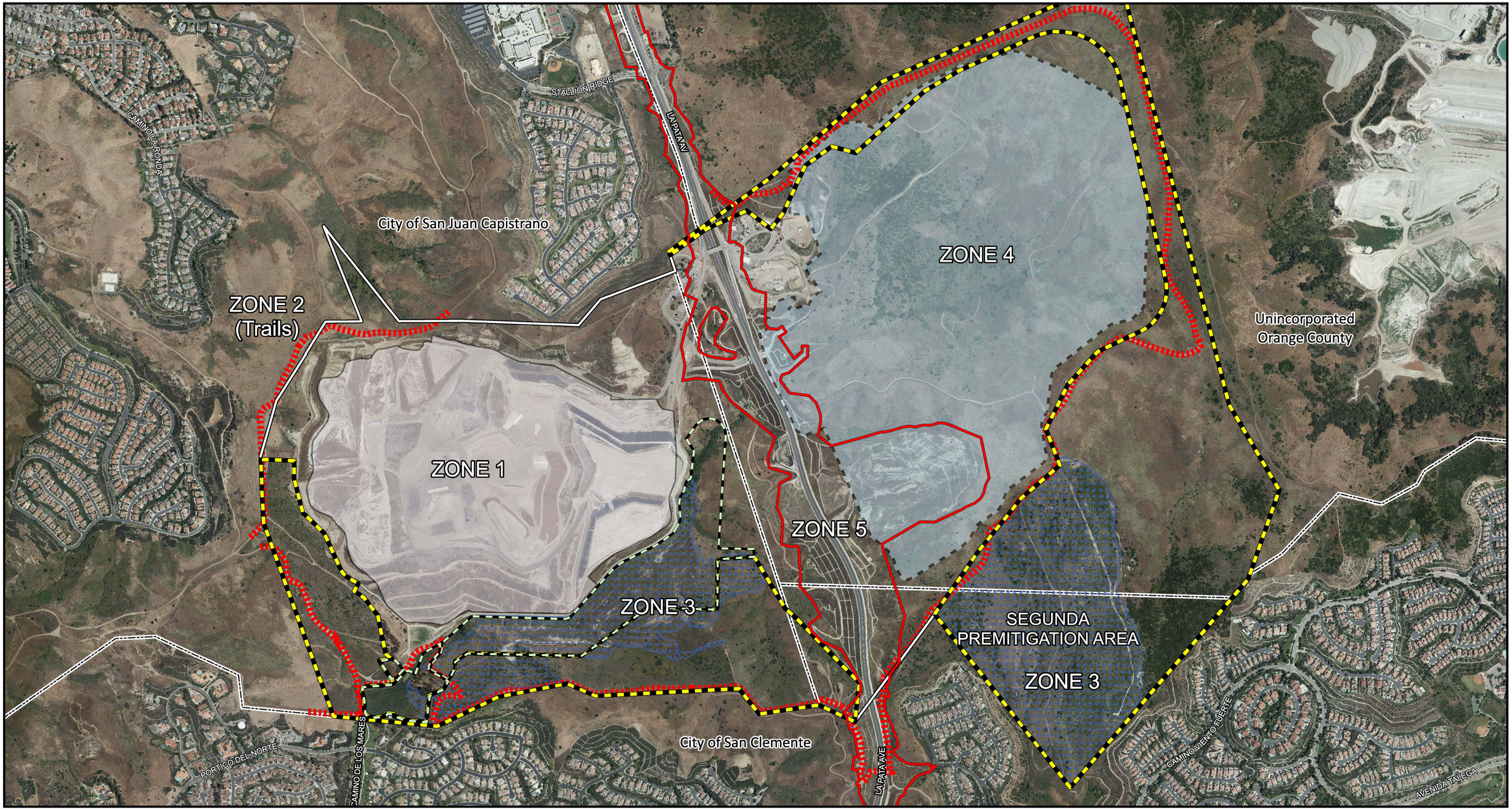
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FIGURE 3.2

Increase in Maximum Daily Operations at Prima Deshecha Landfill

Surrounding Land Use

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LSA

LEGEND

- Prima Deshecha Landfill (PDLF) Boundary
- Supplemental Open Space Conservation Easement Area (486.4 ac)
- Proposed Conservation Easement (70.7 ac)
- PDLF Zone 1
- PDLF Zone 2 (Multi-Use Trail System)
- PDLF Zone 3
- PDLF Zone 4
- La Pata Maximum Direct Disturbance Limit (PDLF Zone 5)

N

0 550 1100
FEET

SOURCE: OCWR (2001, 2005, 2010, 2017, 6/2020); Esri (7/2019)

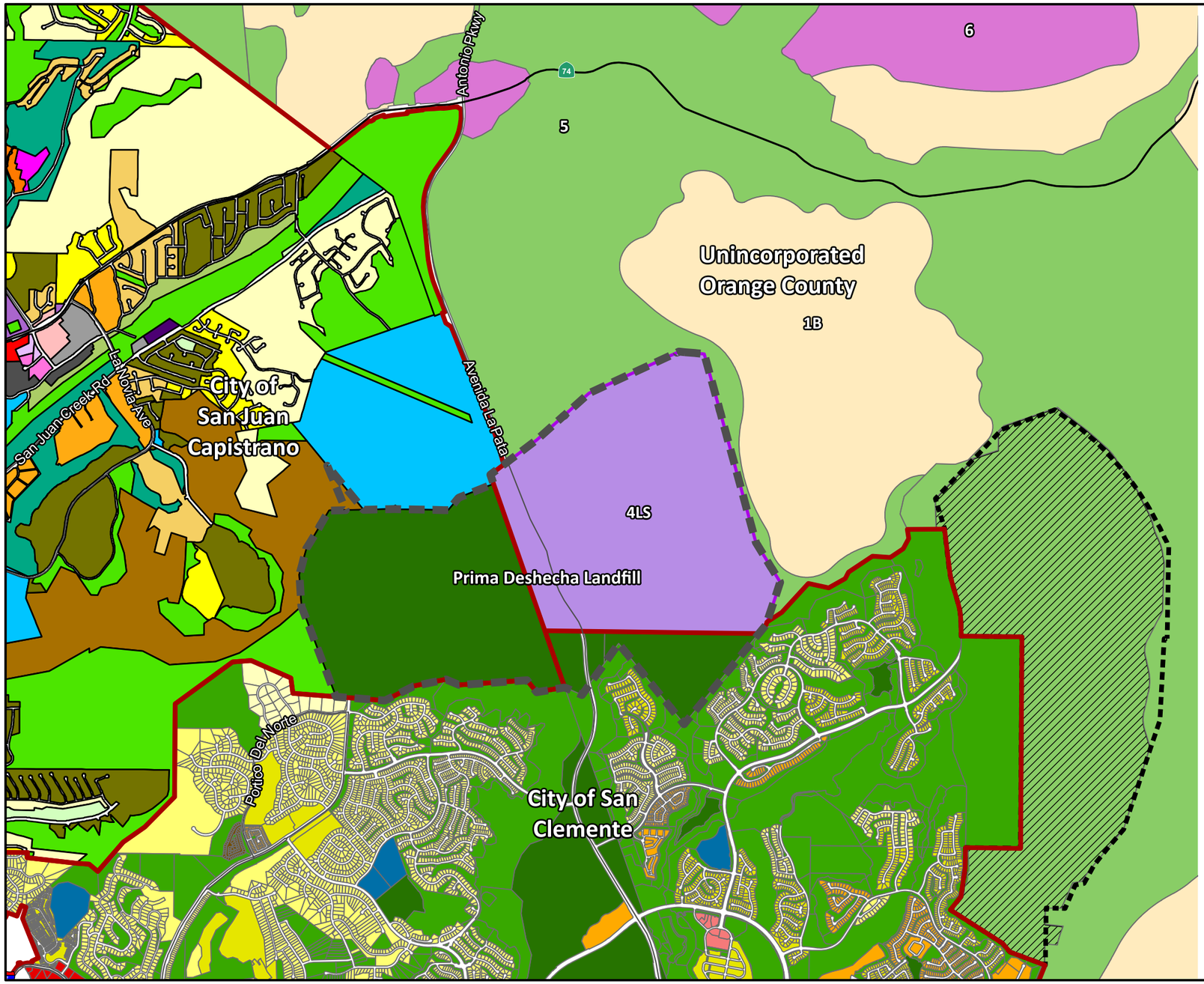
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FIGURE 3.3

Increase in Maximum Daily Operations at Prima Deshecha Landfill

Landfill Zones

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City of San Juan Capistrano

General Plan Land Use

- 1.0, GENERAL OPEN SPACE
- 1.1, OPEN SPACE RECREATION
- 1.2, NEIGHBORHOOD PARK
- 1.3, COMMUNITY PARK
- 1.4, SPECIALTY PARK
- 1.5, REGIONAL PARK
- 1.6, NATURAL OPEN SPACE
- 1.7, RECREATION COMMERICAL
- 2.0, VERY LOW DENSITY
- 2.1, LOW DENSITY
- 2.2, MEDIUM LOW DENSITY
- 2.3, MEDIUM DENSITY
- 2.4, MEDIUM HIGH DENSITY
- 2.5, HIGH DENSITY
- 2.6, VERY HIGH DENSITY
- 3.0, NEIGHBORHOOD COMMERCIAL
- 3.1, GENERAL COMMERCIAL
- 4.0, INDUSTRIAL PARK
- 4.1, QUASI INDUSTRIAL
- 4.2, AGRI-BUSINESS
- 4.3, LIGHT INDUSTRIAL
- 4.4, OFFICE/RESEARCH PARK
- 5.0, PUBLIC & INSTITUTIONAL
- 5.1, EXISTING PUBLIC SCHOOLS
- 5.3, ASSISTED CARE FACILITIES
- SPECIAL STUDY
- PLANNED COMMUNITY
- SPECIFIC PLAN/PRECISE PLAN

Orange County

General Plan Land Use

Residential
- 1A Rural Residential
- 1B Suburban Residential

Public Facilities
- 4 Public Facilities
- 4LS Landfill Site

Open Space
- 5 Open Space
- 5S Open Space Reserve

Urban Activity Center
- 6 Urban Activity Center

City of San Clemente

General Plan Land Use

- RVL - Residential Very Low Density
- RL - Residential Low Density
- RML - Residential Medium Low Density
- RM - Residential Medium Density
- RH - Residential High Density
- NC - Neighborhood Commercial
- CC - Community Commercial
- RC - Regional Commercial
- CRC - Coastal and Recreation Serving Commercial
- LI - Light Industrial
- HI - Heavy Industrial
- MU - Mixed Use
- CVC - Civic Center
- INST - Institutional
- P - Public
- OS1 - Open Space Public
- OS2 - Open Space Private

LSA

LEGEND

- Prima Deshecha Landfill (PDLF) Boundary
- City Boundary
- Sphere of Influence Boundary

N

0 0.5 1

MILES

SOURCE: Orange County Public Works, City of San Clemente, City of San Juan Capistrano

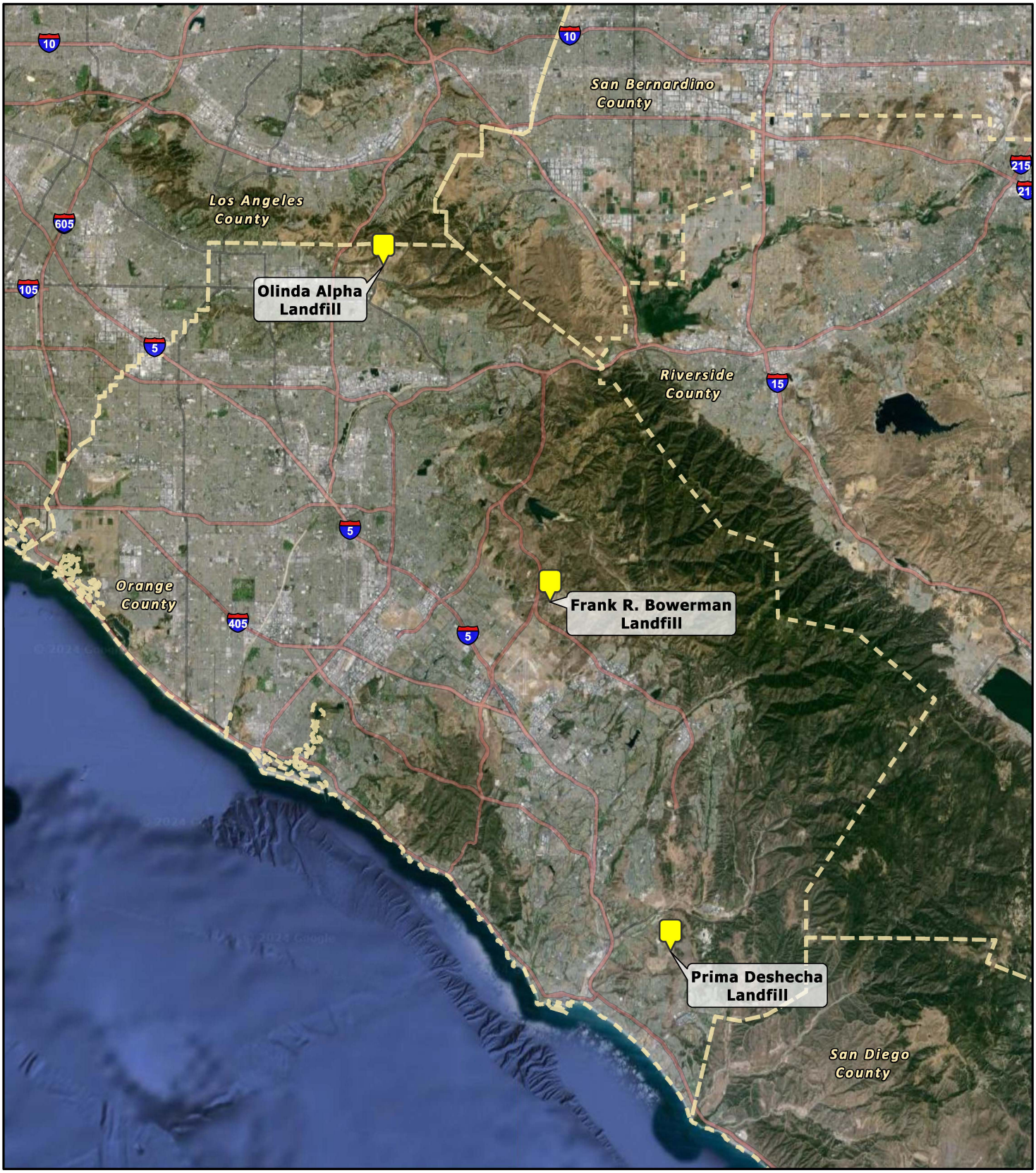
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FIGURE 3.4

Increase in Maximum Daily Operations at Prima Deshecha Landfill

General Plan Land Use Designations

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LSA

Landfills

FIGURE 3.5

N

0 3 6

Miles

Increase in Maximum Daily Operations at Prima Deshecha Landfill

OCWR Landfills

SOURCE: Google Maps (2023)

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4.0 EXISTING ENVIRONMENTAL SETTING, ENVIRONMENTAL ANALYSIS, IMPACTS, AND MITIGATION MEASURES

This chapter contains three sections (i.e., air quality, greenhouse gas [GHG] emissions, and noise), each of which addresses one environmental topic outlined in Appendix G of the *State CEQA Guidelines* that required project-specific analysis to determine whether potentially significant impacts would occur. Additional topics not requiring substantial analysis are addressed in Chapter 5.0.

Transportation impacts are not addressed in this chapter because, consistent with Senate Bill (SB) 743 and the State CEQA Guidelines, transportation impacts under CEQA are evaluated using vehicle miles traveled (VMT). As discussed in Section 5.2.15, Transportation, the Proposed Project is screened from requiring a detailed VMT analysis; therefore, no substantial analysis was required. As such, transportation conditions are not included among the environmental topics requiring project-specific analysis in this chapter.

For each environmental impact issue analyzed in this chapter, this Subsequent EIR includes a detailed explanation of the existing conditions, thresholds of significance that were applied to determine whether the Proposed Project would result in changes to the impacts identified in the prior CEQA documentation for the Prima Deshecha Landfill (Landfill), or if there are "more severe impacts" or new significant impacts to these resources. A "significant impact" or "significant effect" means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project" (*State CEQA Guidelines* Section 15382). Each of the environmental topic sections in Chapter 4.0 also includes a discussion of the cumulative effects of the Proposed Project when considered in combination with other projects causing related impacts, as required by Section 15130 of the *State CEQA Guidelines*.

Per *State CEQA Guidelines* Section 15125, an environmental setting must be presented to serve as a baseline from which to determine the significance of Proposed Project impacts. This discussion also provides the basis for an understanding of the regional context for the Proposed Project. Existing conditions are described for each resource category below, including the environmental setting.

Mitigation measures from the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and associated Addenda remain as project commitments that apply to the Proposed Project and would continue to be implemented per the Mitigation Monitoring and Reporting Program (MMRP) (refer to **Appendix G** of this Subsequent EIR for the MMRP). Mitigation measures pertaining to the environmental topics analyzed in this Subsequent EIR are also included in the "Mitigation Measures" section as described below.

Each of the four environmental sections is organized into the following subsections:

1. **Introduction** briefly describes the topics and issues covered in the section.

2. **Scoping Process** describes the comment letters received during the public review period of the Initial Study/Notice of Preparation (IS/NOP) that are related to the topic.

3. **Summary of Previous Environmental Documents** describes the analysis included in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and the applicable addenda to those documents related to the specific environmental topic being analyzed. This section provides the context for the impacts of the Proposed Project relative to the prior CEQA documentation for the Landfill.

4. **Existing Environmental Setting** describes the physical conditions that existed at the time the Notice of Preparation (NOP) was prepared and distributed that may influence or affect the issue under investigation. This section focuses on physical site characteristics that are relevant to the environmental topic being analyzed.

5. **Regulatory Setting** lists and discusses the laws, ordinances, regulations, and policies that relate to the specific environmental topic and how they apply to the Proposed Project.

6. **Methodology** describes the approach and methods employed to complete the environmental analysis for the issue under investigation.

7. **Thresholds of Significance** provides the thresholds that are the basis of the conclusions of significance, which are based on the criteria in Appendix G of the *State CEQA Guidelines,* and the County of Orange *2020 Local CEQA Procedures Manual* (November 2020).

8. **Project Impacts** describes the potential environmental changes to the existing physical conditions that may occur if the Proposed Project is implemented. Evidence is presented to show the cause-and-effect relationship between the Proposed Project and potential changes in the environment. The magnitude, duration, extent, frequency, and range or other parameters of a potential impact are ascertained to the extent feasible to determine whether impacts may be significant. The existing conditions at the Landfill represent the environmental baseline in this Subsequent EIR. In accordance with CEQA, potential impacts of the Proposed Project, if any, are classified as follows for each of the environmental topics discussed in this Subsequent EIR. Based on these classifications, a determination is made if the Proposed Project would result in a significant adverse impact, a less than significant impact with mitigation incorporated, a less than significant impact, or no impact.

    a. **Significant Adverse Impact.** Significant adverse impacts are those that cannot be fully mitigated or avoided.

    b. **Less than Significant Impact with Mitigation Incorporated.** This refers to significant environmental impacts that can be feasibly reduced to a level below significance or avoided by implementing mitigation measures.

    c. **Less than Significant Impact.** Less than significant impacts are environmental impacts that have been identified but are not significant. No mitigation measures are required for less than significant impacts.

    d. **No Impact.** A “no impact” determination is made when the Proposed Project is found to have no environmental impact.

9. **Cumulative Impacts** refers to potential environmental changes to the existing physical conditions that may occur as a result of Proposed Project implementation together with all other reasonably foreseeable, planned, and approved future projects that may add to the impact. Section 15355 of the *State CEQA Guidelines* defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts may result from individually minor but collectively significant projects taking place over a period of time. For each of the environmental topics considered in this Subsequent EIR, the geographic scope of the cumulative analysis is defined.

10. **Level of Significance Prior to Mitigation** describes the significance of potential impacts prior to implementation of mitigation measures.

11. **Regulatory Compliance Measures** are non-discretionary regulatory requirements the Proposed Project must comply with per applicable federal, state, or local regulations.

12. **Mitigation Measures** are specific measures that would be required for the Proposed Project to avoid, minimize, rectify, reduce, eliminate, or compensate for a potentially significant adverse impact. Mitigation measures and commitments from prior CEQA documentation for the Landfill are noted where relevant to the impacts of the Proposed Project.

13. **Level of Significance after Mitigation** describes the significance of potential impacts after implementation of mitigation measures, and states whether any impacts would be significant and unavoidable.

OVERVIEW OF ENVIRONMENTAL SETTING

The Landfill encompasses 1,530 acres and is located in southeastern Orange County, partially within San Juan Capistrano (570 acres), San Clemente (133 acres), and unincorporated Orange County (827 acres). Of the total 1,530 acres on the Landfill property, approximately 680 acres are currently permitted for waste disposal. The Landfill is located at 32250 Avenida La Pata, and access is provided by Interstate 5 (I-5), Ortega Highway (State Route 74 [SR-74]), and Avenida La Pata.

Geographically, the Landfill is located in the western foothills of the Santa Ana Mountains. Ground elevations range from 230 feet above mean sea level (amsl) at the southwestern boundary of the site to a maximum elevation of 1,125 feet amsl at the northeastern boundary of the site. Bedrock materials exposed in the area consist of predominantly Tertiary marine sediments composed of, from oldest to youngest, the San Onofre Breccia, the Monterey Formation, and the Capistrano Formation. The Prima Deshecha Cañada watercourse traverses the site from the northeast to the southwest.

As described in more detail in Section 3.3, the Landfill is a Class III solid waste landfill that has been in continuous operation since 1976. The Prima Deshecha Landfill site is divided into five zones, called Zones 1 through 5, as shown on **Figure 3.4, General Land Use Designations,** and detailed in Chapter 3.0. Zone 1 is the current landfilling area, with an estimated closure date of approximately 2050. Zone 4 started construction in fall 2023, with a permitted closure date of approximately

2102.[1] Zones 1 and 4, the designated landfilling areas, are located within San Juan Capistrano and unincorporated Orange County. Two major utility easements, consisting of a 150-foot-wide San Diego Gas and Electric (SDG&E) easement and a 200-foot-wide Southern California Edison (SCE) easement, extend through the central portion of the site, separating the western Zone 1 area from the Zone 4 area. Zones 2 and 3 are open space and habitat mitigation areas, and Zone 5 is Avenida La Pata. There are existing uses (i.e., administrative offices/operations building and a household hazardous waste collection center) near the Landfill entrance that do not fall within a designated zone. An existing public use trail that crosses the Landfill site connects the San Clemente and San Juan Capistrano trail systems. OCWR has placed a 487-acre Conservation Easement over a large portion of the Landfill property on non-Landfill development areas (largely falling within Zones 2 and 3) as a requirement of the Landfill's inclusion in the Orange County Southern Subregion Habitat Conservation Plan (SSHCP), a multi-species habitat mitigation and management plan for south Orange County.

General Plan land use designations directly surrounding the Landfill (within 1 mile) can be characterized as follows (refer to **Figure 3.3, Landfill Zones,** of Chapter 3.0, for a map showing the General Plan Land Use designations for the Landfill and surrounding areas):

- To the northeast, unincorporated Orange County includes areas designated Open Space.
- To the east, unincorporated Orange County includes areas designated Suburban Residential.
- To the northwest, the City of San Juan Capistrano includes areas designated Planned Community.
- To the west, the City of San Juan Capistrano includes areas designated Natural Open Space.
- To the south, the City of San Clemente includes areas designated Public Open Space, Private, Open Space, and residential development ranging from Very Low Density to Medium Density Residential.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are the quantitative or qualitative measures by which a lead agency determines whether an impact is "significant" for the purposes of CEQA. Thresholds can be established by the lead agency, based on the checklist in Appendix G of the *State CEQA Guidelines*, or adopted from another jurisdiction with relevant expertise; the lead agency has discretion to determine which thresholds of significance to use.

[1] Changes in regulations requiring a greater amount of recycling and diversion of materials away from the Landfill, and more efficient methods have extended the forecast life of the Landfill. As a condition of the permit issued by the California Department of Resources Recycling and Recovery (CalRecycle), updates are provided every five years to discuss changes in site design, operations plan, and/or remaining life of the Landfill. The most current permit (issued April 19, 2019) identifies 2102 as the projected closure date.

As "supplemental" documents, the First Supplemental EIR to the 2001 GDP EIR and Second Supplemental EIR to the 2001 GDP EIR appropriately used the threshold questions in the 2001 GDP EIR.[2] As discussed in Section 2.1.3, because this document is a Subsequent EIR (as described in Section 15162 of the *State CEQA Guidelines*), the thresholds of significance reflect revisions made to the *State CEQA Guidelines* since the 2001 GDP EIR. Notable revisions include the addition of thresholds related to greenhouse gases (GHGs), energy, tribal cultural resources, and wildfire, as well as changing the metric used for evaluating transportation impacts from LOS to VMT. As a result of these revisions, LOS, which measures traffic delay or congestion, is no longer used as a threshold of significance for transportation impacts under CEQA.

The threshold questions used in this Subsequent EIR are consistent with the requirements of CEQA, including Appendix G of the *State CEQA Guidelines,* and the County's *2020 Local CEQA Procedures Manual* (November 2020). For transportation impacts, this Subsequent EIR uses the County's adopted *Final Guidelines for Evaluating Vehicle Miles Traveled Under CEQA* (LSA 2020), which identify when and which projects are screened from requiring a VMT analysis as they have been legislatively determined to have a less than significant impact, how a VMT analysis is to be performed, and when the identified VMT levels are considered "significant" for CEQA purposes. This Subsequent EIR uses the applicable quantitative thresholds identified by the South Coast Air Quality Management District (SCAQMD) for evaluating impacts to air quality and GHG emissions. For odor, this Subsequent EIR uses the Bay Area Air District (Air District) Regulation 7 nuisance odor standard as the significant risk threshold for sensitive receptors, since Regulation 7 is one of the most restrictive odor regulations in the country using an objective (quantitative) odor concentration threshold. This Subsequent EIR uses the Federal Transit Authority criteria to evaluate potential vibration impacts, as the County has not adopted its own numeric thresholds.

CUMULATIVE PROJECTS

In accordance with *State CEQA Guidelines* Section 15130, cumulative impacts refers to potential environmental changes to the existing physical conditions that may occur as a result of project implementation together with all other reasonably foreseeable, planned, and approved future projects that may add to the impact. Reasonably foreseeable growth may be based on either:

- A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or

- A summary of projections contained in the adopted General Plan or related planning document, or in a prior environmental document that has been adopted or certified, and that described or evaluated regional or areawide conditions contributing to the cumulative impact.

The discussion of cumulative impacts "should be guided by the standards of practicality and reasonableness" (*Environmental Protection Info. Center v. Department of Forestry & Fire Protection*

[2] Note that although the Second Supplemental EIR to the 2001 GDP EIR used the same CEQA threshold questions as the 2001 GDP EIR, transportation impacts were considered in terms of VMT, consistent with the requirements of SB 743, and OCWR conducted outreach to tribes consistent with the requirements of AB 52.

(2008) 44 Cal.4th 459, 524). A proposal that has not crystallized to the point that it would be reasonable and practical to evaluate its cumulative impacts need not be treated as a probable future project (*City of Maywood v. Los Angeles Unified School District* (2012) 208 Cal.App.4th 362, 397). Rather, a potential future project qualifies for inclusion in an analysis of cumulative impacts only to the extent the future project is "both probable and sufficiently certain to allow for meaningful cumulative impact analysis" (*Id*. at p. 398; see *City of Long Beach v. Los Angeles Unified School Dist*. (2009) 176 Cal.App.4th 889, 902 [when "review[ing] the agency's decision to include information in the cumulative impacts analysis[,] ... [w]e determine whether inclusion was reasonable and practical"]).

For the purposes of this Subsequent EIR, a list of past, present, and probable future projects is used in the evaluation of potential cumulative impacts (refer to **Table 4.A** below). All proposed, recently approved, under construction, and reasonably foreseeable projects that could produce a related or cumulative impact on the local environment when considered in conjunction with the Proposed Project are evaluated in a Subsequent EIR. As stated above, an analysis of the cumulative impacts associated with these related projects in combination with the Proposed Project is provided in the cumulative impacts discussion under each individual impact category in Chapter 4.0.

In coordination with the County, California Department of Transportation (Caltrans), and the cities of San Juan Capistrano and San Clemente, a list of past, present, and probable future projects was developed. As shown in **Table 4.A,** the projects identified include residential, commercial, office, and mixed land uses. The locations of the identified projects are shown on **Figure 4.0.1, Cumulative Projects**. Although some projects on the list have been completed since issuance of the NOP, they remain on the list because they are part of the cumulative analysis for the Subsequent EIR since the environmental baseline for the analysis is the existing conditions at the time of the issuance of the NOP. Prior and ongoing activities at the Landfill are also considered in the cumulative analysis for the Proposed Project. Given that most of the impacts associated with the Proposed Project are associated with an increase in the number of truck trips to the Landfill (much of which are anticipated to consist of redirected trips upon the closure of the Olinda Alpha Landfill), the potential for cumulative impacts is limited to additive impacts to the transportation network and in regional emissions of pollutants and GHGs. Other impacts associated with the increase in operations, such as on-site equipment noise, would be localized to the Landfill and unlikely to result in cumulative impacts with projects that are not in proximity to the project site.

Table 4.A: Cumulative Projects

ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
S1	City of San Juan Capistrano	Compass Energy Storage	29343 Camino Capistrano	Battery Energy Storage System	15 Acres	This project is located approximately 4.6 miles northwest of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes in combination with the Proposed Project, but would result in an incremental increase in regional air quality and GHG emissions.
S2	City of San Juan Capistrano	St. John Church	29742 Rosenbaum Road	Church Campus	21.358 TSF	This project is located approximately 3.8 miles northwest of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes in combination with the Proposed Project, but would result in an incremental increase in regional air quality and GHG emissions.
S3	City of San Juan Capistrano	J. Serra Catholic High School	Northwest corner of I-5 SB Ramps and Junipero Serra Road	Private High School. Currently, 64% occupied (i.e., 1,289 students).	2,000 Students	This project is located approximately 3.5 miles northwest of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes in combination with the Proposed Project but would result in an incremental increase in regional air quality and GHG emissions.
S4	City of San Juan Capistrano	Swallows Creek	30700 Rancho Viejo Road	Industrial	136.308 TSF	This project is located approximately 3.4 miles northwest of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes with the Proposed Project, but would result in an incremental increase in regional air quality and GHG emissions.
S5	City of San Juan Capistrano	El Camino Specific Plan	26874 Old Mission Road	Retail/Restaurant Office	14.977 TSF; 12.48 TSF	This project is located approximately 2.75 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.

Table 4.A: Cumulative Projects

ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
S6	City of San Juan Capistrano	Camino Capistrano Hotel	31861 Camino Capistrano	Hotel	77 Rooms	This project is located approximately 2.5 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S7	City of San Juan Capistrano	In N Out	31791 Del Obispo Street	Sit-Down and Drive-Through Restaurant	3.879 TSF	This project is located approximately 2.6 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S8	City of San Juan Capistrano	The River Street Project	Northeast corner of Paseo Adelanto and Del Obispo Street	Commercial	59.067 TSF	This project is located approximately 3 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S9	City of San Juan Capistrano	Forster Mixed-Use Project	31878 El Camino Real	7 TSF Residential Commercial Apartment Units	95 MFDU	This project is located approximately 2.8 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S10	City of San Juan Capistrano	Performing Arts Center	31872 El Camino Real	Commercial	49 TSF	This project is located approximately 2.8 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.

Table 4.A: Cumulative Projects

ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
S11	City of San Juan Capistrano	Petra Avelina	Southeast corner of Via Refrescar and Calle Arroyo	Townhomes and Detached Single-Family Rooms	132 DU	This project is located approximately 2.4 miles west of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S12	City of San Juan Capistrano	Juliana Farms Lot 13 Subdivision	31495 Juliana Farms Road	Residential	6 DU	This project is located approximately 1.2 miles northwest of the Landfill and in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S13	City of San Juan Capistrano	San Juan Plaza Mixed-Use Project	32211 Camino Capistrano	Residential Commercial Apartment Units	278 MFDU	This project is located approximately 2.7 miles west of the Landfill and in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S14	City of San Juan Capistrano	The Farm on Del Obispo	32382 Del Obispo	Residential	132 DU	This project is located approximately 3.5 miles west of the Landfill and in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S15	City of San Juan Capistrano	City Hall	32400 Paseo Adelanto	Multi-Family Municipal Office	50 DU	This project is located approximately 2.8 miles west of the Landfill and in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.

Table 4.A: Cumulative Projects

ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
S16	City of San Juan Capistrano	Camino Twelve	25642 Camino Del Avion	Residential	12 DU	This project is located approximately 3.85 miles west of the Landfill and in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S17	City of San Juan Capistrano	Distrito La Novia-San Juan Meadows	Southeast corner of Valle Road and La Novia Avenue	Commercial, Office, Equestrian, and Residential Facilities	75.1 TSF (commercial); 16 TSF (office); 500 horses; 85 MFDU (condos); 45 MFDU (apartments); 94 SFDU	This project is located approximately 2.9 miles west of the Landfill and in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S18	City of San Juan Capistrano	Capistrano Greenery Update	32250 Avenida La Pata	Composting Operation	50 Trucks	This project is located at the Landfill site and is included in the traffic volumes forecasted in the cumulative condition. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
S19	City of San Juan Capistrano	Zone 4 Construction Projects	32250 Avenida La Pata	Breccia Removal and Soil Import	104 Trucks	This project is located at the Landfill site and is included in the traffic volumes forecasted in the cumulative condition. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
C1	City of San Clemente	Sandpiper Energy Storage	Northwest corner of Cristianitos Road and Avenida Pico	Industrial	14.8 Acres	This project is located approximately 3.5 miles southwest of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes in combination with the Proposed Project but would result in an incremental increase in regional air quality and GHG emissions.

Table 4.A: Cumulative Projects

ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
C2	City of San Clemente	Frontera Memory Care Assisted Living	2651 Calle Frontera	State-licensed Residential Care Facility for the Elderly consisting of a 24-bed memory care component and a 64-unit assisted-living component	81.071 TSF	This project is located approximately 3.4 miles south of the Landfill and is in proximity to one or more of the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
C3	City of San Clemente	EOS Fitness Centre	95 Via Pico Plaza	Establish and operate a full-service fitness center in an existing tenant space in Pico Plaza shopping center	30 TSF	This project is located approximately 3.8 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes in combination with the Proposed Project but would result in an incremental increase in regional air quality and GHG emissions.
C4	City of San Clemente	San Clemente Coastal Offices	1755 N. El Camino Real	Three-story building with a roof deck. The project proposed a coffee shop on the first floor with second floor office space and a tapas bar on the third floor.	8.215 TSF	This project is located approximately 4.2 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes in combination with the Proposed Project but would result in an incremental increase in regional air quality and GHG emissions.
C5	City of San Clemente	The Gallery	1801 N. El Camino Real	61 key hotel (25% affordable rooms) with a café, restaurant center	31.139 TSF	This project is located approximately 4.2 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes but would result in an incremental increase in regional air quality and GHG emissions.
C6	City of San Clemente	Miramar Event Center and Restaurants	1700 North El Camino Real	Rehabilitate and adaptively reuse the historic Miramar Theater into a performance and event center	5.2 TSF	This project is located approximately 4.2 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes but would result in an incremental increase in regional air quality and GHG emissions.

Table 4.A: Cumulative Projects

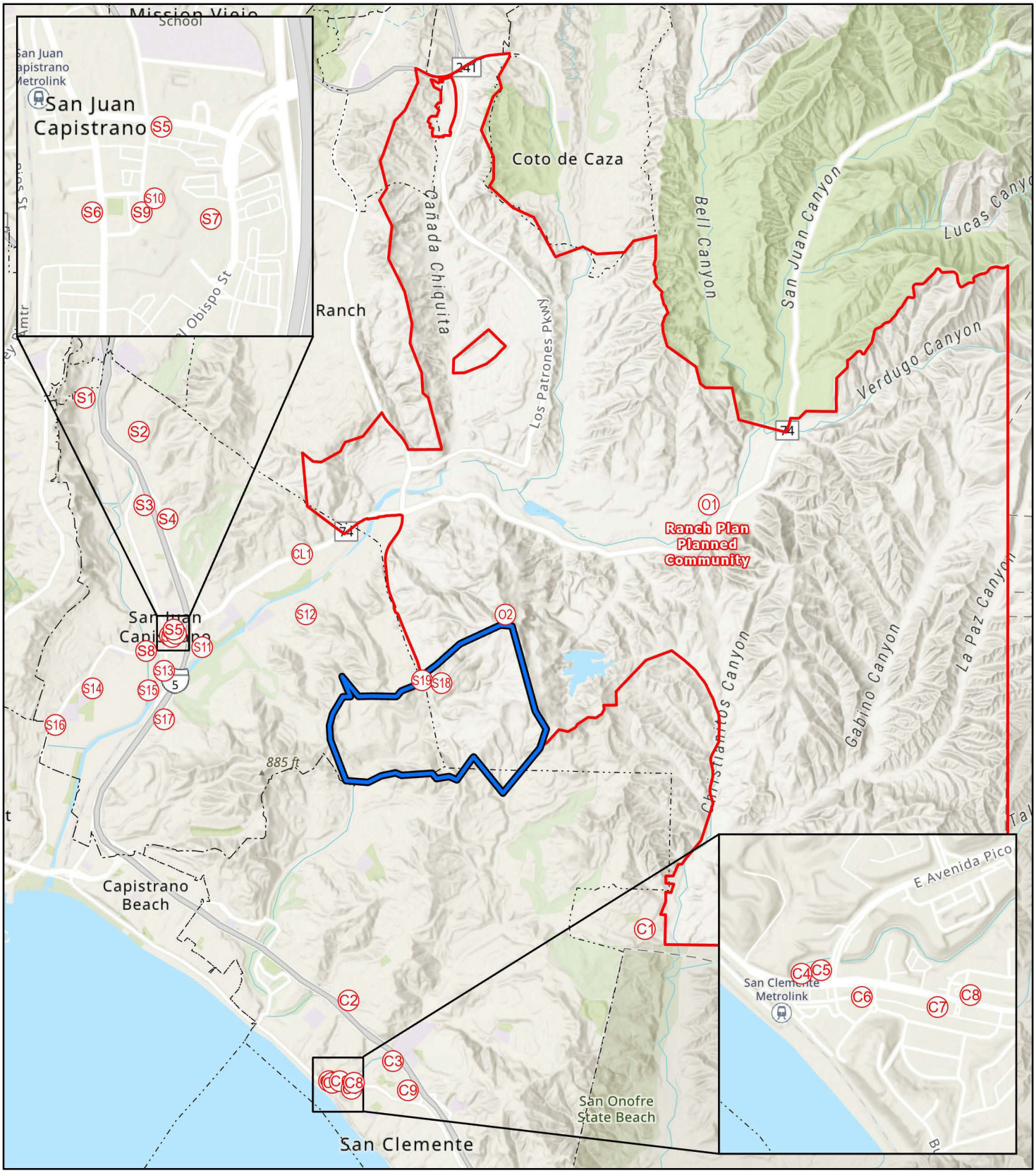
ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
C7	City of San Clemente	North El Camino Real Mixed Use	1602 North El Camino Real	Addition to existing one-story commercial building to create 1st floor commercial space with one residence above	2 TSF	This project is located approximately 4.2 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes but would result in an incremental increase in regional air quality and GHG emissions.
C8	City of San Clemente	Publik House	1531 N. El Camino Real	Redevelop the historic San Clemente Art Supply building into a multi-use building comprised of a special events venue, café, and office space	19.979 TSF	This project is located approximately 4.15 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes but would result in an incremental increase in regional air quality and GHG emissions.
C9	City of San Clemente	El Oriente Apartments	101 El Oriente	Demolition of an existing single-family house and construction of a new 7-unit apartment building	7 MFDU	This project is located approximately 4.15 miles south of the Landfill and is not in proximity to the study area intersections for the Proposed Project. Therefore, it is unlikely to contribute to cumulative increases in study area traffic volumes but would result in an incremental increase in regional air quality and GHG emissions.
CL1	Caltrans	SR-74 Lower Ortega Highway	SR-74 from PM 1.0 to PM 2.1	Widening of SR-74 from two lanes to four lanes from Calle Entradero (PM 1.0) to 150 feet east of the City/County boundary to Reata Road (PM 2.1).	1.1 miles	This project is anticipated to improve traffic conditions and LOS along Lower Ortega Highway. Implementation of this project would improve conditions at several roadway segments and intersections within the study area. This project is anticipated to reduce cumulative impacts along this reach of Ortega Highway, including the traffic volumes associated with the Proposed Project. Construction of this project may result in short-term increases in regional air quality and GHG emissions; however, by improving traffic congestion along Ortega Highway, it is anticipated to incrementally reduce emissions associated with idling vehicles.

Table 4.A: Cumulative Projects

ID	Jurisdiction	Project Name	Address/Location	Project Description	Project Units/ Area/Other	Potential for Cumulative Impacts with Proposed Project
O1	Orange County	The Ranch Plan	Southern portion of Orange County	This development is projected to have a total of 14,000 dwelling units along with approximately 17,000 acres of open space.	17,000 acres	This project is located northeast of the Landfill and in proximity to the study area intersections for the Proposed Project. Considering both this project and the Proposed Project, there would be an incremental contribution to traffic volumes within the study area and an incremental increase in regional air quality and GHG emissions.
O2	Orange County	Los Patrones Parkway Extension (LPPE)	Between Cow Camp Road and Avenida La Pata	This development would extend Los Patrones Parkway from its current terminus at Cow Camp Road to Avenida La Pata.	~3 miles	The LPPE project site begins at the southern terminus at Cow Camp Road (approximately 2.6 miles north of the Landfill) and would extend south across San Juan Creek and SR-74 to eventually connect to the Landfill. This project was the subject of the LPPE Addendum (see Section 2.1.4.4). The schedule for this project has not yet been finalized; therefore, the forecasted future traffic volumes prepared for the Proposed Project included scenarios with and without the LPPE. This project has the potential to improve traffic conditions within the study area for the Proposed Project. Construction of this project may result in short-term increases in regional air quality and GHG emissions; however, by improving traffic congestion along Ortega Highway, it is anticipated to incrementally reduce emissions associated with idling vehicles.

Source = Traffic Impact Analysis (LSA 2025).
Caltrans = California Department of Transportation
DU = dwelling units
GHG = greenhouse gas
I-5 = Interstate 5
Landfill = Prima Deshecha Landfill
LOS = level of service
MFDU = multi-family dwelling units
PM = Post Mile
SB = southbound
SFDU = single-family dwelling units
SR-74 = State Route 74
TIA = Traffic Impact Analysis
TSF = thousand square feet

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LSA

Prima Deshecha Landfill Boundary

P# Approved/Pending Projects

Ranch Plan Planned Community

FIGURE 4.0.1

N

0 0.75 1.5

Miles

Increase in Maximum Daily Operations at Prima Deshecha Landfill

Cumulative Projects

SOURCE: Esri World Topographic Map (2024)

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4.1 AIR QUALITY

This section discusses the existing air quality, summarizes existing air quality regulations, and evaluates potential air quality impacts associated with the Proposed Project. The existing conditions at the Prima Deshecha Landfill (Landfill) represent the environmental baseline in this Subsequent EIR. This section also presents the impact assessment methodology, potential impacts, and mitigation measures. The Proposed Project's impacts are compared to the impacts identified in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR. The air quality modeling outputs and health risk assessment outputs are included as **Appendix B-1 and Appendix B-2**, respectively, of this Subsequent EIR.

4.1.1 Scoping Process

The Scoping Process for the Proposed Project commenced with the issuance of the Initial Study/Notice of Preparation (IS/NOP) for public review on September 27, 2023. OCWR received eight comment letters from Public Agencies, and 103 comment letters from individuals during the public review period of the IS/NOP. **Appendix A** includes the NOP and the Initial Study, the NOP distribution list, a summary of comments received during public scoping, and comment letters from Public Agencies. Three comment letters from Public Agencies included comments related to air quality. Those comments are summarized below.

The letter from South Coast Air Quality Management District (SCAQMD) (October 27, 2023) requested all environmental notices, documents, and appendices related to the Proposed Project. The letter recommended the use of the SCAQMD *CEQA Air Quality Handbook* (1993), use of the California Emissions Estimator Model (CalEEMod), SCAQMD significance thresholds, and preparation of a Health Risk Assessment (HRA). Additionally, SCAQMD provided information about SCAQMD permits and data availability and included a statement regarding mitigation requirements under CEQA.

The letter from the City of San Clemente (October 27, 2023) expressed concerns about potential air quality impacts within San Clemente due to additional truck trips associated with the Proposed Project. Concerns were expressed for the communities of Forster Ranch and Talega that border the Landfill to the south. The City requested to be included in the future Notice of Availability (NOA) of the Subsequent EIR.

The letter from Capistrano Unified School District (CUSD) (October 20, 2023) expressed concern regarding potential impacts due to increased truck traffic. CUSD requested that the Subsequent EIR examine potential impacts on sensitive receptors generally and relative to students attending nearby CUSD schools from exposure to substantial pollution concentrations. Additionally, CUSD requested that the Subsequent EIR explore traffic impacts associated with increased trips per day on surrounding roadways, including those routes passing adjacent nearby schools.

Many comment letters received from individuals included comments related to air quality and are summarized below.

The comments from individuals related to air quality and health risks expressed general concern for the increase in emissions, potential odors, and dust. Commenters primarily represented residents of

the San Juan Capistrano and Talega communities. Several commenters expressed concerns about the increase in methane gas as well as the effect the increase in acceptance of tonnage on a daily basis could have on climate change and cancer risk. Many commenters requested that HRAs and air quality sampling be conducted near sensitive receptors. Several residents expressed concerns with a potential increase in black soot and dust that reportedly settles on their windows and in their backyards. Many individuals suggested mitigation measures to reduce potential air quality impacts and questioned how odor will be mitigated with the increase in waste disposal. Mitigation such as planting trees along Avenida La Pata was requested in order to help filter dust. Residents in the Talega community asserted that the odors and dust they experience at their residences are due to their proximity to the Landfill and expressed concern for the vulnerable populations in the community such as children and people with autoimmune disorders.

4.1.2 Summary of Previous Environmental Documents

A summary of the air quality analysis in the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and the applicable addenda to those documents related to air quality is provided below.

4.1.2.1 2001 GDP EIR

The 2001 GDP EIR analysis was based on evaluating an increase in the rate of disposal, from the then-current baseline level of 2,500 tons per day (TPD) to up to 4,000 TPD, along with implementation of the 2001 GDP. The 2001 GDP EIR concluded the following regarding air quality:

- **Air Quality Standard Violation:** The air quality analysis included an inventory of baseline conditions, considering on-site mobile sources (equipment operation associated with landfilling activities), landfill gas (LFG) combustion from the Energy Recovery Facility, and fugitive LFG. The baseline condition for each of these sources was adjusted to account for implementation of the 2001 GDP, including the projected increase in the rate of disposal, and the results were compared to the existing condition to determine whether an exceedance of the SCAQMD significance threshold would occur. Construction emissions were not specifically quantified in the 2001 GDP EIR but were identified as occurring with the continued landfilling operations, which were factored into the quantitative analysis for ongoing operations. A separate discussion of construction impacts included a qualitative discussion identifying the potential sources of emissions and noting those were described in the operational analysis; it additionally notes that construction-related impacts would occur with the construction of the La Pata Avenue (later renamed to Avenida La Pata) extension. The 2001 GDP EIR determined that on-site equipment mobile source emissions would exceed the SCAQMD's significance threshold for nitrogen oxides (NO_X). However, when compared to existing conditions and combined with off-site traffic and employee commuting emissions, operational mobile source emissions would not exceed SCAQMD's significance threshold for carbon monoxide (CO), reactive organic gases (ROG), NO_X, sulfur oxides (SO_X), or particulate matter less than 10 microns in size (PM_{10}). The quantitative assessment of CO hot spots determined that CO concentrations would be well below the State and federal standards. Therefore, impacts related to operational emissions and CO hot spots would have been less than significant.

The 2001 GDP EIR analyzed long-term air quality impacts from LFG emissions generated from the decomposition of landfilled waste material buried at the project site. The 2001 GDP EIR concluded that the LFG production/disposal emissions are potentially significant, but can be mitigated to less than significant by an LFG combustion system design that must meet SCAQMD standards of not allowing ambient pollution concentrations to exceed specific thresholds.

The emissions associated with recreational uses (i.e., golf course) were found not to exceed the SCAQMD significance thresholds.

The 2001 GDP EIR concluded that air emissions generated by the Landfill component of the 2001 GDP exceeded SCAQMD thresholds of significance, and included several mitigation measures to reduce potential air quality impacts. All mitigation measures from the 2001 GDP EIR remain project commitments applicable to the Proposed Project. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.1.10.2, Previously Adopted Mitigation.

The 2001 GDP EIR concluded that after incorporation of mitigation measures, air quality impacts would be less than significant. The air quality impact conclusion of "less than significant" in the 2001 GDP EIR was based upon the provisions contained within Section 15064(h) of the *State CEQA Guidelines*, which provided that an environmental impact is not significant if it complies with a standard adopted by a public agency for the purpose of environmental protection. The "standard" cited in the 2001 GDP EIR to support the conclusion of less than significant impact is conformity with landfill-specific SCAQMD air quality standards, which the Landfill must meet through permit acquisition in order to continue operation. On October 28, 2002 (after certification of the 2001 GDP EIR), the California Court of Appeal invalidated this provision in Section 15064(h) in its decision in the case of *Citizens for a Better Environment et al. vs. the California Resources Agency.* Refer to Section 4.1.2.2 for a discussion of how this was addressed in the First Supplemental EIR to the 2001 GDP EIR.

- **Cumulatively Considerable Net Increase in Criterial Pollutants:** The 2001 GDP EIR determined that project-related operational activities, in combination with those from other projects in the area, would not substantially deteriorate local air quality with the implementation of Mitigation Measures 4.9.1 through 4.9.13 and adherence to applicable SCAQMD rules and regulations. Therefore, cumulative operational impacts associated with the 2001 GDP were determined to be less than significant and no mitigation was required.

- **Exposure of Sensitive Receptors:** The 2001 GDP EIR identified locations of sensitive receptors in the vicinity of the Landfill and determined that localized operational emissions would not exceed the California Ambient Air Quality Standards (CAAQS) at the sensitive receptor locations. The implementation of Mitigation Measures 4.9.1 through 4.9.13 would further reduce project-related emission impacts. As previously mentioned above, the air quality impacts associated with implementation of the 2001 GDP were determined to be less than significant with mitigation.

- **Objectionable Odors:** Potential objectionable odors generated during operational activities were determined to be less than significant given the project size. The 2001 GDP EIR did not include any land uses identified by the SCAQMD as being associated with odors. However, potential

airborne odors could result from fresh waste refuse. These odors would be confined to the immediate vicinity of the Landfill working face and minimized by daily cover of buried fresh waste in compliance with the SCAQMD regulations. Therefore, impacts related to long-term operational odors were determined to be less than significant and no mitigation was required.

4.1.2.2 First Supplemental EIR to the 2001 GDP EIR

This section provides a summary of the information contained in Section 4.3.1 of the First Supplemental EIR to the 2001 GDP EIR. The First Supplemental EIR to the 2001 GDP EIR analyzed the Second Amendment to the 2001 GDP and determined that it would not result in a change in air quality emissions beyond those identified in the 2001 GDP EIR. The 2001 GDP EIR analyzed the impacts associated with daily operations of up to 4,000 TPD and future recreational and roadway uses. No new impacts were anticipated. Consequently, no additional mitigation measures were required. The First Supplemental EIR to the 2001 GDP EIR included the following air quality analysis and conclusions:

- **Implementation of an Applicable Air Quality Plan:** The First Supplemental EIR to the 2001 GDP EIR determined that the implementation of the Second Amendment to the 2001 GDP would not result in a substantial change in the previous analysis provided in the 2001 GDP EIR. While the 2001 GDP EIR did not specifically analyze the potential for the GDP to conflict with or obstruct implementation of an applicable air quality plan, it did determine an impact would be significant if it exceeded the SCAQMD thresholds. Similarly, the First Supplemental EIR to the 2001 GDP EIR provides the SCAQMD thresholds from the *CEQA Air Quality Handbook* (SCAQMD 1993), and concludes the Second Amendment to the 2001 GDP would not result in a change in air quality emissions beyond those identified in the 2001 GDP EIR, which analyzed the impacts associated with daily operations of up to 4,000 TPD and future recreational and roadway uses. No new impacts were identified; consequently, no additional mitigation measures were required.

- **Air Quality Standard Violation:** As discussed in Section 4.1.2.1, on October 28, 2002 (after certification of the 2001 GDP EIR), the California Court of Appeal invalidated this provision in Section 15064(h) in its decision in the case of *Citizens for a Better Environment et al. vs. the California Resources Agency*; accordingly, although the Second Amendment to the 2001 GDP emissions were not different/greater than those generated by the 2001 GDP, the First Supplemental EIR to the 2001 GDP EIR updated the impact conclusion for air quality effects associated with the original 2001 GDP to reflect a conclusion of "significant after mitigation" based upon this change to the *State CEQA Guidelines*. The First Supplemental EIR to the 2001 GDP EIR concluded that air quality impacts would be significant and unavoidable reflecting that both the worst-case daily construction and operational emissions from a 4,000 TPD landfill would exceed both the daily construction and operational emissions thresholds of significance included in the SCAQMD *CEQA Air Quality Handbook* (1993). Additional mitigation measures under SCAQMD Rule 403 were included in the First Supplemental EIR to the 2001 GDP EIR. A summary of the additional mitigation measures are provided in Section 4.1.10.2 of this Subsequent EIR.

- **Cumulatively Considerable Net Increase in Criterial Pollutants:** Similar to the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR determined project-related operational activities, in combination with those from other projects in the area, would not substantially deteriorate local air quality with the implementation of Mitigation Measures 4.9.1 through 4.9.13 and adherence to applicable SCAQMD rules and regulations. Therefore, cumulative operational impacts associated with the implementation of the Second Amendment to the 2001 GDP were determined to be less than significant, and no mitigation was required.

- **Expose Sensitive Receptors:** Similar to the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR identified locations of sensitive receptors in the vicinity of the project site and determined that localized operational emissions would not exceed the CAAQS. The implementation of Mitigation Measures 4.9.1 through 4.9.13 would further reduce project-related emission impacts.

- **Objectionable Odors:** Potential objectionable odors generated during operational activities were determined to be less than significant given the project size. Therefore, impacts related to long-term operational odors would have been less than significant, and no mitigation was required.

4.1.2.3 Second Supplemental EIR to the 2001 GDP EIR

This section provides a summary of the information contained in Section 4.2 of the Second Supplemental EIR to the 2001 GDP EIR. The Second Supplemental EIR to the 2001 GDP EIR evaluated the Zone 4 construction projects and determined they would not result in a change in air quality emissions beyond those identified in the 2001 GDP EIR, which analyzed the impacts associated with daily operations of up to 4,000 TPD and future recreational and roadway uses. No new impacts were anticipated. Consequently, no additional mitigation measures beyond those identified in the prior CEQA documentation were required. The Second Supplemental EIR to the 2001 GDP EIR included the following air quality analysis and conclusions:

- **Implementation of an Applicable Air Quality Plan:** Similar to the First Supplemental EIR to the 2001 GDP EIR and the 2001 GDP EIR, the Zone 4 construction projects would not result in new or significantly worsening air quality emissions beyond those identified in prior CEQA documentation. Additionally, the Second Supplemental EIR to the 2001 GDP EIR concluded that the Zone 4 construction projects would not exceed the assumptions in the Air Quality Management Plan (AQMP) or increments based on the year of the Zone 4 construction projects build out and phase. No new impacts were identified; consequently, no additional mitigation measures were required.

- **Air Quality Standard Violation:** As discussed above, the First Supplemental EIR to the 2001 GDP EIR concluded that air quality impacts would be significant and unavoidable as emissions would exceed thresholds of significance included in the SCAQMD *CEQA Air Quality Handbook* (1993). The Second Supplemental EIR to the 2001 GDP EIR evaluated maximum daily emissions associated with operation activities for years 2023, 2043, and 2058, and identified that the emissions of criteria pollutants generated from operation of the Zone 4 construction projects would not exceed the corresponding SCAQMD daily emission thresholds for operations in years 2043 and 2058. Long-term landfill operational emissions of the Zone 4 construction projects

would exceed the SCAQMD threshold for NO_X in 2023; however, because the South Coast Air Basin (Basin) is a designated attainment area for nitrogen dioxide (NO_2) (and NO_2 is a constituent of NO_X) and the existing NO_2 concentrations in the area are well below the National Ambient Air Quality Standards (NAAQS) and CAAQS standards, the Zone 4 construction projects therefore would not exceed the NAAQS and CAAQS for NO_2. All mitigation measures contained within the 2001 GDP EIR, and the First Supplemental EIR to the 2001 GDP EIR would apply to the Zone 4 construction projects. No new significant impacts were identified; consequently, no additional mitigation measures were required.

- **Cumulatively Considerable Net Increase in Criterial Pollutants:** Similar to the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR concluded that the Zone 4 construction projects would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable NAAQS or CAAQS. While the Zone 4 construction projects would result in a less than significant impact related to criteria pollutant emissions, there is no change to the impact conclusion in First Supplemental EIR to the 2001 GDP EIR, which concluded that impacts related to emissions would be significant and unavoidable. No new significant impacts were identified; consequently, no additional mitigation measures were required.

- **Expose Sensitive Receptors:** The Second Supplemental EIR to the 2001 GDP EIR concluded that the Zone 4 construction projects would not result in health effects associated with criteria pollutants. Additionally, the Zone 4 construction projects would not result in a significant increased cancer risk to nearby residents and would not expose sensitive receptors to substantial pollutant concentrations. The Second Supplemental EIR would incorporate all mitigation measures outlined in the 2001 GDP EIR, and the First Supplemental EIR to the 2001 GDP EIR per the Mitigation Monitoring and Reporting Program (MMRP). No new significant impacts were identified; consequently, no additional mitigation measures were required.

- **Objectionable Odors:** The Second Supplemental EIR to the 2001 GDP EIR analyzed concurrent operations in both Zones 1 and 4 to allow landfilling activities to shift between the two zones based on seasonal environmental conditions to minimize any potential exhaust emissions, fugitive dust, and odor impacts that may occur to existing and future residential developments near the Landfill. By design, the Zone 4 construction projects was intended to reduce odors associated with operations. Therefore, the Zone 4 construction projects would not result in odors adversely affecting a substantial number of people and would not result in any new or increased significant impacts related to odors. The Second Supplemental EIR to the 2001 GDP EIR would incorporate all mitigation measures outlined in the 2001 GDP EIR, and the First Supplemental EIR to the 2001 GDP EIR per the MMRP. No new impacts were identified; consequently, no additional mitigation measures were required.

4.1.3 Existing Environmental Setting

The project site is within the 6,745-square-mile Basin, which is under SCAQMD jurisdiction. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Background information about air pollutants and health effects, climate, meteorological conditions, and regional air quality conditions in the Basin and local air quality

conditions in the vicinity of the Landfill is provided below. This section provides a description of the regional air quality setting. Please note that not all the pollutants and health effects listed relate directly to operations at the Landfill.

4.1.3.1 Air Pollutants and Health Effects

Both the State and federal government have established health-based ambient air quality standards for six criteria air pollutants: CO, ozone (O_3), NO_2, sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter ($PM_{2.5}$ and PM_{10}). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the Basin are O_3, CO, and suspended particulate matter ($PM_{2.5}$ and PM_{10}). Significance thresholds established by an air quality district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the Basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like NO_X and volatile organic compounds (VOCs).

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to by itself result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air quality districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered

sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise. These populations are referred to as sensitive receptors.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in **Table 4.1.A** and are described in more detail below.

Table 4.1.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	● Precursor sources:[1] motor vehicles, industrial emissions, and consumer products.	● Respiratory symptoms. ● Worsening of lung disease leading to premature death. ● Damage to lung tissue. ● Crop, forest, and ecosystem damage. ● Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Diameter ($PM_{2.5}$)	● Cars and trucks (especially diesels). ● Fireplaces, woodstoves. ● Windblown dust from roadways, agriculture, and construction.	● Premature death. ● Hospitalization for worsening of cardiovascular disease. ● Hospitalization for respiratory disease. ● Asthma-related emergency room visits. ● Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Diameter (PM_{10})	● Cars and trucks (especially diesels). ● Fireplaces, woodstoves. ● Windblown dust from roadways, agriculture, and construction.	● Premature death and hospitalization, primarily for worsening of respiratory disease. ● Reduced visibility and material soiling.
Nitrogen Oxides (NO_X)	● Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	● Lung irritation. ● Enhanced allergic responses.
Carbon Monoxide (CO)	● Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	● Chest pain in patients with heart disease. ● Headache. ● Light-headedness. ● Reduced mental alertness.
Sulfur Oxides (SO_X)	● Combustion of sulfur-containing fossil fuels. ● Smelting of sulfur-bearing metal ores. ● Industrial processes.	● Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	● Contaminated soil.	● Impaired mental functioning in children. ● Learning disabilities in children. ● Brain and kidney damage.
Toxic Air Contaminants (TACs)	● Cars and trucks (especially diesels). ● Industrial sources, such as chrome platers. ● Neighborhood businesses, such as dry cleaners and service stations. ● Building materials and products.	● Cancer. ● Reproductive and developmental effects. ● Neurological effects.

Source: Common Air Pollutants (CARB. n.d.-a).

[1] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

CARB = California Air Resources Board

Ozone. O_3 is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving VOCs and NO_X. The main sources of VOCs and NO_X, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. Automobiles are typically the largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited—it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from humanmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter. Motor vehicles are the primary generators of particulates, through tailpipe emissions as well as brake pad, tire wear, and entrained road dust.

Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children (CARB 2020). Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease, asthma-related emergency room visits, and episodes of respiratory illness in California.

Nitrogen Dioxide. NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

Lead. Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (EPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of EPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the EPA, CARB, and SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines (CARB 2000a). High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily “off-road” sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways.

The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines (CARB 2000b). The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions.

High-Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

4.1.3.2 National and State Ambient Air Quality Standards

Both the State and federal government have established health-based ambient air quality standards for criteria air pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the EPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and suspended particulate matter ($PM_{2.5}$ and PM_{10}). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings (EPA 2017). State and federal standards for the criteria air pollutants are listed in **Table 4.1.B**.

Table 4.1.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration [3]	Method [4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	–		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	9.0 µg/m³	15.0 µg/m³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.03 ppm (57 µg/m³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	–	
Lead (Pb)[12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[11]	Same as Primary Standard	
	Rolling 3-Month Average [9]	–		0.15 µg/m³		
Sulfur Dioxide (SO_2)[11]	24-Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1,300 µg/m³)	
	1-Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Visibility-Reducing Particles[14]	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: Ambient Air Quality Standards (CARB 2024).

Table notes continued on the following page

[1] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For 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 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current national policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon 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.

[4] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

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

[9] On February 7, 2024, the national annual $PM_{2.5}$ primary standard was lowered from 12 µg/m^3 to 9.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (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.

[11] 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 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 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 for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

[13] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/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.

[14] In 1989, the CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the Statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million

4.1.3.3 Regional Climate

Air quality in the Basin is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States gives the Basin the worst air pollution problem in the nation.

Climate in the Basin is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the Basin, which lies in the semipermanent high-pressure zone of the eastern Pacific, resulting in a climate that is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted; however, periods of extremely hot weather, winter storms, or Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The Laguna Beach meteorological station (approximately 10 miles northwest from the project site) high temperature ranges from 65.1°F in January to 78.1°F in August. The monthly average minimum temperature ranges from 43.0°F in January to 59.6°F in August (WRCC n.d.). January is typically the coldest month and August typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The monthly average rainfall at the Laguna Beach meteorological station typically varies from 2.77 inches in January to 0.03 inch in July, with an annual total of 12.52 inches (WRCC n.d.). Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning. Winds in the Landfill blow predominantly from the south and southwest, with relatively low velocities. Wind speeds at the nearest meteorological station (at Mission Viejo Meteorological Station approximately 9.5 miles northwest from the Landfill) show the average offshore wind speed of 3.4 miles per hour (mph) in the vicinity of the Landfill (SCAQMD 2020). Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The nearest representative meteorological station that provides American Meteorological Society/ Environmental Protection Agency Regulatory Model (AERMOD) ready meteorological data is the meteorological station in Mission Viejo, about 9.5 miles northwest of the project site. **Figure 4.1.1, Project Area Wind Patterns**, shows the wind rose from data measured at this station and shows the wind patterns for the vicinity of the Landfill. A wind rose is a graphic tool used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location. The frequency of winds over a time period is plotted by wind direction, with color bands showing wind speed ranges. The direction of the longest spoke shows the wind direction with the greatest frequency. Low wind speeds are marked in red to yellow. Higher wind speeds are marked in green to blue. The Mission Viejo wind rose indicated the dominant wind directions and the direction of strongest wind speeds are from the south-southwest direction. The wind rose also indicates shifting wind patterns from the west and east that could occur during occasions such as Santa Ana or offshore wind conditions.

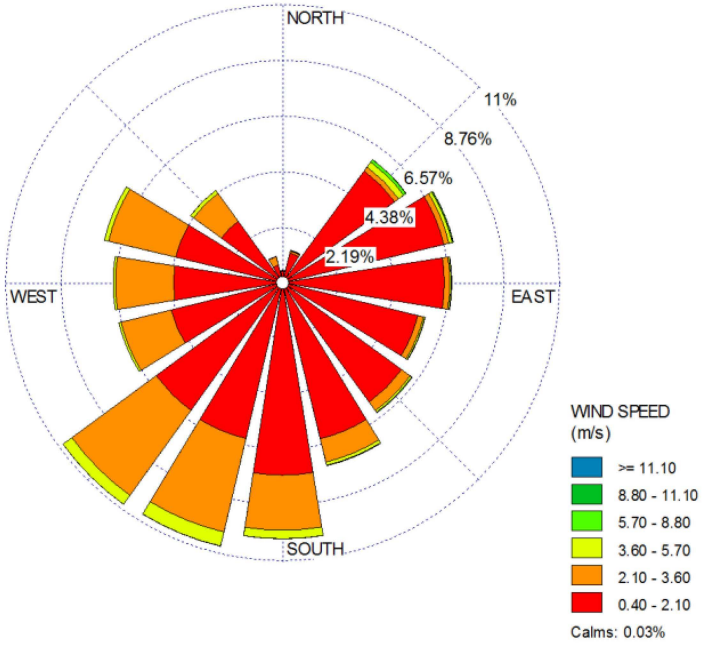


Figure 4.1.1: Project Area Wind Patterns

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Orange County. In the winter, the greatest pollution problems are CO and NO_X because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

4.1.3.4 Attainment Status

The CARB is required to designate areas of the State as attainment, nonattainment, or unclassified for all State standards. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An unclassified designation signifies that data do not support either an attainment or nonattainment status. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The EPA designates areas for O_3, CO, and NO_2 as one of the following: does not meet the primary standards, or cannot be classified, or better than national standards. For SO_2, areas are designated as: does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards. **Table 4.1.C** provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table 4.1.C: Attainment Status of the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	**Nonattainment**	N/A
O_3 8-hour	**Nonattainment**	**Extreme Nonattainment**[1]
PM_{10}	**Nonattainment**	Attainment/Maintenance
$PM_{2.5}$	**Nonattainment**	**Serious Nonattainment**
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Unclassified/Attainment (1-hour) Attainment/Maintenance (Annual)
SO_2	Attainment	Unclassified/Attainment
Lead	Attainment[2]	Unclassified/Attainment[2]
Hydrogen sulfide	Unclassified	No National Standard
Sulfates	Attainment	No National Standard
Visibility-reducing particles	Unclassified	No National Standard
Vinyl chloride	No Designation	No National Standard

Source: NAAQS and CAAQS Attainment Status for the South Coast Air Basin (SCAQMD 2016).
[1] The extreme nonattainment area has a design value of 0.175 ppm and above.
[2] Except in Los Angeles County.
Bolded data indicate nonattainment of ambient air quality standards.

CAAQS = California Ambient Air Quality Standards
CARB = California Air Resources Board
CO = carbon monoxide
N/A = not applicable
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide

In summary, the Basin is designated as a nonattainment area for federal and State O_3 standards and federal and State $PM_{2.5}$ standards. The Basin is designated as a nonattainment area for State PM_{10} standards; however, it is designated as an attainment area for federal PM_{10} standards. The Basin is designated as an attainment area for federal and State CO standards, federal and State NO_2 standards, and federal and State SO_2 standards. While the Basin has been designated as

nonattainment for the federal rolling 3-month average lead standard, it is designated attainment for the State lead standard (EPA 2024; CARB 2023a).

Despite the current nonattainment status, air quality in the Basin has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly a result of lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by SCAQMD. This trend toward cleaner air has occurred in spite of continued population growth. PM_{10} levels have declined almost 50 percent since 1990, and $PM_{2.5}$ levels have also declined 50 percent since measurements began in 1999. Similar improvements are observed with O_3, although the rate of O_3 decline has slowed in recent years.

4.1.3.5 Local Air Quality

The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the Landfill is the Mission Viejo monitoring station (approximately 9.5 miles northwest at 26081 Via Pera), which monitors air pollutant data for O_3, CO, NO_2, $PM_{2.5}$, and PM_{10}. NO_2 data were obtained from the Anaheim monitoring station (approximately 29 miles northwest at 812 Vermont Street). SO_2 is no longer monitored in the area. The air quality trends from these two stations are used to represent the ambient air quality in the vicinity of the project site. **Table 4.1.D** presents the ambient air quality data monitored at these stations within the past 3 years.

As shown in **Table 4.1.D**, the ambient air quality data indicate that CO and NO_2 levels are consistently below the relevant State and federal standards. The State 1-hour O_3 standards were exceeded twice in 2020 and 2021 and once in 2022, while the State 8-hour O_3 standard was exceeded 32 times in 2020, 8 times in 2021, and 5 times in 2022. The federal 8-hour O_3 standard was exceeded 34 times in 2020, 8 times in 2021, and 6 times in 2022. The State 24-hour PM_{10} standards exceeded thresholds twice in 2020 but did not exceed thresholds in 2021 or 2022. The annual federal PM_{10} standards were exceeded 6 times in 2020 but were not exceeded in 2021 or 2022. The federal 24-hour $PM_{2.5}$ standards were not exceeded during the last 3 years. All areas of the Basin have continued to remain below the federal CO standards (35 parts per million [ppm] 1-hour and 9 ppm 8-hour) since 2003. The EPA redesignated the Basin to attainment of the federal CO standards, effective June 11, 2017. The Basin is also well below the State CO standards (20 ppm 1-hour CO and 9 ppm 8-hour CO).

4.1.3.6 Toxic Air Contaminant Trends

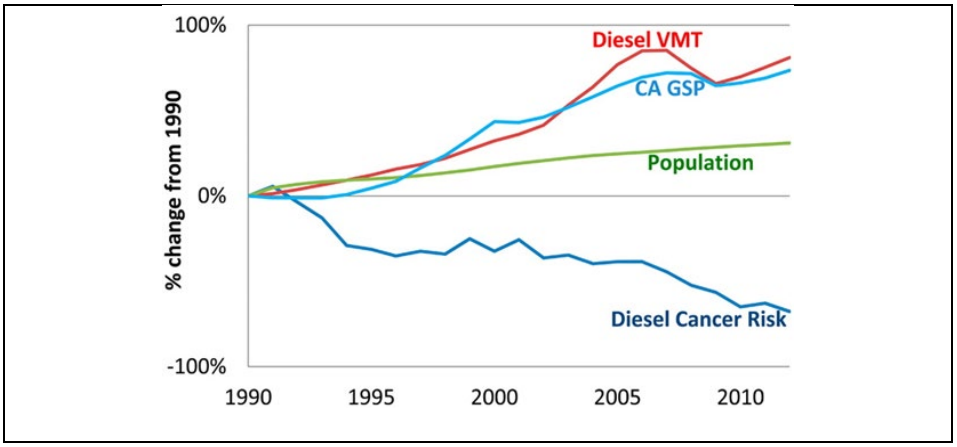
In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012 (Propper et al. 2015). Concentrations of diesel particulate matter, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled (VMT), as shown on **Figure 4.1.2, California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context,** below. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.

Table 4.1.D: Ambient Air Quality in the Project Vicinity

Pollutant	NAAQS/CAAQS	2020	2021	2022
O_3: Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 1-hour concentration (ppm)		0.171	0.105	0.110
Number of days exceeded:	State: >0.09 ppm	2	2	1
Maximum 8-hour concentration (ppm)		0.123	0.082	0.089
Number of days exceeded:	State: >0.07 ppm	32	8	5
	Federal: >0.07 ppm	34	8	6
Coarse Particulates (PM_{10}): Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 24-hour concentration (µg/m³)		56.2	35.2	31.0
Number of days exceeded:	State: >50 µg/m³	2	0	0
	Federal: >150 µg/m³	0	0	0
Annual arithmetic average concentration (µg/m³)		18.8	19.5	16.6
Exceeded for the year:	State: >20 µg/m³	No	No	No
Fine Particulates ($PM_{2.5}$): Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 24-hour concentration (µg/m³)		47.6	32.6	22.6
Number of days exceeded:	Federal: >35 µg/m³	6	0	0
Annual arithmetic average concentration (µg/m³)		10.3	9.3	ND
Exceeded for the year:	State: >12 µg/m³	No	No	ND
	Federal: >9 µg/m³	Yes	Yes	ND
CO: Mission Viejo Monitoring Station (26081 Via Pera)				
Maximum 1-hour concentration (ppm)		1.7	1.0	1.2
Number of days exceeded:	State: >20 ppm	0	0	0
	Federal: >35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		0.8	0.8	1.0
Number of days exceeded:	State: ≥9.0 ppm	0	0	0
	Federal: ≥9 ppm	0	0	0
NO_2: Anaheim Monitoring Station (812 Vermont Street)				
Maximum 1-hour concentration (ppm)		0.070	0.072	0.062
Number of days exceeded:	State: >0.18 ppm	0	0	0
	Federal: >0.10 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.019	0.019	0.019
Exceeded for the year:	State: >0.030 ppm	No	No	No
	Federal: >0.053 ppm	No	No	No

Source 1**:** Outdoor Air Quality Data (EPA 2024).
Source 2: iADAM: Air Quality Data Statistics (CARB 2023a).

µg/m³ = micrograms per cubic meter
CAAQS = California Ambient Air Quality Standards
CARB = California Air Resources Board
CO = carbon monoxide
EPA = United States Environmental Protection Agency
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
ND = data is not available
O_3 = ozone
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
SO_2 = sulfur dioxide



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper et al. 2015).

Figure 4.1.2: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context

The EPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Multiple Air Toxics Exposure Study IV (MATES IV). MATES IV is a monitoring and evaluation study conducted in the Basin and is part of the SCAQMD Governing Board's Environmental Justice Initiative (SCAQMD n.d.-b.). The study focused on the carcinogenic risk from exposure to air toxics. It does not estimate mortality or other adverse health effects from particulate exposures. The MATES IV study uses 2012 monitored data to model risk throughout the Basin. Risk is shown in 2-kilometer by 2-kilometer (1.2-mile by 1.2-mile) squares. Two squares cover the Landfill. The first square includes the western end at Zone 1. The modeled carcinogenic risk for this area is 377 per million. The second square covers the remainder of the Landfill, and the modeled carcinogenic risk for this area is 350 per million (SCAQMD 2015b). The MATES IV data were calculated using methods and guidelines established by the State Office of Environmental Health Hazard Assessment (OEHHA) in 2003.

In March 2015, subsequent to the preparation of the MATES IV report, the OEHHA adopted new methods and guidelines for calculation of cancer risk (OEHHA 2015). The new guidelines recognize increased risks to infants and children, revised assumptions for breathing rates of different age groups, and revised exposure periods for various age groups and receptor types. The new methods result in substantially greater estimated cancer risks than previously calculated. The Basin population-weighted risk, calculated with the new guidelines, is 420 per million. However, it should be noted that some of the modeled risk increase identified using the new methods may be offset in later risk modeling by new (EMFAC2021) heavy-duty diesel truck particulate emissions factors that are approximately a factor of 10 lower than the corresponding EMFAC2011 emissions factors that were used for the MATES IV calculations.

4.1.3.7 Sensitive Receptors

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. Several single-family residential developments exist around Landfill Zones 1 and 4. The combined Landfill area is 1,530 acres. The closest sensitive receptors are identified in **Table 4.1.E** below.

Table 4.1.E: Surrounding Sensitive Receptors

Receptor	Distance (feet) / Direction Relative to Zone 1	Distance (feet) / Direction Relative to Zone 4
San Juan Hills High School	3,450 / North	3,230 / Northwest
Rancho San Juan/Whispering Hills Community	550 / North	1,775 / West
Rancho San Juan Hills Estates Community	1,140 / West	6,800 / West
Forster Ranch Community	2,840 / Southeast	3,200 / Southwest
Talega Residential Community	4,830 / Southeast	1,225 / South

Source: Compiled by LSA (2024).

As shown in **Figure 4.1.1** above, based on the Mission Viejo wind rose (the nearest representative meteorological station to the project site), the dominant wind directions and the direction of strongest wind speeds are from the south-southwest direction. The wind rose also indicates shifting wind patterns from the west and east that could occur during Santa Ana or offshore wind conditions. These wind conditions were incorporated into the health risk modeling conducted for the Proposed Project. Based on the location of the surrounding sensitive receptors and wind conditions, the Rancho San Juan/Whispering Hills community would be the maximally exposed receptor.

4.1.3.8 Existing Project Site Emissions

The Landfill is owned by the County of Orange and operated by OCWR. The Landfill is a Class III solid waste landfill that has been in continuous operation since 1976. The Landfill is in the western foothills of the southern Santa Ana Mountains. Primary access to the Landfill is through the Main Entrance located along a standalone vehicle exit on Avenida La Pata, allowing access to Landfill Zones 1 through 5. There are existing administration offices, facility operation buildings, a household hazardous waste collection center, and a gas-to-energy facility near the Landfill's entrance that do not fall within a designated zone.

The 1,530-acre Landfill site is in south Orange County. The County-owned site includes acreage within the jurisdictions of the cities of San Juan Capistrano (570 acres) and San Clemente (133 acres). The remaining 827 acres are within unincorporated Orange County.

The facility currently receives waste from commercial and private sources, places and compacts the waste, covers the waste with soil or other cover material on a daily basis, operates an LFG collection and control system, constructs new cells for future waste receipts, and places final cover materials. These operations are typical of all Landfill operations.

The Landfill is permitted to accept up to 4,000 TPD of solid waste.[1] The Landfill is also permitted to accept up to 350 TPD of digested dewatered biosolids (i.e., wastewater treatment plant sludge). Current operations do not typically reach the maximum permitted amount, with variations in the amount of waste received daily. The Landfill accepted a daily average of approximately 2,625 TPD of solid waste in Fiscal Year (FY) 2022/2023 (i.e., July 2022 to June 2023), with the daily average ranging from a low of approximately 2,135 TPD in July 2022 to a maximum of 3,313 TPD in March 2023. Of the average total of 2,625 TPD in FY 2022/2023, an average of approximately 1,854 TPD was received from Orange County cities served by the Landfill. Baseline operations at the Landfill take place approximately 309 days per year.

Emissions of criteria pollutants and TACs result from the transport of the waste on site, the handling and disposal of the waste on site, and the byproducts of the disposal of the waste on site, as well as emissions from the destruction of LFG in the two flares. Tailpipe emissions are the main category of emissions from the existing Landfill. The Landfill uses off-road equipment (e.g., compactors and bulldozers) to handle the waste and place the daily cover over the waste. The off-road equipment used at the Landfill is diesel-powered. There are also tailpipe emissions resulting from trucks delivering waste to the Landfill as well as employee vehicles. OCWR is currently incorporating Tier 4 Final engines into its fleet and plans to utilize only Tier 4 engines by 2026.

Existing Stationary Source Emissions. LFG, consisting primarily of methane (CH_4) and CO_2, is produced by the decomposition of organic refuse. The facility has systems in place that collect approximately 70 percent of the generated LFG and flare the excess gas. The collection system consists of a series of vertical wells, connection piping, headers, and blowers (that place the wells under vacuum) for the withdrawal of the gases from the Landfill. A small fraction of the LFG is assumed to migrate to the surface of the Landfill and be released to the atmosphere. Operational practices, including use of sufficient cover and repair of cracks, fissures, and settling, minimize surface emissions. The effectiveness of these practices is verified by conducting quarterly surface emission monitoring.

The Landfill has state-of-the-art environmental control systems that include: (a) a hazardous waste control program; (b) two flares for flaring of collected LFG; (c) a LFG monitoring, recovery, and control system with plans to design and implement a new LFG-to-energy project in the near future, which will convert LFG into renewable clean energy in the form of electricity or renewable natural gas (RNG); (d) a groundwater monitoring, extraction, and collection system; (e) a leachate collection and recovery system; (f) a radioactive waste detection program; and (g) fire, erosion, dust, odor, noise, bird, insect, rodent, and litter control. The collected LFG is flared in the two state-of-the-art low emission flares on site (i.e., combusted). In accordance with the EPA's New Source Performance Standard and SCAQMD Rule 1150.1, an LFG collection system is required to be installed in active and inactive landfills to collect the gas generated from refuse decomposition.

[1] Impacts associated with the current permitted level of operations (4,000 TPD) were the subject of previous environmental documentation, including the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR. Refer to Section 2.1.4 for more information.

The Landfill maintains SCAQMD operating permits for the LFG collection system, flares, fuel storage and dispensing, and a diesel-fired electrical generator that may be used for emergency power. The Landfill is classified as a major stationary source of emissions (major source) and maintains a Title V operating permit for major sources under the federal Title V Permitting Program. Existing permitted equipment and emissions, as reported in the Landfill's Annual Emissions Report (AER) submitted to SCAQMD on a yearly basis, are presented below.

Baseline criteria pollutant emissions from permitted stationary sources were obtained from the annual emissions presented in the 2021 through 2023 AERs, which are representative of the most recent 3 years of available data (SCAQMD 2023b). **Table 4.1.F** presents the annual baseline criteria pollutant emissions for stationary sources at the Landfill as reported in the AER submitted to SCAQMD.

Table 4.1.F: Annual Baseline Emissions (tons/year)

Annual Emissions	VOCs	NO_x	CO	SO_x	PM
Reporting Year 2021	0.401	6.871	6.75	3.478	1.881
Reporting Year 2022	0.631	10.321	10.722	5.199	2.815
Reporting Year 2023	1.101	16.672	18.094	10.653	4.802

Source: Annual Emissions Reports for Facility ID 52753 (SCAQMD 2025).
CO = carbon monoxide
NO_x = nitrogen oxides
PM = particulate matter
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
tons/yr = tons per year
VOCs = volatile organic compounds

Existing Landfill Toxic Air Contaminants. The CARB maintains information on TACs and HRAs for facilities throughout California. According to the CARB Air Toxic Hot Spot Assessment database, the Landfill facility HRA and prioritization score data were collected under the Air Toxic Hot Spots Program in 2020. Based on the reporting, the baseline health impacts at Landfill are less than 10 in 1 million for cancer risk and a Hazard Index of less than 1.0 for non-cancer chronic and acute health impacts (CARB 2021). These are below the SCAQMD's allowable project increment threshold of 10 in 1 million for cancer risk and 1.0 for non-cancer on the Hazard Index.

Existing TAC emission sources include flared LFG combustion, landfill surface gas, heaters, stationary internal combustion engines, paints and cleaners, gasoline and diesel fuel storage and dispensing, and heavy-duty equipment operations. **Table 4.1.G** presents baseline TAC emissions as reported in the Landfill's most recent and publicly available AER. Based on the last 3 years of reports submitted to SCAQMD and CARB reporting, the TAC emissions from existing Landfill operations do not pose significant cancer or non-cancer risks to the surrounding community.

Table 4.1.G: Annual Toxic Air Contaminant Emissions

CAS No.	Toxic Air Contaminant	Reporting Year 2021 (lbs/yr)	Reporting Year 2022 (lbs/yr)	Reporting Year 2023 (lbs/yr)
106990	1,3-Butadiene	0.58	1.986	1.938
7664417	Ammonia	2.687	4.135	3.958
7440382	Arsenic	0.005	0.008	0.007
71432	Benzene	3.146	5.821	7.748
7440439	Cadmium	0.005	0.007	0.007
56235	Carbon tetrachloride	1.237	1.849	2.954
18540299	Chromium (IV)	0.000	0.000	0.000
9901	Diesel engine exhaust, particulate matter	115.526	173.161	165.758
106934	Ethylene dibromide	1.513	2.261	3.613
107062	Ethylene dichloride	0.799	1.194	1.908
50000	Formaldehyde	561.804	840.983	1,738.041
7439921	Lead (inorganic)	0.027	0.042	0.041
71556	Methyl chloroform	1.074	1.606	2.566
75092	Methylene chloride	0.701	1.048	1.674
91203	Naphthalene	0.209	0.361	0.492
7440020	Nickel	0.014	0.023	0.022
1151	PAHs, total, with components not reported	0.18	0.275	0.362
127184	Perchloroethylene	1.336	1.997	3.191
79016	Trichloroethylene	0.799	1.194	1.908
75014	Vinyl chloride	0.503	0.752	1.202

Source: Annual Emissions Reports for Facility ID 52753 (SCAQMD 2025).
lbs/yr = pounds per year
PAH = polycyclic aromatic hydrocarbon
SCAQMD = South Coast Air Quality Management District

4.1.4 Regulatory Setting

4.1.4.1 Federal Regulations

Clean Air Act. The EPA is responsible for implementing the federal Clean Air Act (CAA). The CAA was first enacted in 1955 and has been amended numerous times in subsequent years (i.e., 1963, 1965, 1967, 1970, 1977, and 1990). The CAA authorizes the federal government to set federal air quality standards for pollutant emissions. The CAA also specifies future dates for achieving compliance with the NAAQS. Pursuant to the federal CAA, the EPA is responsible for setting and enforcing the NAAQS for seven major pollutants: O_3, CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and lead, which are termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards (AAQS), or criteria, for outdoor concentrations to protect public health.

The federal government first adopted the CAA (United States Code [USC] § 7401) in 1963 to improve air quality and protect citizens' health and welfare. The NAAQS are revised and changed when scientific evidence indicates a need. The CAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). State and local agencies, including the CARB and SCAQMD, are responsible for providing the SIP and attainment plans. The CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to

incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. As described below, state and local agencies are responsible for planning for attainment and maintenance of the NAAQS.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt an NAAQS for $PM_{2.5}$. All air basins have been formally designated as attainment or nonattainment for each NAAQS. The NAAQS attainment status for the Basin is summarized in **Table 4.1.C**.

Federal Regulatory Authority for Toxic Air Contaminants. The EPA administers several programs that regulate TAC emissions from stationary and mobile sources. The EPA identified 188 TACs that are known or suspected carcinogens, present a threat to human health or the environment, and are regulated under control technology programs. Also, the EPA has identified 33 urban TACs that pose the greatest threat to public health in urban areas and are regulated under the Urban Air Toxics Strategy. The EPA regulates TACs primarily by setting emission standards for vehicles and technology standards for industrial source categories.

In 2003, the EPA issued the final National Emissions Standard for Hazardous Air Pollutants rule to ensure reduction of TACs from municipal solid waste (MSW) landfills. The regulation largely incorporated the requirements of Subpart WWW (described below), with the added requirements for Start-up, Shutdown, Malfunction Plans, and requirements for bioreactor landfills.

The CAA includes standards of performance for new stationary sources, including MSW landfills, per 40 Code of Federal Regulations (CFR) Part 60, Subpart WWW. The provisions of this subpart apply to each MSW landfill that commenced construction, reconstruction, or modification on or after May 30, 1991. Subpart Cc of the same Part 60 (Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills) applies to each existing landfill for which construction, reconstruction, or modification commenced before May 30, 1991. A modification is defined as an increase in the permitted volume design capacity by either horizontal or vertical expansion. Under Subpart WWW rules, facilities with design capacities less than 2.5 million metric tons (MMT) are required to submit initial design capacity reports, and for those with design capacities greater than 2.5 MMT, are required to calculate the facility's generated non-methane organic compounds (NMOC) emissions. Estimated NMOC emissions exceeding 50 metric tons per year (MT/yr) require the owner or operator to submit a collection and control system design plan and install a collection system to capture and control the gas generated. SCAQMD Rule 1150.1 (described in Section 4.1.4.3, Regional Regulations) was deemed equivalent to Subpart Cc by the EPA, and MSW landfills in compliance with Rule 1150.1 are deemed in compliance with Subpart Cc.

4.1.4.2 State Regulations

California Clean Air Act. Assembly Bill (AB) 2595, the CCAA, was signed into law in 1988 and requires all areas of the State to achieve and maintain the CAAQS. The CCAA mandates achievement of the maximum degree of emission reductions possible from vehicular and other mobile sources to attain

the CAAQS by the earliest practical date. The CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the CCAA and federal CAA and for regulating emissions from consumer products and motor vehicles within California. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. All air basins have been formally designated as attainment or nonattainment for each CAAQS.

Non-attainment areas are required to prepare AQMPs that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Development of control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- An SCAQMD permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementation of reasonably available transportation control measures and assurance of a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low-emission vehicles by fleet operators; and
- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions or 15 percent or more in a period of 3 years for VOCs, NO_X, CO, and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5 percent per year under certain circumstances.

California State Implementation Plan (SIP). The CAA mandates that each state submit and implement SIPs. States containing areas violating the NAAQS are required to revise their SIPs to include additional control measures aimed at reducing air pollution. The SIP is required to include strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA reviews all SIPs to determine conformance with the CAA.

State law mandates the CARB to serve as the lead agency for all purposes related to SIPs, which are prepared by local air quality districts and other agencies and submitted to the CARB for review and approval. Subsequently, the CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register. The 2022 AQMP is the SIP for the Basin and is a regional blueprint for implementing air quality standards within areas under SCAQMD jurisdiction, which is discussed further below.

In addition to the CCAA, the CARB:

- Establishes and enforces emissions standards for motor vehicles, fuels, and consumer products;
- Establishes health-based air quality standards;
- Conducts research;
- Monitors air quality;
- Identifies and promulgates control measures for TACs;
- Provides compliance assistance for businesses;
- Produces education and outreach programs and materials; and
- Oversees and assists local air quality districts that regulate most non-vehicular sources of air pollution.

Toxic Air Contaminants. The State Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and non-carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the State list includes the (federal) hazardous air pollutants. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform an HRA, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

The CARB reviews scientific research on exposure and health effects to identify the toxic air pollutants that pose the greatest threat to public health. One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. Health statistics show that 1 in 4 people (or 250,000 in 1 million) will contract cancer over their lifetime from all causes, including diet, genetic factors, and lifestyle choices (SCAQMD 2008).

Unlike carcinogens, most non-carcinogens have a threshold level of exposure below which the compound will not pose a health risk. CalEPA and the OEHHA have developed reference exposure levels (RELs) for non-carcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The non-cancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The

comparison is expressed as the ratio of the estimated exposure level to the REL, called the Hazard Index.

Diesel Regulations. As part of California's Diesel Risk Reduction Plan, the CARB has passed numerous regulations to reduce diesel emissions from vehicles and equipment that are already in use. Combining these retrofit regulations with new engine standards for diesel-fueled vehicles and equipment, the CARB intends to reduce diesel particulate matter (DPM) emissions by 85 percent due to the installation of diesel particulate filters. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment Program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several airborne toxic control measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 California Code of Regulations [CCR] 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

Diesel Fuels. California Diesel Fuel Regulations (13 CCR §§2281-2285; 17 CCR §93114) provide standards for motor vehicle fuels and diesel fuel.

In-Use Off-Road Diesel Vehicle Regulation. The CARB In-Use Off-Road Diesel Vehicle Regulation establishes various requirements for owners of off-road diesel vehicles, with engine ratings of 25 horsepower (hp) and greater, to reduce emissions of NO_X and DPM generated during combustion. Requirements to date have included reporting fleet vehicles to the CARB, obtaining a CARB-issued equipment identification number for all diesel-fleet vehicles, and developing and implementing a written idling policy restricting non-essential idling to less than 5 minutes. Emission performance requirements became effective January 2014, and established fleet average targets for NO_X emission reductions. Emission performance can be achieved through fleet turnover and use of newer model year equipment, as well as installation of certified retrofit equipment such as a particulate filter.

On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation. The CARB On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation applies to diesel-fueled trucks and buses with a gross vehicle weight greater than 14,000 pounds. The regulation establishes a phase-in schedule for fleet owners and operators to reduce emissions of particulate matter through fleet turnover and/or installation of retrofit equipment such as exhaust filters. The phase-in schedule began January 1, 2012, and applies to fleets based on model year.

California Health and Safety Code Section 41700. Section 41700 of the Health and Safety Code states that a person shall not 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.

4.1.4.3 Regional Regulations

South Coast Air Quality Management District. The SCAQMD is the air pollution control agency for Orange County, as well as the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is to ensure the NAAQS and CAAQS are attained and maintained in the Basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects within the Basin are subject to SCAQMD rules and regulations in effect at the time of construction.

As stated previously, the AQMP is the SIP for the Basin. The AQMP is a regional blueprint for implementing air quality standards within the Basin and some portions of the Salton Sea Air Basin that are under SCAQMD jurisdiction. The AQMP asserts that the most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. Additionally, the AQMP relies on partnerships between governmental agencies at the federal, state, regional, and local level. These agencies, which are comprised of the EPA, CARB, local governments, the Southern California Association of Governments (SCAG), and SCAQMD, are the primary agencies that implement the AQMP programs. The AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and the latest SCAG growth forecasts, as well as including integrated strategies and measures to meet the NAAQS.

The SCAQMD has adopted several regulations that apply to the Landfill operations:

- **Rule 201 Permit to Construct:** This rule requires a permit to construct prior to building, erecting, installing, altering, or replacing any equipment, the use of which may cause the issuance of TACs or the use of which may eliminate, reduce, or control the issuance of TACs without first obtaining written authorization.

- **Rule 203 Permit to Operate:** This rule requires a permit to operate any equipment, the use of which may cause the issuance of TACs or the use of which may eliminate, reduce, or control the issuance of TACs without first obtaining written authorization.

- **Rule 401 Visible Emissions:** This rule establishes the limit for visible emissions from stationary sources for a period or periods aggregating more than 3 minutes in any hour. This rule prohibits visible emissions dark or darker than Ringelmann No. 1[2] for periods greater than 3 minutes in any hour or such opacity that could obscure an observer's view to a degree equal or greater than does smoke.

[2] The Ringelmann Smoke Chart provides a basis to measure and compare the darkness of smoke columns on a scale from 0 to 5. Ringelmann No. 1 is the lightest shade (next to white, which is No. 0).

- **Rule 402 Nuisance:** Regional odor regulations include SCAQMD Rule 402, *Nuisance*, which limits the discharge of odors that "cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property".

- **Rule 403 Fugitive Dust:** The purpose of SCAQMD Rule 403, *Fugitive Dust,* is to reduce and control emissions of PM from fugitive dust generated during construction activities. SCAQMD Rule 403, *Fugitive Dust,* states that any active operations, including demolition, grading, and/or earthmoving activities, shall include appropriate best control measures designed to control localized fugitive dust emissions. Best control measures include, but are not limited to, the following:

    - Watering the site two to three times a day with a water truck
    - Application of non-chemical soil stabilizers to unpaved roads or disturbed areas
    - Stabilizing equipment staging areas through site watering, application of non-chemical stabilizers, or track-out installation
    - Pre-water material prior to loading into crusher (i.e., rocks, boulders)
    - Apply water to crushed material to prevent dust plumes
    - Add or remove material from the downwind portion of the storage pile
    - Limit vehicle speeds to 15 mph
    - Limit number and size of staging area entrances/exits

- **Rule 431.1 Sulfur Content of Gaseous Fuels:** The purpose of this rule is to reduce SO_X emissions from the burning of gaseous fuels in stationary equipment requiring a permit to operate.

- **Rule 431.2 Sulfur Content of Liquid Fuels:** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of SO_X and particulates during combustion and to enable the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers and retailers, as well as to users of diesel, low sulfur diesel, and other liquid fuels for stationary source applications in the SCAQMD. This rule also affects diesel fuel supplied for mobile source applications.

- **Rule 1118.1 Control of Emissions from Non-Refinery Flares:** The purpose of this rule is to reduce NO_X and VOC emissions from flaring produced gas, digester gas, LFG, and other combustible gases or vapors and to encourage alternatives to flaring.

- **Rule 1150 Excavation of Landfill Sites:** The SCAQMD has adopted source-specific regulations to reduce and control fugitive emissions from landfills during excavation activities. SCAQMD Rule 1150, *Excavation of Landfill Sites*, states that excavation of an active or inactive landfill requires an Excavation Management Plan approved by the SCAQMD Executive Officer. At a minimum, the Excavation Management Plan must describe the quantity and characteristics of the material to be excavated and transported, and identify mitigation measures to ensure that a public nuisance condition does not occur. Mitigation measures may include gas collection and disposal, baling, encapsulation, covering of the material, chemical neutralizing, or other actions approved by the Executive Officer.

- **Rule 1150.1 Control of Gaseous Emissions from MSW Landfills:** SCAQMD has also adopted source-specific regulations to limit gaseous emissions from MSW landfills to prevent public nuisance and public health impacts. SCAQMD Rule 1150.1, *Control of Gaseous Emissions from MSW Landfills*, requires active landfills to have a collection and control system designed to handle the maximum expected gas flow rate and minimize migration of subsurface gas. The regulation was updated in 2011 to incorporate the CARB regulation that controls CH_4 emissions from MSW landfills. Rule 1150.1 requires all collected gas to be routed to a treatment system that processes the collected gas for subsequent sale or use. The system must either reduce NMOC by at least 98 percent by weight, or reduce the outlet NMOC concentration to less than 20 ppm by volume (ppmv), dry basis as hexane at 3 percent oxygen. In addition, the treatment system must achieve a CH_4 emissions destruction efficiency of at least 99 percent, except for lean burn internal combustion engines, which must reduce outlet CH_4 concentration to less than 3,000 ppm, dry basis, corrected to 15 percent oxygen. The system must also prevent the concentration of total organic carbon, measured as CH_4, from exceeding 5 percent by volume in subsurface refuse boundary sampling probes, 25 ppmv in samples taken on numbered 50,000-square-foot landfill grids, or 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill (except at the outlet of any control device).

- **Rule 1150.3 Emissions of Oxides of Nitrogen from Combustion Equipment at Landfills:** The purpose of this rule is to reduce NO_X and CO emissions from boilers, process heaters, and turbines located at MSW landfills and LFG to energy facilities.

- **Rule 1401 New Source Review of Toxic Air Contaminants:** This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic Hazard Index from new permit units, relocations, or modifications to existing permit units that emit TACs. The rule establishes allowable risks for permit units requiring new permits pursuant to Rules 201 or 203.

- **Rule 3003 Applications:** This rule outlines application requirements for operators of Title V facilities.

- **Rule 3005 Permit Revisions:** This rule outlines requirements for permit revisions.

Orange County General Plan. The Resources Element, one of nine elements of the County's General Plan, contains official County policies on the conservation and management of resources (County of

Orange 2011). One component of the Resources Element is Air Resources. The policy of the Air Resources Component is "To develop and support programs which improve air quality or reduce air pollutant emissions". The Air Resources Component includes 15 implementation programs. The responsibility for implementation is designated to the County, the Orange County Transportation Authority (OCTA), and other public agencies.

4.1.4.4 Local Regulations

Although not applicable to OCWR, local regulations that work to reduce air pollutant emissions in San Juan Capistrano and San Clemente are listed below for informational purposes. These regulations would apply to many of the cumulative projects listed in **Table 4.A** in Chapter 4.0.

City of San Juan Capistrano General Plan. The City Council approved the San Juan Capistrano General Plan in December 1999 and last updated it in May 2002. The Housing Element was updated separately, last revised in August 2022. The General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in San Juan Capistrano. Air quality-related goals and policies that are applicable to the Proposed Project are listed below.

> ***Conservation and Open Space Element.*** Although air quality is not a State-mandated element of a general plan, the AQMP requires air quality to be addressed in general plans. Air quality is included within the Conservation and Open Space Element (2002) of the City of San Juan Capistrano's General Plan to fulfill AQMP requirements. The Conservation and Open Space Element contains the following goals and policies aimed at improving air quality within the City through proper planning for land use, transportation, and energy use:
>
> **Goal 6.0: Improve air quality.**
>
> - **Policy 6.1:** Cooperate with the South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.
> - **Policy 6.2:** Cooperate and participate in regional air quality management planning, programs and enforcement measures.
> - **Policy 6.3:** Implement City-wide traffic flow improvements.
> - **Policy 6.4:** Achieve a greater balance between jobs and housing in San Juan Capistrano.
> - **Policy 6.5:** Integrate air quality planning with land use and transportation planning.
> - **Policy 6.6:** Promote energy conservation and recycling by the public and private sectors.

City of San Clemente General Plan. The City Council adopted the City of San Clemente Centennial General Plan in February 2014 and last amended it in October 2022. The Natural Resources Element and Land Use Element of the Centennial General Plan outline the following air quality-related goals and policies that are applicable to the Proposed Project:

Goal: Reduce levels of air pollution and greenhouse gas emissions so that the City meets or exceeds regional, State, and Federal mandates.

- **Policy NR-5.01: New Development.** We require new development to utilize appropriate SCAQMD air quality mitigation measures.
- **Policy NR-5.02: Sensitive Land Uses.** We prohibit the future siting of sensitive land uses within distances defined by the CARB for specific source categories, unless such uses include sufficient mitigation.
- **Policy NR-5.04: Indoor Air Quality.** We comply with State Green Building Codes relative to indoor air quality.
- **Policy NR-5.05: Transportation.** We provide non-motorized, multi-modal mobility options (e.g. pedestrian and bicycle facilities) and work with other agencies and organizations to provide transit opportunities to reduce air pollutant emissions.
- **Policy NR-5.06: Particulate Matter.** We support efforts to reduce particulate matter to meet State and federal Clean Air Standards.
- **Policy NR-5.07: Street Trees.** We maintain a healthy stock of park, public area, and street trees and encourage the planting of trees with significant canopies that provide numerous benefits, including reduced urban heat gain, natural shading and wind screening, air filtration, and oxygen production.

4.1.5 Methodology

4.1.5.1 Air Quality Analysis

The air quality analyses in the previous environmental documents (the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR) were analyzed with the Urban Emissions Model (URBEMIS), which is currently outdated and does not include the latest emission factor data. Consistent with the SCAQMD guidance for estimating emissions associated with proposed projects, CalEEMod was used to calculate the short-term construction and long-term operational emissions associated with the Proposed Project. CalEEMod utilizes widely accepted methodologies for estimating emissions. Sources of these methodologies and default data include but are not limited to the EPA AP-42 emission factors and the CARB vehicle emission models.

The existing conditions at the Landfill represent the environmental baseline in this Subsequent EIR. Therefore, the air quality analysis for the Proposed Project utilizes the annual emissions reports for the Landfill from the most recent 3 years of available data, as reported by the AER. As presented in Section 4.1.3.8, **Table 4.1.F** shows the annual baseline criteria pollutant emissions for stationary sources at the Landfill, and **Table 4.1.G** shows baseline TAC emissions at the Landfill.

The Proposed Project would increase the maximum amount of waste the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. This increase is anticipated to take place gradually, and typical daily operations would likely remain below the maximum permitted amount similar to current operations. No change to the overall capacity of the Landfill would occur, and no change to

the volume of waste that would be accommodated as evaluated in prior environmental documents. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. No expansion of the permitted landfill footprint of either Zone 1 or Zone 4 would result from the Proposed Project. As discussed in Section 1.2, the actual demand for waste fluctuates based on many factors in addition to the permitted capacity. To the extent that the actual rate of waste received increases above the currently permitted 4,000 TPD, the remaining capacity of the Landfill would be correspondingly reduced faster than in the absence of the Proposed Project. The proposed operational changes are administrative in nature and do not include any construction activities; therefore, this analysis focuses on operational emissions only.

Increasing the maximum amount of waste accepted at the Landfill on a daily basis would result in increased operational emissions associated with the increase in vehicle and truck trips and equipment operations. As discussed in the Traffic Volume and VMT Study in **Appendix E** of this Subsequent EIR, the Proposed Project would generate up to 3,041 average daily traffic (ADT), including 2,971 truck trips and 70 passenger vehicle trips, at the maximum permitted capacity of 8,000 TPD. [3] Note that typical daily operations are not anticipated to reach the maximum permitted capacity, consistent with existing conditions. Operation of the Proposed Project would also require the use of additional equipment, which are listed in **Table 4.1.H** below (usage information is based on the proposed maximum permitted capacity of 8,000 TPD).

Table 4.1.H: Proposed Project Equipment List

Vehicle Type	Fuel Type	Engine Tier Level	Quantity	Hours Per Day	Days Per Year	Horsepower	Load Factor
Track-type tractor	Diesel	Tier 4 Final	4	10	307	460	0.37
Track-type tractor	Diesel	Tier 4 Final	1	10	307	251	0.37
Track-type tractor	Diesel	Tier 4 Interim	1	10	307	110	0.37
Wheel dozer w/BG	Diesel	Tier 4 Final	2	10	307	354	0.40
Compactor	Diesel	Tier 4 Final	2	10	307	582	0.43
Scraper front	Diesel	Tier 3	3	10	307	500	0.48
Scraper rear	Diesel	Tier 3	3	10	307	283	0.48
Motor grader	Diesel	Tier 4 Final	1	10	307	253	0.41
Backhoe loader	Diesel	Tier 4 Final	1	5	307	115.3	0.37
Integrated tool carrier	Diesel	Tier 3	1	5	307	180	0.42
Skidsteer loader	Diesel	Tier 4 Interim	1	5	307	69	0.37
Wheel loader	Diesel	Tier 4 Final	1	10	307	182.2	0.36
Wheel loader	Diesel	Tier 4 Final	1	10	307	300	0.36
Water truck	Diesel	Tier 4 Final	3	10	307	370	0.38
Telehandler	Diesel	Tier 4 Final	1	5	307	73.7	0.42
Automatic tarping machine	Diesel	Average	2	5	307	50	0.40

Source: Compiled by LSA (2025).

[3] Note that the ADT used in air quality and GHG emissions modeling is based on forecasted truck and passenger vehicle trips rather than passenger car equivalents (PCEs). PCEs are used for modeling transportation-related impacts to the circulation system.

The CalEEMod analysis was conducted using land use code *Other Non-Asphalt Surfaces*. Trip generation rates used in CalEEMod for the Proposed Project were based on the Proposed Project's trip generation of 3,041 ADT, including 2,971 truck trips and 70 passenger vehicle trips. Although these trips largely represent rerouted waste from the Olinda Alpha Landfill, reducing the number of active landfills in the County would inevitably result in some trips requiring a greater travel distance. The Olinda Alpha Landfill is over 43 miles (by road) from the Prima Deshecha Landfill, meaning that waste hauling trips may on average be up to 43 miles longer each way (but would vary depending on the origin). It is anticipated that contracted waste haulers will work with OCWR to identify efficient ways to reroute the Olinda Alpha Landfill waste stream that minimize overall miles traveled. This analysis assumes that the truck trips would travel approximately 40 miles (80 miles round trip), consistent with SCAQMD recommendations for heavy heavy-duty (HHD) trucks (i.e., trucks with a gross vehicle weight rating of over 33,000 pounds; note that trucks with a gross vehicle weight rating of 14,001 to 33,000 pounds are classified as medium heavy duty). To be conservative, separate CalEEMod analyses were prepared for the operational analysis. One CalEEMod run evaluated operational and vehicle trip emissions, and another CalEEMod run evaluated truck trip emissions. In addition, the equipment listed in **Table 4.1.H** was included in CalEEMod, assuming usage during the Landfill's operational hours of 7:00 a.m. to 5:00 p.m., Monday through Saturday, approximately 307 days per year,[4] except for the backhoe loader, integrated tool carrier, skidsteer loader, telehandler, and automatic tarping machine, which would operate for 5 hours per day. As stated above, OCWR is currently incorporating Tier 4 Final engines into its fleet and plans to utilize only Tier 4 engines by 2026. However, to be conservative, the engine tier levels identified in **Table 4.1.H** were assumed in this analysis.

CalEEMod output sheets are included in **Appendix B-1**.

4.1.5.2 Health Risk Assessment

For the purposes of an HRA, emissions are analyzed for acute health impacts, chronic, and carcinogenic health impacts. A multi-pathway assessment has been conducted to evaluate the Proposed Project's emissions during operation following the modeling techniques recommended in the OEHHA's *Air Toxic Hot Spots Program Risk Assessment Guidelines* (CalEPA OEHHA 2015). The HRA analysis is a cumulative assessment that considers the Proposed Project's emissions as well as existing operations. The analysis herein has been conducted in accordance with SCAQMD requirements for HRAs.

The HRA analysis was conducted using three models:

1. EMFAC2021 for on-road vehicle emissions factors and percentages of fuel type within the overall vehicle fleet;

2. EPA AERMOD air dispersion model to determine how the TACs would move through the atmosphere after release from sources both on site and on surrounding roadways; and

[4] The number of annual operational days varies from year to year based on the number of Sundays and holidays.

3. CARB's HARP2 model to translate the pollutant concentrations from AERMOD into individual health risks at any sensitive receptor locations surrounding the Landfill.

The OEHHA has determined that long-term exposure to diesel exhaust particulates (from diesel engines) poses the highest cancer risk of any TAC it has evaluated. Exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, DPM made people with allergies more susceptible to the materials to which they were allergic, such as dust and pollen. Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. For risk assessment procedures, the OEHHA specifies that the surrogate for whole diesel exhaust is DPM. The HRA analyses used PM_{10} emissions to represent DPM emissions, consistent with OEHHA guidance.

The conservative nature of this analysis is due primarily to the following three factors:

1. The CARB-adopted diesel exhaust unit risk factor (URF) of 300 in 1 million micrograms per cubic meter ($\mu g/m^3$) is based on the upper 95^{th} percentile of estimated risk for each of the epidemiological studies used to develop the URF. Therefore, the risk factor is already representative of the conservative risk posed by DPM.

2. The risk estimates assume sensitive receptors would be subject to DPM 24 hours per day, 350 days per year. As a conservative measure, SCAQMD does not recognize indoor adjustments for residents. However, typical people spend the majority of their time indoors versus remaining outdoors 24 hours per day, 350 days per year.

3. The exposure to DPM is assumed to be constant for the given period analyzed (i.e., 30 years for the residential receptors and 25 years for the worker receptors). However, emissions from DPM are expected to substantially decrease in the future with the implementation of standard regulatory requirements and technological advancement to reduce DPM.

Emissions Sources. To determine the potential health risk to people living and working near the Landfill associated with the exhaust of diesel-powered trucks and equipment, an operational HRA was conducted for the Proposed Project.

The first step of an HRA is to characterize the project-related emissions of TACs. The Proposed Project would utilize diesel-powered heavy-duty equipment (listed in **Table 4.1.H** above) and would generate 3,041 ADT, including 2,971 truck trips and 70 passenger vehicle trips. The trucks would access the Landfill via Avenida La Pata. Avenida La Pata has adequate capacity to accommodate the increase in vehicle and truck trips as a result of the increase in maximum daily operations and off-site queuing of trucks is not anticipated. While the TAC emissions from gasoline-powered vehicles have a small health effect compared to DPM, this HRA includes both gasoline- and diesel-powered vehicle emissions. For the diesel exhaust emissions, it is sufficient to only consider the DPM (PM_{10} and $PM_{2.5}$) portions of the exhaust; all the TACs for the gasoline exhaust emissions are contained in the ROG emissions. Using data from CARB, the emission rates of the TAC components are derived from the total ROG emissions. These data are included in **Appendix B-1.**

Landfill trucks would operate in two modes: stationary idling and moving on and off the Landfill site. The emissions from trucks while idling result in a much higher concentration of TACs at nearby sensitive receptors compared to the emissions from moving trucks. This is due to the dispersion of emissions that occurs with distance and with travel of the vehicle. Idling emission factors included in the HRA modeling includes idling events, which were assumed to be 15 minutes per truck. This is due to the dispersion of emissions that occurs with distance and with travel of the vehicle. For this HRA, the truck travel emissions were modeled as a series of volume sources within the Landfill and along Avenida La Pata going north and south. The analysis assumed vehicles traveling on the Landfill site would maneuver slowly, averaging approximately 5–15 mph, and that vehicles traveling on roadways would average 5–55 mph.

The idling emissions of trucks operating on the Landfill were modeled as point sources. EMFAC2021 was used to determine the emissions factors of idling and operating diesel trucks to determine the total emissions of DPM. While it is expected that the truck emissions rate would continue to reduce over time due to increasingly stringent standards, an HRA only allows for a single emission rate to represent the entire 30-year exposure period. The use of emissions factors for the year 2024 was used as a conservative estimate of emissions, although the increase in tonnage would be gradual.

American Meteorological Society/Environmental Protection Agency Regulatory Model Dispersion Modeling. In order to assess the dispersion of emissions associated with the Proposed Project, air dispersion modeling was performed using the latest version of AERMOD (version 23120, 2023). The model is approved by the EPA when estimating the air quality impacts associated with point and fugitive sources in simple and complex terrain. The model was used to calculate the annual average pollutant concentrations associated with each emitting source. Inputs for each emitting source were based on the characterizations described above. Details of these inputs are included in **Appendix B-1**.

For the volume sources used to represent on-road mobile source activity, vertical (sigma z) dispersion parameters were developed as described in the SCAQMD's modeling guidance for trucks. For the truck unloading locations, individual point sources represent the trucks idling at each loading dock. For all the idling sources, the release parameters were set to the SCAQMD default parameters.

The model requires additional input parameters, including local meteorology. Due to the model's sensitivity to individual parameters (e.g., wind speed, temperature, and direction), the EPA recommends meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. As such, 5 years of meteorological data from SCAQMD's Mission Viejo Monitoring Station (the nearest available station) was used to represent local weather conditions and prevailing winds. **Figure 4.1.1** above shows the graphical representation of the wind patterns.

Hot Spot Analysis and Reporting Program Modeling. CARB's HARP2 model is a tool that assists with the programmatic requirements of the Air Toxics "Hot Spots" Program (AB 2588). HARP2 was used to translate the TAC concentrations from AERMOD into long-term carcinogenic and chronic, and short-term acute health risk levels following the guidance in the SCAQMD and OEHHA risk assessment guidelines. These guidelines specify a minimum set of TAC pathways and HARP2 modeling options for the carcinogenic assessment. To estimate chronic noncancer risks at residential receptors, the

"Risk Management Policy (RMP)-Derived Method" risk-calculation option was used. Following the OEHHA guidance, an 8-hour chronic noncancer risk was calculated for residential receptors because the project would operate more than 8 hours per day and 5 days per week.

The dose-response relationship for a specific pollutant describes the association between exposure and the observed response (health effect). In other words, the relationship estimates how different levels of exposure to a pollutant change the likelihood and severity of health effects. The dose-response relationship (the response occurring with increasing doses) varies with each pollutant, individual sensitivity, and type of health effect. Combining the results of the emission characterization and dispersion modeling described above with the dose-response assessment gives an estimate of the increased health risk for an individual exposed to the maximum predicted long-term concentrations of TACs.

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were default rates as presented in the OEHHA guidance document entitled *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (CalEPA OEHHA 2015) and guidance from SCAQMD.

4.1.6 Thresholds of Significance

The significance criteria used to evaluate the Proposed Project's impacts to air quality are based on Appendix G of the *State CEQA Guidelines* and the County's *2020 Local CEQA Procedures Manual* (November 2020). A significant impact related to air quality would occur if a project would:

Threshold 4.1.1: Conflict with or obstruct implementation of the applicable air quality plan;

Threshold 4.1.2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

Threshold 4.1.3: Expose sensitive receptors to substantial pollutant concentrations; or

Threshold 4.1.4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the *State CEQA Guidelines* indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether a Proposed Project would have a significant impact on air quality. The SCAQMD has established Air Quality Significance Thresholds, as revised in April 2019, that set forth quantitative emission significance thresholds below which a Project would not have a significant impact on ambient air quality (SCAQMD 2023c). The quantitative air quality analysis provided herein applies the SCAQMD thresholds identified in **Table 4.1.I** to determine the potential for the Proposed Project to result in a significant impact under CEQA.

Table 4.1.I: South Coast Air Quality Management District Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NO_X	100 lbs/day	55 lbs/day
VOCs	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants and Odor Thresholds		
TACs	Maximum Incremental Cancer Risk ≥10 in 1 million. Cancer Burden >0.5 excess cancer cases (in areas ≥1 in 1 million). Chronic and Acute Hazard Index ≥1.0 (project increment).	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHGs	10,000 MT CO_2e/yr for industrial facilities	
Ambient Air Quality for Criteria Pollutants		
NO_2 1-hour average Annual average	The SCAQMD is in attainment; a project is significant if it causes or contributes to an exceedance of the following attainment standards: ● 0.18 ppm (State) ● 0.03 ppm (State) and 0.0534 ppm (federal)	
PM_{10} 24-hour average Annual average	 10.4 µg/m³ (construction) and 2.5 µg/m³ (operation) 1.0 µg/m³	
$PM_{2.5}$ 24-hour average	 10.4 µg/m³ (construction) and 2.5 µg/m³ (operation)	
SO_2 1-hour average 24-hour average	 0.25 ppm (State) and 0.075 ppm (federal—99th percentile) 0.04 ppm (State)	
Sulfate 24-hour average	 25 µg/m³ (State)	
CO 1-hour average 8-hour average	The SCAQMD is in attainment; a project is significant if it causes or contributes to an exceedance of the following attainment standards: ● 20 ppm (State) and 35 ppm (federal) ● 9.0 ppm (State/federal)	
Lead 30-day average Rolling 3-month average	 1.5 µg/m³ (State) 0.15 µg/m³ (federal)	

Source: Air Quality Significance Thresholds (SCAQMD 2023a).
µg/m³ = micrograms per cubic meter
CO = carbon monoxide
GHGs = greenhouse gases
lbs/day = pounds per day
MT CO_2e/yr = metric tons of carbon dioxide equivalent per year
NO_2 = nitrogen dioxide
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppm = parts per million
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide
SO_X = sulfur oxides
TACs = toxic air contaminants
VOCs = volatile organic compounds

4.1.7 Project Impacts

Threshold 4.1.1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Potentially Significant Impact. As previously discussed, the Landfill is within the Basin under the jurisdiction of the SCAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. The SCAQMD has established criteria for determining consistency with the AQMP, currently the 2022 AQMP, in the SCAQMD *CEQA Air Quality Handbook*. The criteria are as follows:

- **Consistency Criterion No. 1:** The Proposed Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP.

    - **Consistency Assessment for Criterion No. 1.** This criterion evaluates the Proposed Project's potential impacts with regards to whether the project would result in a cumulatively considerable net increase of a nonattainment criteria pollutant. The SCAQMD mass daily thresholds are applied to this criterion in order to evaluate the potential for a project to result in a cumulatively considerable net increase of a nonattainment criteria pollutant (**Table 4.1.I**).

As demonstrated in **Table 4.1.J** and **Table 4.1.K** (provided later in this section), even with mitigation, the Proposed Project would result in operational NO_X emissions that would exceed the SCAQMD mass daily CEQA thresholds. Additionally, the combined emissions associated with the Proposed Project and the operation and development of the Landfill consistent with the 2001 GDP, as amended, would exceed the SCAQMD's operational CEQA significance thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. As such, the Proposed Project would result in worsening air quality emissions beyond those identified in the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR. Therefore, the Proposed Project would not be consistent with Consistency Criterion No. 1 of the SCAQMD *CEQA Air Quality Handbook*.

- **Consistency Criterion No. 2:** The Proposed Project would not exceed the assumptions in the AQMP or increments based on the year of project build out and phase.

    - **Consistency Assessment for Criterion No. 2.** The Landfill is a Class III municipal solid waste landfill located that has been in continuous operation since 1976. The 2001 GDP as analyzed in prior CEQA documentation is consistent with the growth assumptions for the County use of the Landfill in accordance with the Orange County General Plan and other regional planning documents including SCAQMD's AQMP. The Proposed Project would be consistent with the development concept and goals, objectives, and policies under Chapter 5 – Public Services and Facilities Element of the Orange County General Plan. The County's General Plan is consistent with the SCAG Regional Comprehensive Plan Guidelines and the SCAQMD AQMP. The SCAQMD AQMP presents the strategies and control measures needed to continue to improve air quality in the Basin, including Orange County. AQMP measures

represent actions implemented as part of the Proposed Project to control LFG, equipment exhaust, and/or fugitive dust emissions.

- Heavy-duty diesel regulations were updated in the AQMP to represent the effectiveness of the control equipment used to meet more stringent emission standards.
- Fugitive dust from vehicle travel on paved roads would be controlled through the use of a gravel track-out apron and three times daily cleaning of the paved roads.
- Fugitive dust from vehicle travel on unpaved roads would be controlled through watering two times daily, applying dust palliatives at least twice a year, paving as much as possible, and limiting the maximum vehicle speed to 15 mph.
- Fugitive dust from soil disturbance would be suppressed with hourly watering and application of dust suppressants, which would reduce particulate matter emissions by up to 90 percent.

OCWR has implemented these SCAQMD measures at the Landfill. The Proposed Project would not change the intended on-site uses. Furthermore, the Proposed Project would reduce the need to develop more landfills that may be located farther from the source of solid waste generation if the waste stream from the upcoming closure of the Olinda Alpha Landfill could not be accommodated at the Prima Deshecha Landfill. Therefore, the Proposed Project would not conflict with or obstruct the implementation of the applicable air quality plan.

Impact Conclusions. The First Supplemental EIR to the 2001 GDP EIR determined that the implementation of the Second Amendment to the 2001 GDP EIR would not result in a substantial change in the previous analysis provided in the 2001 GDP EIR. While the 2001 GDP EIR did not specifically analyze the potential for the GDP to conflict with or obstruct implementation of an applicable air quality plan, it did determine an impact would be significant if it exceeded the SCAQMD thresholds. The Second Supplemental EIR to the 2001 GDP EIR found that the Zone 4 construction projects also would not result in new or significantly worsening air quality emissions.

Based on the discussion above, the Proposed Project would have the potential to conflict or obstruct implementation of applicable air quality plans under Indicator 1 because the Proposed Project would result in significant and unavoidable long-term operational pollutant emissions, as shown in **Table 4.1.J** and **Table 4.1.K** (provided later in this section under Threshold 4.1.2). As discussed in Threshold 4.1.2 below, although there is no feasible mitigation to reduce operational pollutant emissions to a less than significant level, all mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project. Even with the implementation of previously adopted mitigation measures and additional Mitigation Measure 4.1-1, the Proposed Project would still exceed the SCAQMD regional significance thresholds (see **Table 4.1.K**, which is provided under Threshold 4.1.2). Therefore, operational activities would remain significant and unavoidable, and impacts would be an increase from those identified in prior CEQA documentation for the Landfill.

Threshold 4.1.2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Potentially Significant Impact. The Basin is designated as nonattainment for O_3 and $PM_{2.5}$ for federal standards and nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary. As discussed above, the Proposed Project would not require any construction activities; therefore, the following analysis assesses the potential project-level impacts associated with operation of the Proposed Project.

The Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal.

Long-term air pollutant emission impacts are those typically associated with mobile sources (e.g., vehicle and truck trips), energy sources (e.g., natural gas usage), area sources (e.g., architectural coatings and the use of consumer products and landscape maintenance equipment), and off-road sources (e.g., use of off-road equipment).

As discussed in Section 4.1.5, Methodology, above, increasing the maximum amount of waste would result in an increase in vehicle and truck trips and equipment operations, which would have the potential to adversely affect air quality through the generation of fugitive dust, odors, and/or criteria pollutants and TACs. Indirect emissions of criteria pollutants with regional impacts would occur from vehicle trips associated with solid waste transportation to the Landfill and employee vehicle emissions.

Mobile source emissions include VOC and NO_X emissions that contribute to the formation of ozone. Additionally, PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways.

Energy source emissions result from activities in buildings for which natural gas is used. The quantity of emissions is the product of usage intensity (i.e., the amount of natural gas) and the emission factor of the fuel source. Operation of the Proposed Project would not include any buildings or consume natural gas; therefore, the Proposed Project would not increase energy source emissions.

Typically, area source emissions consist of direct sources of air emissions located at a project site, including architectural coatings and the use of consumer products and landscape maintenance equipment. The Proposed Project would result in minimal area source emissions associated with the use of consumer products and landscape maintenance equipment.

Emissions from off-road equipment are also anticipated and would include CO, NO_X, VOCs, directly emitted $PM_{2.5}$ or PM_{10}, and TACs, such as DPM.

CalEEMod was used to calculate the long-term operational emissions associated with the Proposed Project. Trip generation rates used in CalEEMod for the Proposed Project were based on the Proposed Project's trip generation of 3,041 ADT, including 2,971 truck trips and 70 passenger vehicle trips. This analysis assumes that the truck trips would travel approximately 40 miles per trip (SCAQMD n.d.-a.). To be conservative, separate CalEEMod analyses were prepared for the operational analysis. One CalEEMod run evaluated operational and vehicle trip emissions, and another CalEEMod run evaluated truck trip emissions. In addition, the equipment listed in **Table 4.1.H** was included in CalEEMod, assuming usage during the Landfill's operational hours of 7:00 a.m. to 5:00 p.m., Monday through Saturday, approximately 307 days[5] per year, except for the backhoe loader, integrated tool carrier, skidsteer loader, telehandler, and automatic tarping machine which would operate for 5 hours per day. The maximum daily emissions associated with the Proposed Project operational activities are identified in **Table 4.1.J** for VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. CalEEMod output sheets are included in **Appendix B-1**.

Table 4.1.J: Unmitigated Maximum Daily Operational Emissions (lbs/day)

Emission Source	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Source Emissions – Employee Vehicle Trips	0.2	0.2	2.5	<0.1	0.6	0.2
Mobile Source Emissions – Heavy Heavy-Duty Truck Trips	6.0	500.0	198.2	3.8	115.3	35.3
Area Source Emissions	4.6	0.0	0.0	0.0	0.0	0.0
Energy Source Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Off-Road Equipment Source Emissions	5.2	78.1	205.3	0.4	3.0	2.7
Total Project Operational Emissions	**16.0**	**578.3**	**406.0**	**4.2**	**118.9**	**38.2**
Significance Threshold	55.0	55.0	550.0	150.0	150.0	55.0
Above Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (March 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SO_X = sulfur oxides
VOCs = volatile organic compounds

The results in **Table 4.1.J** indicate the Proposed Project's operational emissions would not exceed the SCAQMD's significance criteria for daily VOCs, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions; however, the Proposed Project's NO_X emissions would exceed the SCAQMD's thresholds.

[5] The number of annual operational days varies from year to year based on the number of Sundays and holidays.

As described above, the 2001 GDP EIR concluded that air emissions generated by the Landfill component of the 2001 GDP exceeded SCAQMD thresholds of significance, and included several mitigation measures to reduce potential air quality impacts. All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project. In addition, implementation of additional Mitigation Measure 4.1-1 would require the use of all Tier 4 Final equipment. **Table 4.1.K** identifies the results of the analysis with implementation of additional Mitigation Measure 4.1-1. As shown in **Table 4.1.K**, the mitigated NO_X emissions would still exceed the SCAQMD's thresholds.

Table 4.1.K: Mitigated Maximum Daily Operational Emissions (lbs/day)

Emission Source	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Source Emissions – Employee Vehicle Trips	0.2	0.2	2.5	<0.1	0.6	0.2
Mobile Source Emissions – Heavy Heavy-Duty Truck Trips	6.0	500.0	198.2	3.8	115.3	35.3
Area Source Emissions	4.6	0.0	0.0	0.0	0.0	0.0
Energy Source Emissions	0.0	0.0	0.0	0.0	0.0	0.0
Off-Road Equipment Source Emissions	3.9	22.9	205.1	0.4	0.8	0.8
Total Project Operational Emissions	**14.7**	**523.1**	**405.8**	**4.2**	**116.7**	**36.3**
Significance Threshold	55.0	55.0	550.0	150.0	150.0	55.0
Above Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (July 2024).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SO_X = sulfur oxides
VOCs = volatile organic compounds

Table 4.1.L presents the previously identified maximum daily emissions for the 2001 GDP in the previous 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR.

The 2001 GDP EIR determined that on-site equipment mobile source emissions would exceed the SCAQMD's significance threshold for NO_X. The First Supplemental EIR to the 2001 GDP EIR concluded that the Second Amendment to the 2001 GDP would result in a significant and unavoidable impact related to an exceedance of SCAQMD's threshold for NO_X emissions. The Second Supplemental EIR to the 2001 GDP EIR found that the Zone 4 construction projects would not result in new or significantly worsening air quality impacts.

Table 4.1.L: Previously Approved Project Emissions (lbs/day)

Emission Source	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile Sources	37.0	404.0	310.0	39.0	34.0	–
LFG Combustion Energy Recovery Facility (ERF)[1]	173.0	341.0	979.0	53.8	325.0	–
Fugitive Combustion (Flare)[1]	13.0	99.0	82.0	44.3	22.0	–
Fugitive LPG Uncaptured LFG Surface Emissions	2,803.0	–	–	–	–	–
Total	**3,026.0**	**844.0**	**1,371.0**	**137.1**	**381.0**	**0.0**
Approved Zone 4 Construction Projects Emissions	958.3	197.3	373.9	12.9	69.7	29.0
Total	**3,984.3**	**1,041.3**	**1,744.9**	**15.0**	**450.7**	**29.0**
Significance Threshold	55.0	55.0	550.0	150.0	150.0	55.0
Above Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**No**

Source 1: Final EIR No. 575 for the Prima Deshecha Landfill General Development Plan (SCH No. 199041035) (OCWR 2001).
Source 2: Final Supplemental EIR 597 for the Second Amendment to the Prima Deshecha Landfill General Development Plan (SCH #1999041035) (OCWR 2006).
Source 3: Addendum No. 12 to Final EIR 575/Addendum No. 3 to Final SEIR 597 for the Prima Deshecha Landfill General Development Plan (SCH #1999041035) (OCWR 2021b).
Source 4: Supplemental EIR No. 2 to Final EIR 575 for the Prima Deshecha General Development Plan (SCH#1999041035) (OCWR 2021d).

[1] Addendum No. 12 to Final EIR No. 575 provided updated total SO_X emissions associated with both the LFG Combustion ERF and Fugitive Combustion (Flare). This analysis scaled the total 98.1 lbs/day of SO_X based on the previous SO_X emissions identified in the GDP FEIR No. 575.

CO = carbon monoxide
FEIR = Final Environmental Impact Report
lbs/day = pounds per day
NO_X = nitrogen oxides
OCWR = OC Waste & Recycling
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCH = State Clearinghouse
SEIR = Supplemental Environmental Impact Report
SO_X = sulfur oxides
VOCs = volatile organic compounds

Table 4.1.M presents the maximum daily emissions from the Proposed Project with the 2001 GDP emissions.

Table 4.1.M: Maximum Daily Project Operation Combined with Previously Approved Project Emissions (lbs/day)

Emission Source	VOCs	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$[1]
Proposed Project Emissions	**14.7**	**523.1**	**405.8**	**4.2**	**116.7**	**36.3**
Emissions Associated with Current Operation and Development of the Landfill as Permitted[2]	3,811.3	700.3	765.9	96.2	125.7	56.9*
Total Project Emissions	**3,826.0**	**1,223.4**	**1,171.7**	**100.4**	**242.4**	**93.2**
Significance Threshold	55.0	55.0	550.0	150.0	150.0	55.0
Total Project Above Threshold?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: Compiled by LSA (March 2024).

[1] Estimated $PM_{2.5}$ emissions for the Emissions Associated with Current Operation and Development of the Landfill as Permitted were determined by using the $PM_{10}/PM_{2.5}$ conversion rate for diesel particulate matter.

[2] LFG Combustion Energy Recovery Facility (ERF) is no longer occurring at the Landfill; therefore, those emissions have been subtracted from the total emissions associated with current operation and development of the Landfill.

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SO_X = sulfur oxides
VOCs = volatile organic compounds

As shown in **Table 4.1.M**, the combined emissions associated with the Proposed Project and the operation and development of the Landfill consistent with the 2001 GDP, as amended, would exceed the SCAQMD's thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. As shown in **Table 4.1.K**, the majority of the emissions from the Proposed Project are associated with mobile sources.

Emissions of motor vehicles and heavy duty trucks are controlled by State and federal standards, and the Proposed Project has no control over these standards. In addition, because the Landfill would accept waste from a variety of haulers, OCWR would not be able to require truck fleets to incorporate zero or near-zero emissions technologies. However, heavy duty truck fleets would be required by law to meet applicable CARB regulations, potentially including the CARB's Statewide Truck and Bus regulations, as well as the Advanced Clean Truck and Advanced Clean Fleets regulations, which have a goal of achieving a zero-emission truck and bus fleet by 2045 and would substantially reduce mobile source emissions over the life of the project.

Additionally, as discussed in Chapter 3.0, Project Description, the Proposed Project includes increasing the daily permitted capacity of the Landfill to allow for this diversion of waste once the Olinda Alpha Landfill closes. Although these trips largely represent rerouted waste from the Olinda Alpha Landfill, reducing the number of active landfills in the County would inevitably result in some trips requiring a greater travel distance. It is anticipated that contracted waste haulers will work with OCWR to identify efficient ways to reroute the Olinda Alpha Landfill waste stream that minimize overall miles traveled. Because the number and/or length of trips would increase, these are considered new emissions as part of the Proposed Project.

As discussed above, long-term Landfill operational emissions associated with the Proposed Project would exceed the SCAQMD threshold for NO_X; all other criteria air pollutants, including VOCs, CO, SO_X, PM_{10}, and $PM_{2.5}$ long-term landfill operational emissions would not exceed SCAQMD thresholds.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. The SCAQMD's numeric regional mass daily emissions thresholds are based in part on Section 180 (e) of the CAA. The numeric regional mass daily emissions thresholds have not changed since their adoption as part of SCAQMD's *CEQA Air Quality Handbook* published in 1993 (over 20 years ago). The numeric regional mass daily emission thresholds are also intended to provide a means of consistency in significance determination within the environmental review process.

Notwithstanding, simply exceeding the SCAQMD's numeric regional mass daily emissions thresholds does not constitute a particular health impact to an individual nearby. The reason for this is that the mass daily emissions thresholds are represented in pounds per day emitted into the air, whereas health effects are determined based on the concentration of a pollutant in the air at a particular location (e.g., ppm by volume of air or $\mu g/m^3$ of air). CAAQS and NAAQS were developed to protect the most susceptible population groups from adverse health effects and were established in terms of ppm or $\mu g/m^3$ for the applicable emissions.

As noted in the Brief of Amicus Curiae (SCAQMD 2015a), the SCAQMD has acknowledged that for criteria pollutants, it would be extremely difficult, if not impossible, to quantify health impacts for various reasons, including modeling limitations as well as where in the atmosphere air pollutants

interact and form. The SCAQMD Brief of Amicus Curiae is incorporated by reference into this Subsequent EIR, including all references therein.

Additionally, the SCAQMD acknowledges that health effects quantification from O_3, as an example, is correlated with the increases in ambient levels of O_3 in the air (concentration) that an individual person breathes. The SCAQMD goes on to state that it would take a large amount of additional emissions to result in a modeled increase in ambient O_3 levels over the entire region. The SCAQMD states that based on its own modeling in its 2012 AQMP, a reduction of 432 tons (864,000 pounds) per day of NO_X and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce O_3 levels at the highest monitored site by only 9 parts per billion (ppb). As such, the SCAQMD concludes that it is not currently possible to accurately quantify O_3-related health impacts caused by NO_X or VOC emissions from relatively small projects (defined as projects that are not regional in scope) due to photochemistry and regional model limitations (see page 11 of the SCAQMD Brief of Amicus Curiae).

To underscore this point, the SCAQMD goes on to state that it has only been able to correlate potential health outcomes for very large emissions sources. As part of its rulemaking activity, specifically 6,620 pounds per day (lbs/day) of NO_X and 89,180 lbs/day of VOCs were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3.

The Proposed Project would not generate 6,620 lbs/day of NO_X or 89,190 lbs/day of VOC emissions. As shown previously in **Table 4.1.K**, with implementation of additional Mitigation Measure 4.1-1, the Proposed Project would generate a maximum of 523.1 lbs/day of NO_X (7.9 percent of 6,620 lbs/day). The Proposed Project would also generate a maximum of 14.7 lbs/day of VOC emissions (less than 0.1 percent of 89,190 lbs/day), respectively. Therefore, the Proposed Project's emissions are not sufficiently high to use a regional modeling program to correlate health effects on a Basin-wide level.

As shown in **Table 4.1.K**, even with mitigation, the Proposed Project's NO_X emissions would exceed the SCAQMD's thresholds. Additionally, as shown in **Table 4.1.M**, the combined emissions associated with the Proposed Project and the operation and development of the Landfill consistent with the 2001 GDP, as amended, would exceed the SCAQMD's thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. However, current scientific, technological, and modeling limitations prevent the relation of expected adverse air quality impacts to likely health consequences.

Impact Conclusions. As demonstrated in **Table 4.1.J**, the Proposed Project's NO_X emissions would exceed the SCAQMD's CEQA threshold for operations. Additionally, as shown in **Table 4.1.M**, the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. As such, the Proposed Project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state AAQS. Further, as compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would result in an increase in significant impacts related to a cumulatively considerable net increase of any criteria pollutants.

All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, including 2001 GDP EIR

Mitigation Measures 4.9-1 through 4.9-10 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. The 2001 GDP EIR mitigation measures require that Landfill personnel and inspectors refuse extremely odorous or dusty loads, conduct odor surveys, cover the active face of the Landfill to reduce nuisance effects on adjacent uses, monitor and inspect landfill areas in Zones 1 and 4 with LFG systems to maximize the collection of LFG. Additionally, the measures require Landfill personnel and/or inspectors to incorporate dust control systems or vegetative covers, periodically spray exposed areas with water, restrict vehicular travel on unpaved roads, spray unpaved roads with a hydromulch solution or synthetic binder, and use the on-site water trucks to spray water on graded areas or areas where the vegetation has been removed or severely disturbed as a result of landfilling activities. The identified measures would reduce operational emissions associated with Landfill activities. In addition, the First Supplemental EIR to the 2001 GDP EIR mitigation measures require that the Landfill complies with SCAQMD rules and regulations and implement measures to reduce equipment emissions. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.1.10.2, Previously Adopted Mitigation.

In addition, implementation of additional Mitigation Measure 4.1-1 would be required to require the use of all Tier 4 Final equipment. **Table 4.1.K** identifies the results of the analysis with implementation of additional Mitigation Measure 4.1-1. As shown in **Table 4.1.K**, the mitigated NO_X emissions would still exceed the SCAQMD's thresholds. As such, while these mitigation measures would reduce criteria air pollutant emissions generated during operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD regional significance thresholds.

Threshold 4.1.3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact with Mitigation Incorporated. The following discusses the potential for the Proposed Project to result in impacts relating to CO hot spots, TACs (health risk), and health effects associated with criteria air pollutants.

Sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large, including residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). As shown in **Table 4.1.E**, the closest off-site sensitive receptors, given the prevailing wind direction from the south-southwest direction to the Landfill, include residences located approximately 550 feet north of Zone 1 and 1,775 feet west of Zone 4. In addition, San Juan Hills High School is located approximately 3,450 feet north of Zone 1 and 3,230 feet northwest of Zone 4.

Carbon Monoxide Hot Spots. Mobile source impacts occur on two scales. Regionally, project-related travel would add to regional trip generation and would increase the VMT, within the Basin. Locally, project-generated traffic would be added to the local roadway system near the Landfill. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO hot spots in the area immediately around points of congested traffic. The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated

under peak traffic conditions represent a worst-case analysis. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hot spots in the Basin is steadily decreasing.

At the time that the SCAQMD *CEQA Air Quality Handbook* (1993) was published, the Basin was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAQMD was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the Basin due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities.

CO concentrations at study area intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least more than 100,000 vehicles per day. As determined in the Traffic Volume and VMT Study for the project (**Appendix E**), the Proposed Project would generate 3,041 ADT, including 2,971 truck trips and 70 passenger vehicle trips. Therefore, the Proposed Project would not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day, a CO hot spot is not anticipated to occur, and associated impacts would be less than significant. As such, the Proposed Project would not result in any new or increased significant impacts related to CO hot spots.

Toxic Air Contaminants (Health Risk Assessment). In addition to impacts from criteria pollutants, certain projects may include emissions of pollutants identified by the State and federal government as TACs or hazardous air pollutants. State law has established the framework for California's TAC identification and control, which is generally more stringent than federal regulations, and is aimed at TACs that are a problem in California. The State has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and is adopting appropriate control measures for sources of these TACs.

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over 9-, 30-, and 70-year exposure periods would contract cancer based on the use of standard OEHHA risk-assessment methodology (CalEPA OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that could potentially be emitted during project activities would be DPM emitted from heavy-duty equipment and heavy-duty trucks. Heavy-duty equipment and diesel trucks are subject to CARB Airborne Toxic Control Measures to reduce DPM emissions. According to the OEHHA, HRAs should be based on a 30-year exposure duration based on the typical residency period; however, such assessments should be limited to the period/duration of activities associated with the project (CalEPA OEHHA 2015). Additionally, as described above, the Landfill maintains SCAQMD operating permits for the LFG collection system, flares, fuel storage and dispensing, and a diesel-fired electrical generator. The Landfill is classified as a major stationary source of emissions (major source) and maintains a Title V operating permit for major sources under the federal Title V Permitting Program. Existing permitted equipment and emissions, as reported in the facility AER, are presented in **Tables 4.1.F** and **4.1.G** above. As such, since the existing equipment is subject to Title V permitting, this analysis assumes that the permitted maximum tonnage allowed under existing permit would cover the Proposed Project.

An HRA for the Proposed Project was performed to evaluate the risk from DPM on existing sensitive receptors from increased disposal activities in Zone 1 and Zone 4. Analyzing impacts to receptors close to sources of TACs is important in determining cancer and non-cancer health risk impacts. Receptors were placed at the nearest sensitive receptor locations (indicated in purple), as shown in **Figure 4.1.3**, **Sensitive Receptor Grid.**

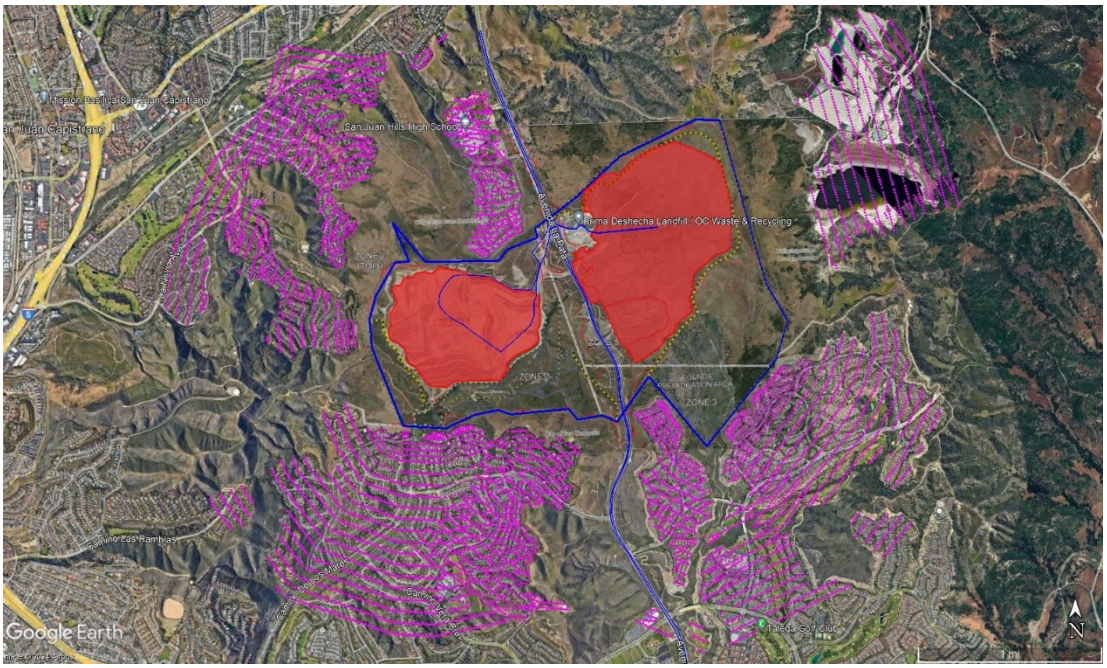


Figure 4.1.3: Sensitive Receptor Grid

To determine the potential health risk to people living and working near the Landfill associated with the exhaust of diesel-powered trucks and equipment, an operational HRA was conducted for the increase in waste hauling to the Landfill associated with the Proposed Project. The carcinogenic and chronic health risks from the Proposed Project are shown in **Table 4.1.N**. The residential risk incorporates both the risk for a child living in a nearby residence for 9 years (the standard period of time for child risk) and an adult living in a nearby residence for 30 years (considered a conservative period of time for an individual to live in any one residence).

Table 4.1.N: Maximum Long-Term Health Risk Impact from Project Operation

Location	Carcinogenic Inhalation Health Risk in 1 Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Residential Receptor Risk	7.99	0.003	<0.001
School Receptor Risk	1.98	0.001	<0.001
Worker Receptor Risk	0.14	<0.001	<0.001
SCAQMD Significance Threshold	**10.0 in 1 million**	**1.0**	**1.0**
Significant?	**No**	**No**	**No**

Source: Compiled by LSA (March 2024).
SCAQMD = South Coast Air Quality Management District

The HRA methodology was described in Section 4.1.5, and the modeling outputs are provided in **Appendix B-2** of this Subsequent EIR.

As shown in **Table 4.1.N**, the maximum cancer risk for the residential receptor maximally exposed individual (MEI) would be 7.99 in 1 million, less than the threshold of 10 in 1 million. The maximum cancer risk for the school receptor MEI would be 1.98 in 1 million and the maximum cancer risk for the worker receptor MEI would be 0.14 in 1 million. The total chronic hazard index would be 0.003 for the residential receptor MEI, 0.001 for the school receptor MEI, and less than 0.001 for the worker receptor MEI. In addition, the total acute hazard index would be less than 0.001, which would also not exceed the threshold of 1.0. As these results show, all health risk levels to nearby residents from operation-related emissions of TACs would be well below the SCAQMD's HRA thresholds. No significant health risk would occur from project operation emissions.

Impact Conclusions. As shown in **Table 4.1.N**, the Proposed Project would not result in a significant increased cancer risk to nearby residential receptors, school receptors, or worker receptors, and would not expose sensitive receptors to substantial pollutant concentrations. In addition, as described above, sensitive receptors would not be exposed to substantial pollutant concentrations. Therefore, as compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would not result in any new or increased significant impacts related to the exposure of sensitive receptors to substantial pollutant concentrations.

The Proposed Project would also not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day; therefore, a CO hot spot is not anticipated to occur and associated impacts would be less than significant. As such, the Proposed Project would not result in any new or increased significant impacts related to CO hot spots.

All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, including 2001 GDP EIR Mitigation Measures 4.9-1 through 4.9-10 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. The 2001 GDP EIR mitigation measures require that Landfill personnel and inspectors refuse extremely odorous or dusty loads, conduct odor surveys, cover the active face of the Landfill to reduce nuisance effects on adjacent uses, monitor and inspect landfill areas in Zones 1 and 4 with LFG systems to maximize the collection of LFG, incorporate dust control systems or vegetative covers, periodically spray exposed areas with water, restrict vehicular travel on unpaved roads, spray unpaved roads with a hydromulch solution or synthetic binder, and use the on-site water trucks to spray water on graded areas or areas where the vegetation has been removed or severely disturbed as a result of landfilling activities, which would reduce operational emissions associated with Landfill activities. In addition, the First Supplemental EIR to the 2001 GDP EIR mitigation measures require that the Landfill complies with SCAQMD rules and regulations and implement measures to reduce equipment emissions. The mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR are reiterated in Section 4.2.10.2, Previously Adopted Mitigation.

Threshold 4.1.4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying, cause distress among the public, and generate citizen complaints.

The SCAQMD has adopted Rule 402 Nuisance which states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

A Quantitative Odor Analysis (SCS Engineers 2024), which is included in **Appendix C**, was prepared for the Proposed Project to analyze significant nuisance odor impacts at nearby sensitive receptors for existing baseline conditions and post-project conditions. As part of the analysis, representative odor concentrations and associated flow rates were used to estimate the potential emissions of odor from Landfill operations. The AERMOD atmospheric dispersion model was then used to predict odor concentrations at sensitive receptor locations surrounding the Landfill for comparison to a significant risk threshold for nuisance odor.

Odor concentration is defined as the dilution of an odor sample with odor-free air, at which point only 50 percent of an odor panel (or population) will detect or recognize the odor (e.g., per ASTM 679-04 –Standard Practice for Determination of Odor and Taste Thresholds by a Forced-Choice Ascending Concentration Series Method of Limits). This point is expressed in units of dilutions-to-threshold (D/T). The odor threshold is equal to 1 D/T (i.e., volume of odorous air after dilution divided by volume before dilution equals one). Typically, odors become a nuisance at or above 7 D/T above background. Since SCAQMD Rule 402 Nuisance is subjective (i.e., qualitative), the Bay Area Air District (Air District) Regulation 7 nuisance odor standard of 4 D/T was selected as the significant risk threshold for sensitive receptors since Regulation 7 is one of the most restrictive odor regulations in the country using an objective (quantitative) odor concentration threshold.

Based upon the dispersion modeling analysis of representative odors, the peak 3-minute odor concentration at a sensitive receptor was 2.4 D/T for the post-project scenario (well below the significant risk threshold of 4 D/T). Therefore, it was concluded that the Proposed Project would not cause significant off-site nuisance odor impacts at nearby sensitive receptors. In addition, as was planned in the 2001 GDP and analyzed and approved in the Second Supplemental EIR to the 2001 GDP EIR, OCWR is actively expanding into Zone 4 of the Landfill property. Zone 4 is located east of Avenida La Pata, which gives OCWR the ability to conduct waste operations further away from the closest homes in Rancho San Juan/Whispering Hills during weather conditions that exacerbate odors. For example, the availability of Zone 4 makes it possible to split the waste stream entering the Landfill, directing public loads to Zone 1, while directing commercial loads, which are generally more

odorous, to Zone 4. The development and use of Zone 4 would coincide approximately with the implementation of the Proposed Project to increase the daily maximum tonnage of waste accepted at the Landfill.

Further, the Landfill has developed and implemented an Odor Control Management Plan, which is currently in place, that includes measures such as:

- Application of daily cover.
- LFG collection and control system.
- Odor neutralizing misting system located on the ridge separating Zone 1 from the Rancho San Juan/Whispering Hills residential area.
- Various portable misting systems.
- Biosolids and green waster are deposited when not raining on weekdays prior to 11:00 a.m.
- Berm between Landfill and Rancho San Juan/Whispering Hills community provides a buffer.
- Limit width of the two open working faces to the extent possible during odorous conditions.
- Reject odorous loads, or apply odor neutralizer and cover immediately.
- Monitoring weather reports and site conditions on an ongoing basis.
- Routing received complaints directly to all site staff for immediate response:
    - Observe the area of concern for smell and neighborhood conditions;
    - Inspect the active landfill for any unusual activities or conditions;
    - Confirm implementation of applicable minimization measures;
    - Review working face size, weather conditions, biosolids, and importation status; and
    - When possible, implement changes or remedial actions on the same day, such as covering certain parts of the working face with tarps, increasing the use of deodorizer sprays, or pausing biosolids receipt and disposal.

Therefore, the Proposed Project would not result in odors adversely affecting a substantial number of people and the Proposed Project would not result in any new or increased significant impacts related to odors.

Impact Conclusions. The Proposed Project would not result in odors adversely affecting a substantial number of people and no mitigation is required. As compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP

EIR, the Proposed Project would not result in any new or increased significant impacts related to odors.

All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, including 2001 GDP EIR Mitigation Measures 4.9-1 through 4.9-10 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. The 2001 GDP EIR mitigation measures require that Landfill personnel and inspectors refuse extremely odorous or dusty loads, conduct odor surveys, and cover the active face of the Landfill to reduce nuisance effects on adjacent uses, which would reduce odors. In addition, the First Supplemental EIR to the 2001 GDP EIR mitigation measures require that the Landfill complies with SCAQMD rules and regulations and implement measures to reduce equipment emissions, which would also help to reduce odors. The mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR are reiterated in Section 4.2.10.2, Previously Adopted Mitigation.

4.1.8 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. The cumulative study area analyzed for potential air quality impacts is the South Coast Air Basin. Each project in the Basin is required to comply with SCAQMD rules and regulations and is subject to independent review.

The Basin is currently designated as a nonattainment area for the federal O_3 standard and $PM_{2.5}$ standard and as a nonattainment area for the State O_3, PM_{10}, and $PM_{2.5}$ standard. Thus, the Basin has not met the federal and State standards for these air pollutants. Future development that may occur with implementation of the Proposed Project would contribute criteria pollutants to the area during Proposed Project construction and operation.

As discussed above, air pollution is inherently a cumulative impact measured across an air basin. The discussion under Threshold 4.1.2, above, includes an analysis of the Proposed Project's contribution to cumulative air impacts. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions.

Results shown in **Table 4.1.K** indicate the Proposed Project's operational emissions would not exceed the SCAQMD's significance criteria for daily VOCs, CO, SO_X, PM_{10}, or $PM_{2.5}$ emissions; however, the Proposed Project's NO_X emissions would exceed the SCAQMD's thresholds even with the implementation of additional Mitigation Measure 4.4-1. Additionally, as shown in **Table 4.1.M**, the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds for VOCs, NO_X, CO, PM_{10}, and $PM_{2.5}$. As described above, the 2001 GDP EIR concluded that air emissions generated by the Landfill component of the 2001 GDP exceeded SCAQMD thresholds of significance, and included several mitigation measures to reduce potential air quality impacts. As compared to the findings of

the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would result in an increase in significant criteria pollutant impacts. All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, including 2001 GDP EIR Mitigation Measures 4.9-1 through 4.9-10 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.1.10.2, Previously Adopted Mitigation. While these mitigation measures would reduce criteria air pollutant emissions generated during operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD regional significance thresholds. Therefore, operational activities would be considered significant and unavoidable at the cumulative level.

In addition, as demonstrated in the analysis, the health risk levels to nearby sensitive receptors from project-related increases in TAC emissions would be below the SCAQMD's HRA thresholds. Therefore, the Proposed Project would not result in any individual health risk in excess of the thresholds considered to be prudent risk management levels. Therefore, the Proposed Project would not result in new or significantly worsening cumulative air quality impacts on sensitive receptors.

4.1.9 Level of Significance Prior to Mitigation

As presented above, the Proposed Project would result in a significant impact as compared to the applicable air quality standards and would result in a worsening of impacts as compared to the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, and their addenda. All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project.

4.1.10 Regulatory Compliance Measures and Mitigation Measures

4.1.10.1 Regulatory Compliance Measures

The Proposed Project would be required to comply with the following SCAQMD Regulatory Compliance Measures. The County considers these mandatory; therefore, they are not considered mitigation.

Regulatory Compliance Measure AQ-1

South Coast Air Quality Management District (SCAQMD) Rule 402, Nuisance. This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural

operations necessary for the growing of crops or the raising of fowl or animals.

Regulatory Compliance Measure AQ-2

SCAQMD Rule 1150. The SCAQMD has adopted source-specific regulations to reduce and control fugitive emissions from landfills during excavation activities. SCAQMD Rule 1150, *Excavation of Landfill Sites*, states that excavation of an active or inactive landfill requires an Excavation Management Plan (Plan) approved by the SCAQMD Executive Officer. At a minimum, the Plan must describe the quantity and characteristics of the material to be excavated and transported, and identify mitigation measures to ensure that a public nuisance condition does not occur. Mitigation measures may include gas collection and disposal, baling, encapsulation, covering of the material, chemical neutralizing, or other actions approved by the Executive Officer (SCAQMD 1982).

Regulatory Compliance Measure AQ-3

SCAQMD Rule 1150.1. The SCAQMD has also adopted source-specific regulations to limit gaseous emissions from municipal solid waste (MSW) landfills to prevent public nuisance and public health impacts. SCAQMD Rule 1150.1, *Control of Gaseous Emissions from MSW Landfills*, requires active landfills to have a collection and control system designed to handle the maximum expected gas flow rate and minimize migration of subsurface gas. The regulation was updated in 2011 to incorporate the California Air Resources Board (CARB) regulation that controls methane emissions from MSW landfills. Rule 1150.1 requires all collected gas to be routed to a treatment system that processes the collected gas for subsequent sale or use. The system must either reduce non-methane organic compounds (NMOC) by at least 98 percent by weight, or reduce the outlet NMOC concentration to less than 20 parts per million by volume (ppmv), dry basis as hexane at 3 percent oxygen. In addition, the treatment system must achieve a methane emissions destruction efficiency of at least 99 percent, except for lean burn internal combustion engines, which must reduce outlet methane concentration to less than 3,000 ppm, dry

basis, corrected to 15 percent oxygen. The system must also prevent the concentration of total organic carbon (TOC), measured as methane (CH_4), from exceeding 5 percent by volume in subsurface refuse boundary sampling probes, 25 ppmv in samples taken on numbered 50,000-square-foot landfill grids, or 500 ppmv above background as determined by instantaneous monitoring at any location on the landfill (except at the outlet of any control device) (SCAQMD 2011).

4.1.10.2 Previously Adopted Mitigation

The following mitigation measures are currently in place for impacts associated with the landfill component of the 2001 GDP, as identified in the 2001 GDP EIR (numerical designations are from the 2001 GDP EIR) and the First Supplemental EIR to the 2001 GDP EIR. All mitigation commitments contained within the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR will apply to the Proposed Project.

Note: The numbering in this section corresponds with the numbering in the 2001 GDP EIR. Also, the Integrated Waste Management Department (IWMD) is now OCWR.

Previously Adopted Mitigation Measures (MM), 2001 GDP EIR.

MM 4.9-1 Landfill fee station personnel and/or landfill refuse inspectors shall reject extremely odorous loads for disposal in the landfill.

MM 4.9-2 The active face of the landfill shall be covered daily. If the active face is in close proximity and upwind of on-site recreation uses, masking or neutralization agents may be added to exposed refuse to reduce the odor nuisance effects on the adjacent recreation uses.

MM 4.9-3 The Integrated Waste Management District shall design, construct and operate new landfill areas in Zones 1 and 4 with landfill gas (LFG) systems to maximize the collection of LFG. The LFG systems will include continuous monitoring of the LFG collection system to maximize efficient collection of LFG generated in these areas.

MM 4.9-4 During landfill operations, the Integrated Waste Management Department (IWMD) shall continue regular visual inspections of the landfill cover and monitoring of LFG emissions throughout the entire refuse fill areas. The purpose of these inspections is to locate cracks or other defects or flaws in the landfill cover, which may allow LFG to escape. When such areas are identified, the IWMD will implement the appropriate corrective action as soon as feasible. These corrective actions may include application and compaction of additional cover material, adjustment of the existing LFG control system and/or installation of new LFG control facilities.

MM 4.9-5 During landfill operations, the IWMD shall conduct periodic odor surveys on the landfill site and at various points in the area surrounding the site. The IWMD shall conduct odor surveys if any odors from the landfill are detected off site and reported by nearby residents. When the source of these odors is identified, the IWMD will implement the appropriate corrective action as soon as feasible. These corrective actions may include application and compaction of additional cover material, use of masking or neutralizing agents, adjustment of the existing LFG control system and/or installation of new LFG control facilities.

MM 4.9-6 During landfill operations, the IWMD shall ensure that landfill operations areas that are to be left exposed temporarily, including top deck and excavation slopes, are sprayed periodically with water, as needed.

MM 4.9-7 On landfilled areas that are no longer in use, the IWMD will, as appropriate, incorporate dust control systems or vegetative covers, consistent with the Final Closure Plans and with IWMD's approved Rule 403 Compliance Plan for landfilling Zones 1 and 4.

MM 4.9-8 During landfill operations, the landfill fee station personnel and/or landfill refuse inspectors shall refrain from accepting dusty loads of refuse for disposal in either landfilling Zone 1 or 4. Alternatively, at the discretion of landfill personnel, dusty loads of refuse may be accepted for disposal, if they are sprayed with water prior to leaving the fee station and accessing the active face of the landfill.

MM 4.9-9a During landfill operations, the IWMD shall maintain water trucks on site to spray water on on-site unpaved roads as needed to minimize the generation of dust as vehicles travel on these roads, as per IWMD's approved Rule 403 Compliance Plan.

MM 4.9-9b During landfill operations, the IWMD shall, to the extent feasible while still maintaining appropriate landfill operations, restrict vehicular travel on unpaved roads on the site. In the event that unpaved roads must be used, the IWMD shall spray water on these roads as needed.

MM 4.9-9c As unpaved on-site roads are removed from active service, the IWMD will spray these areas with a hydromulch solution or synthetic binder.

MM 4.9-10 During landfill operations, the IWMD will use the on-site water trucks to spray water on graded areas or areas where the vegetation has been removed or severely disturbed as a result of landfilling activities, as per IWMD's approved Rule 403 Compliance Plan.

Adopted Mitigation Measures, First Supplemental EIR to the 2001 GDP EIR.

Note: The numbering in this section corresponds with the numbering in First Supplemental EIR to the 2001 GDP EIR. **Tables 5.4-3 through 5.4-7**, which are cited in the text in the mitigation measures, are from the First Supplemental to the 2001 GDP EIR. **Tables 5.4-3 through 5.4-5** reference the analysis in the First Supplemental EIR to the 2001 GDP EIR and are not repeated here. However, **Tables 5.4-6 and 5.4-7** include the standards referenced for the mitigation measures and are included below. For clarity, these tables are included on the pages following Section 4.1.11. All mitigation measures are included in **Appendix G**, **Mitigation Monitoring and Reporting Program**, of this Subsequent EIR.

MM 5.4-1 IWMD and its contractors shall be required to comply with regional rules to reduce air pollutant emissions. SCAQMD Rule 401 sets limits on the opacity of visible plumes of dust resulting from activities at the Landfill. SCAQMD Rule 402 requires that air pollutant emissions generated at the Landfill not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Two options are presented in Rule 403: monitoring of particulate concentrations, or active control. Monitoring involves a sampling network around the project with no additional control measures unless specified concentrations are exceeded. The active control option does not require any monitoring, but requires that a list of measures be implemented on a daily basis.

SCAQMD Rule 403 requires that "best available control measures" be utilized whenever a dust-generating activity occurs in the Basin. These measures are listed in Table 1 of Rule 403 and called out in Table 5.4-6 below. It is important to note that all applicable measures from Table 5.4-6 should be implemented to achieve the required PM_{10} emissions reductions.

[Table 5.4-6 has been moved to the end of the section to enhance readability]

Rule 403 requires that "Large Projects" implement additional measures. A Large Project is defined as any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cy) or more than three times during the most recent 365-day period. The Prima Deshecha Landfill would be considered a Large Project under Rule 403. Therefore, the Landfill is required to implement the applicable actions specified in Table 2 of the Rule. Table 2 from Rule 403 is presented below as Table 5.4-7.

[Table 5.4-7 has been moved to follow Table 5.4-6 at the end of this section to enhance readability]

As a large operation, the landfill will also be required to:

- Submit a fully executed Large Operation Notification (SCAQMD Form 403N) to the SCAQMD Executive Officer within 7 days of qualifying as a Large Operation;
- Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
- Maintain daily records to document the specific dust-control actions taken, maintain such records for a period of not less than 3 years, and make such records available to the Executive Officer upon request;
- Install and maintain project signage with project contact signage that meets the minimum standards of the *Rule 403 Implementation Handbook*, prior to initiating any earthmoving activities;
- Identify a dust control supervisor that is employed by or contracted with the property owner or developer, is on the site or available on-site within 30 minutes during working hours, has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements, and has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and
- Notify the SCAQMD Executive Officer in writing within 30 days after the site no longer qualifies as a large operation.

MM 5.4-2 To reduce equipment emissions, the following measures shall be implemented when feasible:

- Use low emission mobile construction equipment. "CARB Certified" heavy construction equipment conforms to the latest off-road CARB emission standards and is the lowest polluting equipment available. The use of this equipment would reduce heavy equipment NO_X emissions by approximately 30 percent and heavy equipment PM_{10} emissions by approximately 50 percent from the emissions levels shown in Tables 5.4-3 through 5.4-5. This is a substantial reduction but will not reduce emissions to less than the significance thresholds.
- Maintain construction equipment engines by keeping them tuned.
- Use low-sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2.

- Utilize existing power sources (i.e., power poles) when feasible. This measure would minimize the use of higher polluting gas or diesel generators.
- Use aqueous diesel fuel where feasible and reasonably commercially available.
- Use cooled exhaust gas recirculation (EGR) where feasible and reasonably commercially available.

Several of the mitigation measures listed above are advanced emission control technologies that are currently not commercially available. For example, aqueous diesel fuel reduces NO_X formation by reducing combustion temperatures, resulting in lower NO_X emissions. According to SCAQMD, the current availability of this fuel technology is limited, and it may not be available for use at the Landfill. In addition, with EGR diesel engines, a small amount of hot exhaust gas is routed through a cooler and is mixed with fresh air entering the engine. The exhaust gas helps reduce the temperature during combustion, which lowers the formation of thermal NO_X. EGR technology is in the development phase and has not been fully commercialized. To the extent that the advanced emissions-control technologies become reasonably commercially available, or are required by the CARB from grading contractors, then such advanced emissions-control technologies will be used.

Furthermore, a requirement to install diesel particulate filters on construction equipment used at the Landfill was considered to further reduce emissions. However, the availability of construction equipment retrofitted with diesel particulate filters is limited. This is a result of operational problems in diesel engines equipped with these filters. Therefore, this potential mitigation measure for construction is considered infeasible.

4.1.10.3 Additional Mitigation

The following additional mitigation measure has been identified to reduce operational air quality impacts:

Mitigation Measure 4.1-1 All off-road diesel-powered equipment used during project operations shall have engines that meet or exceed the California Air Resources Board Tier 4 Final emissions standards.

Based on the analysis presented above, even with implementation of regulatory compliance measures, previously-adopted mitigation measures, and additional Mitigation Measure 4.1-1, impacts would be significant. No other additional feasible measures have been identified that would further reduce the severity of identified significant impacts.

4.1.11 Level of Significance after Mitigation

Operation of the Proposed Project would result in a significant and unavoidable operational criteria pollutant impact as compared to the applicable air quality standards, resulting in an increase in the severity of air quality impacts identified in the First Supplemental EIR to the 2001 GDP EIR and the Second Supplemental EIR to the 2001 GDP EIR.

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Backfilling	
01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	● Mix backfill soil with water prior to moving ● Dedicate water truck or high capacity hose to backfilling equipment ● Empty loader bucket slowly so that no dust plumes are generated ● Minimize drop height from loader bucket
Clearing and Grubbing	
02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	● Maintain live perennial vegetation where possible ● Apply water in sufficient quantity to prevent generation of dust plumes
Clearing Forms	
03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	● Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	
04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	● Follow permit conditions for crushing equipment ● Pre-water material prior to loading into crusher ● Monitor crusher emissions opacity ● Apply water to crushed material to prevent dust plumes
Cut and Fill	
05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	● For large sites, pre-water with sprinklers or water trucks and allow time for penetration ● Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – Mechanical/Manual	
06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	● Apply water in sufficient quantities to prevent the generation of visible dust plumes

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Disturbed Soil	
07-1 Stabilize disturbed soil throughout the construction site; and 07-02 Stabilize disturbed soil between structures	● Limit vehicular traffic and disturbances on soils where possible ● If interior block walls are planned, install as early as possible ● Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust ● plumes
Earth-Moving Activities	
08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	● Grade each project phase separately, timed to coincide with construction phase ● Upwind fencing can prevent material movement on site ● Apply water or a stabilizing agent in sufficient ● quantities to prevent the generation of visible dust plumes
Importing/Exporting of Bulk Materials	
09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	● Use tarps or other suitable enclosures on haul trucks ● Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ● Comply with track-out prevention/mitigation requirements ● Provide water while loading and unloading to reduce visible dust plumes
Landscaping	
10-1 Stabilize soils, materials, slopes	● Apply water to materials to stabilize Maintain materials in a crusted condition ● Maintain effective cover over materials ● Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ● Hydroseed prior to rain season
Road Shoulder Maintenance	
11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	● Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ● Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder ● maintenance costs
Screening	
12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	● Dedicate water truck or high capacity hose to screening operation ● Drop material through the screen slowly and minimize drop height ● Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop ● point

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Staging Areas	
13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	● Limit size of staging area ● Limit vehicle speeds to 15 miles per hour ● Limit number and size of staging area entrances/exists
Stockpiles/Bulk Material Handling	
14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	● Add or remove material from the downwind portion of the storage pile ● Maintain storage piles to avoid steep sides or faces
Traffic Areas for Construction Activities	
15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	● Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ● Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	
16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16.2 Stabilize soils at the completion of trenching activities.	● Pre-watering of soils prior to trenching is an effective preventive measure. ● For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ● Washing mud and soils from equipment at the ● conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck Loading	
17-1 Pre-water material prior to loading; and 17.2 Ensure that freeboard exceeds six inches (CVC 23114)	● Empty loader bucket such that no visible dust plumes are created ● Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	
18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	● Haul waste material immediately off site
Unpaved Roads/Parking Lots	
19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	● Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant Land	
20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 5.4-7 (from Mitigation Measure 5.4-1): Fugitive Dust Control Actions (SCAQMD Rule 403, Table 1)

Fugitive Dust Source Category Control Actions	
Earth-Moving (Except Construction Cutting and Filling Areas, and Mining Operations)	
(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by the ASTM [American Society for Testing and Materials] method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; **OR**
(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-Moving: Construction Fill Areas	
(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.
Earth-Moving: Construction Cut Areas and Mining Operations	
(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed Surface Areas (Except Completed Grading Areas)	
(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed Surface Areas: Completed Grading Areas	
(2c)	Apply chemical stabilizers within five working days of grading completion; **OR**
(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive Disturbed Surface Areas	
(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; **OR**
(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; **OR**
(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all
(3d)	times thereafter; **OR** Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	
(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; **OR**
(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; **OR**
(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open Storage Piles	
(5a)	Apply chemical stabilizers; **OR**
(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; **OR**

Table 5.4-7 (from Mitigation Measure 5.4-1): Fugitive Dust Control Actions (SCAQMD Rule 403, Table 1)

Fugitive Dust Source Category Control Actions	
(5c)	Install temporary coverings; **OR**
(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	
(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

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4.2 GREENHOUSE GAS EMISSIONS

This section summarizes existing greenhouse gas (GHG) emissions and discusses global climate change, its causes, and the contribution of human activities. This section also estimates the likely GHG emissions that would result from the Proposed Project. The existing conditions at the Prima Deshecha Landfill (Landfill) represent the environmental baseline in this Subsequent EIR. This section also presents the Proposed Project's impact assessment methodology, potential impacts, and mitigation measures. The modeling outputs are included as **Appendix B-1** of this Subsequent EIR.

4.2.1 Scoping Process

OCWR received eight comment letters from Public Agencies and 103 comment letters from individuals during the public review period of the IS/NOP. For copies of the IS/NOP comment letters and responses to those comments, refer to **Appendix A** of this Subsequent EIR. No comment letters related to GHG emissions were received from Public Agencies; however, a comment letter from the South Coast Air Quality Management District (SCAQMD) was received regarding air quality. This comment letter is further explained in Section 4.1, Air Quality. Two comment letters related to GHG emissions were received from individuals, the letters expressed concern related to methane gas and the Proposed Project's contribution to climate change.

4.2.2 Summary of Previous Environmental Documents

At the time the 2001 GDP EIR was certified in November 2001, the *State CEQA Guidelines* did not include GHGs and no numeric thresholds had formally been adopted. Section 15163(b) of the *State CEQA Guidelines* states that a supplement to an EIR need only contain the information necessary to make the previous EIR adequate for the project as revised. Therefore, the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR did not evaluate potential GHG impacts.

As a Subsequent EIR, this document considers the *State CEQA Guidelines* in effect when the document is sent out for public review (*State CEQA Guidelines*, Section 15007(c)). As is now required pursuant to the *State CEQA Guidelines*, this section describes the potential GHG impacts associated with implementation of the Proposed Project.

4.2.3 Existing Environmental Setting

The following describes existing GHG emissions in the County and in the vicinity of the Landfill, beginning with typical GHG types and sources, impacts of global climate change, the regulatory framework surrounding these issues, and current emission levels.

4.2.3.1 Background

The following section provides background information on GHGs and global climate change.

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2 degrees Celsius (°C) or 1.1 ± 0.4 degrees Fahrenheit (°F) in the 20th

century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[1]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are the following:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally occurring GHGs such as CO_2, CH_4, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively only to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). **Table 4.2.A** shows the

[1] The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

GWP for each type of GHG. For example, SF_6 is 23,900 times more potent at contributing to global warming than CO_2.

Table 4.2.A: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	21
Nitrous Oxide (N_2O)	120	310
HFC-23	260	11,700
HFC-134a	1	140
HFC-152a	1	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoromethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900

Source: *California's 2017 Climate Change Scoping Plan* (CARB 2017).
CARB = California Air Resources Board
HFC = hydrofluorocarbon
PFC = perfluorocarbon

The following summarizes the characteristics of the six GHGs and black carbon. Black carbon also contributes to climate change and is therefore discussed below.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals, and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of manmade emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of manmade CO_2, and consequently, the gas is building up in the atmosphere.

In 2021, total annual CO_2 accounted for 81.2 percent of California's overall GHG emissions (CARB 2022b). Transportation is the single largest source of CO_2 in California, which is primarily composed of on-road travel. Electricity production, industrial, and residential sources also make important contributions to CO_2 emissions in California.

Methane. CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 accounted for 9.8 percent of GHG emissions in California in 2021 (CARB 2022b). Agriculture accounts for the majority of CH_4 emissions, primarily from livestock enteric fermentation and manure management. Industrial sources and landfills are also important sources of CH_4. Other sources contribute only a small

fraction to CH_4 emissions, and include residential, transportation, electricity generation, and commercial sources. Approximately 20 percent of CH_4 emissions in California originate from landfills (CARB n.d.-b).

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is a product of the reaction between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. N_2O emissions accounted for 3.4 percent of GHG emissions in California in 2021 (CARB 2022b).

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[2] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5.6 percent of GHG emissions in California in 2021 (CARB 2022b).

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter (PM) formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of particulate matter less than 2.5 microns in size ($PM_{2.5}$) and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb one million times more energy than CO_2 (EPA 2015). Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most United States emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030 (CARB 2017b).

4.2.3.2 Emission Inventories

An emission inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

[2] The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

Global Emissions. Worldwide emissions of GHGs in 2021, the latest inventory year available, totaled 19.2 billion metric tons of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC 2023).

United States Emissions. In 2021, the year for which the most recent data are available, the United States emitted about 6,340.2 million metric tons of CO_2e (MMT CO_2e). Overall, emissions in 2021 increased by 5.2 percent relative to the 2020 total GHG emissions. This increase in total GHG emissions was driven by fossil fuel combustion due primarily to economic activity rebounding after the height of the COVID-19 pandemic. However, GHG emissions in 2021 were 17 percent below those of 2005 levels. Of the five major sectors—residential and commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2021 (28 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent (EPA 2021). Under the Greenhouse Gas Reporting Program (GHGRP) (EPA n.d.-b), the United States Environmental Protection Agency (EPA) requires Municipal Solid Waste landfills and industrial landfills to report GHG emissions data if annual CH_4 generation is greater than or equal to 25,000 metric tons of CO_2e (MT CO_2e). Landfills that meet the threshold must report methane generation, methane emissions, and associated data.

State of California Emissions. The State emitted approximately 381.3 MMT CO_2e emissions in 2021, 12.1 MMT CO_2e higher than 2020 levels and 49.7 MMT CO_2e below the 2020 GHG limit of 431 MMT CO_2e (CARB 2023b). CARB estimates that transportation was the source of 38 percent of the State's GHG emissions in 2021. The next largest sources included industrial sources at 19 percent and electricity generation at 16 percent. The remaining sources of GHG emissions were commercial and residential activities at 10 percent, agriculture at 8 percent, high GWP at 6 percent, and waste at 2 percent (CARB 2023b). As previously stated, approximately 20 percent of CH_4 emissions in California originate from landfills (CARB n.d.-b).

4.2.3.3 Existing Project Site Emissions

The Landfill is owned by the County and operated by OCWR. The Landfill is a Class III solid waste landfill that has been in continuous operation since 1976. The Landfill is in the western foothills of the southern Santa Ana Mountains. Primary access to the Landfill is through the Main Entrance located along a standalone vehicle exit on Avenida La Pata, allowing access to Landfill Zones 1 through 5. There are existing administration offices, facility operation buildings, and a household hazardous waste collection center near the Landfill's entrance that do not fall within a designated zone.

The facility currently receives waste from commercial and private sources, places and compacts the waste, covers the waste with soil or other cover material on a daily basis, operates a landfill gas (LFG) collection and control system, constructs new cells for future waste receipts, and places final cover materials. These operations are typical of all Landfill operations.

As described in more detail in Section 3.3, the Landfill is permitted to accept up to 4,000 tons per day (TPD) of solid waste. The Landfill is also permitted to accept up to 350 TPD of digested dewatered biosolids (i.e., wastewater treatment plant sludge). Current operations do not typically

reach the maximum permitted amount, with variation in the amount of waste received daily. The Landfill accepted a daily average of approximately 2,625 TPD of solid waste in Fiscal Year (FY) 2022/2023 (i.e., July 2022 to June 2023), with the daily average ranging from a low of approximately 2,135 TPD in July 2022 to a maximum of 3,313 TPD in March 2023. Of the average total of 2,625 TPD in FY 2022/2023, an average of approximately 1,854 TPD was received from Orange County cities served by the Landfill. Baseline operations at the Landfill take place approximately 309 days per year.

The Landfill has state-of-the-art environmental control systems that include: (a) a hazardous waste control program; (b) two flares for flaring of collected landfill gas; (c) a landfill gas monitoring, recovery, and control system with plans to design and implement a new landfill gas-to-energy project in the near future, which will convert LFG into renewable clean energy in form of electricity or renewable natural gas (RNG); (d) a groundwater monitoring, extraction, and collection system; (e) a leachate collection and recovery system; (f) a radioactive waste detection program; and (g) fire, erosion, dust, odor, noise, bird, insect, rodent, and litter control.

GHG emissions result from the transport of the waste on site, the handling and disposal of the waste on site, and the byproducts of the disposal of the waste on site, as well as emissions from the destruction of landfill gas in the two flares. When municipal solid waste (MSW) is first deposited in a landfill, it undergoes an aerobic (with oxygen) decomposition stage during which little CH_4 is generated. Then anaerobic conditions are established and methane-producing bacteria begin to decompose the waste and generate CH_4. Additionally, mobile source emissions are a main category of emissions from the existing Landfill. The Landfill uses off-road equipment (e.g., compactors and bulldozers) to handle the waste and place the daily cover over the waste. The off-road equipment used at the Landfill is diesel-powered. There are also mobile source emissions resulting from trucks delivering waste to the Landfill as well as employee vehicles. OCWR is currently incorporating California Air Resources Board (CARB) Tier 4 Final engines into its fleet and plans to utilize only Tier 4 engines by 2026.

Additionally, LFG (consisting primarily of CH_4 and CO_2) is produced by the decomposition of organic refuse. The facility has systems in place that collect approximately 70 percent of the generated LFG and flare the excess gas. The collection system consists of a series of vertical wells, connection piping, headers, and blowers (that place the wells under vacuum) for the withdrawal of the gases from the Landfill. A small fraction of the LFG is assumed to migrate to the surface of the Landfill and be released to the atmosphere. LFG is comprised of roughly 50 percent CH_4, 50 percent CO_2 and a small amount of non-CH_4 organic compounds (EPA n.d.-a). Operational practices, including use of sufficient cover and repair of cracks, fissures, and settling, minimize surface emissions. The effectiveness of these practices is verified by conducting quarterly surface emission monitoring.

The collected LFG is flared in two state-of-the-art low emission on-site flares, which destroys the CH_4 (i.e., combusted). In accordance with the EPA's New Source Performance Standard and SCAQMD Rule 1150.1, an LFG collection system is required to be installed in active and inactive landfills to collect the gas generated from refuse decomposition.

The Landfill maintains SCAQMD operating permits for the LFG collection system, flares, fuel storage and dispensing, and a diesel-fired electrical generator. The Landfill is classified as a major stationary

source of emissions (major source) and maintains a Title V operating permit for major sources under the federal Title V Permitting Program.

4.2.4 Regulatory Setting

4.2.4.1 Federal Regulations

Federal Clean Air Act. The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the federal Clean Air Act (FCCA). Although there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 EPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the EPA Administrator signed an endangerment finding action in 2009 under the FCAA, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the EPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the United States Department of Transportation, issued final rules to further reduce GHG emissions and improve Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 *Federal Register* 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg), limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 *Federal Register* 62630).

On March 31, 2022, the NHTSA finalized the CAFE standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

4.2.4.2 State Regulations

Executive Order S-3-05 (2005). Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the EO established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this Climate Action Team (CAT) made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006; it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the EO. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State Legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 MMT CO_2e. The emissions target of 427 MMT CO_2e requires the reduction of 169 MMT CO_2e from the State's projected business-as-usual 2020 emissions of 596 MMT CO_2e. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The CARB approved the Scoping Plan on December 11, 2008. It contains the main strategies California will implement to achieve the reduction of 169 MMT CO_2e, or approximately 30 percent, from the State's projected 2020 emission level of 596 MMT CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e);
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e).

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and sets the groundwork to reach long-term goals

set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan (CARB 2017a), to reflect the 2030 target set by EO B-30-15 and codified by Senate Bill (SB) 32.

The 2022 Scoping Plan (CARB 2022a) was approved in December 2022 and assesses progress toward achieving the SB 32 2030 target and laying out a path to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97 (2007). Senate Bill (SB) 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in November 2018, which went into effect in December 2018. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPO); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the Southern California Association of Governments (SCAG) will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. As shown in **Table 4.2.B**, pursuant to SB 375, the Los Angeles/ Southern California reduction targets for per capita vehicular emissions are 19 percent by 2035.

Table 4.2.B: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (%)	By 2035 (%)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6–13	13–16
Los Angeles/Southern California	8	19

Source: SB 375 Regional Targets, Current Regional Targets (CARB 2018).
CARB = California Air Resources Board
SB = Senate Bill

Executive Order B-30-15 (2015). Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and, therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. SB 350, which Governor Jerry Brown signed on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the California Energy Commission (CEC) for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved using existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires state energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In summer 2016, the Legislature passed and the Governor signed SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emission reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving its 2050

objective of reducing emissions to 80 percent below 1990 levels, consistent with an Intergovernmental Panel on Climate Change (IPCC) analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million (ppm) CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 100. On September 10, 2018, Governor Brown signed SB 100, which raises California's Renewables Portfolio Standard requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. EO B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." EO B-55-18 directs CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other state-wide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Assembly Bill 1279. AB 1279 was signed in September 2022 and codifies the State goals of achieving net carbon neutrality by 2045 and maintaining net negative GHG emissions thereafter. This bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels by 2045 and directs CARB to work with relevant State agencies to achieve these goals.

Cap and Trade. The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade emissions trading program developed by CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The program aims to regulate GHG emissions from the largest producers in the State by setting a declining statewide firm limit, or cap, on allowable annual GHG emissions. The cap-and-trade program was initially slated to sunset in 2020, but the passage of SB 398 in 2017 extended the program through 2030 (CARB 2014).

Executive Order N-79-20. EO N-79-20, which the Governor signed on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero -emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

California Integrated Waste Management Act. To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting 2012 Mandatory Commercial Recycling Regulation requires that, on and after July 1, 2012, certain businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act. In April 2016, AB 1826 further modified the California Integrated Waste Management Act, requiring businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste in a specified manner. On September 15, 2020, CalRecycle signed for the approval of a 2-cubic-yard threshold to take effect for solid waste (including trash, recycling, and organics) generated by businesses. Therefore, businesses that generate 2 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. Diverting organic waste from landfills reduces emissions of CH_4. This is equivalent to reducing anaerobic decomposition of organic waste that would have otherwise occurred in landfills where organic waste is often buried with other inorganic waste.

Senate Bill 1383. SB 1383, which the Governor signed on September 16, 2016, and came into effect on January 1, 2022, establishes CH_4 emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. SB 1383 established targets for 2025, including 75 percent reduction of organic waste disposal in landfills and 20 percent of unsold, still-edible food sent to food recovery organizations.

Low Carbon Fuel Standard. In January 2007, EO S-01-07 established a low carbon fuel standard (LCFS). EO S-01-07 calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in

September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California's 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program. In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuel outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. In 2025, when the rules became fully implemented, the statewide fleet of new cars and light trucks are expected to emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles. In 2022, CARB adopted the Advanced Clean Cars II regulations to establish the next phase of regulations beginning with the 2026 model year.

Executive Order B-48-18. In January 2018, Governor Brown signed EO B-48-18, requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the electric vehicle charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS Program, and recommend how to ensure affordability and accessibility for all drivers.

4.2.4.3 Regional Regulations

South Coast Air Quality Management District Rule 1150.1: Control of Gaseous Emissions From Municipal Solid Waste Landfills. This rule reduces emissions from Municipal Solid Waste landfills to prevent public nuisance and possible detriment to public health caused by exposure to emissions. The Rule requires a site-specific gas collection and gas control system at landfill sites and requires specific records and reporting of emissions.

South Coast Air Quality Management District GHG Emission Thresholds. In 2008, SCAQMD formed a GHG CEQA Significance Threshold Working Group (Working Group) to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting No. 15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency. SCAQMD has not presented a finalized version of these thresholds to the governing board but recommends using the interim guidance.

SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the 2020 and post-2020 emission targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State would be able to accommodate expected population growth and achieve economic development objectives while also abiding by AB 32's emissions target and future post-2020 targets.

Southern California Association of Governments. SCAG is a regional council consisting of the following six counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. In total, the SCAG region encompasses 191 cities and over 38,000 square miles within Southern California. SCAG is the MPO serving the region under federal law and serves as the Joint Powers Authority, the Regional Transportation Planning Agency, and the Council of Governments under State law. As the Regional Transportation Planning Agency, SCAG prepares long-range transportation plans for the Southern California region, including the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2008 Regional Comprehensive Plan (RCP).

On April 4, 2024, SCAG adopted Connect SoCal: The 2024–2050 Regional Transportation Plan/ Sustainable Communities Strategy (2024–2050 RTP/SCS) (SCAG 2024). In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The 2024–2050 RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles. However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

The horizon year for the 2024–2050 RTP/SCS is 2050, and the plan projects that by 2050, 66 percent of new households and 54 percent of new jobs will be located in Priority Development Areas, either near transit or in walkable communities. The objectives of the 2024–2050 RTP/SCS are to create a region with: (a) transit as a backbone of the transportation system; (b) more Complete Streets where people and safety are prioritized; (c) policies that encourage emerging technologies and mobility innovations that support rather than hamper regional goals; (d) more housing, jobs, and mobility options closer together in Priority Development Areas to preserve natural lands and open spaces; (e) more housing to address the existing housing need; and (f) safe and fluid movement of goods with a commitment to the broad deployment of zero- and near-zero emission technologies.

Orange County General Plan. The Orange County General Plan does not address GHG emissions; however, the Resources Element (County of Orange 2011) addresses air resources and would also work to reduce GHG emissions. The policy of the Air Resources Component is "to develop and support programs which improve air quality or reduce air pollutant emissions." The Air Resources Component includes 15 implementation programs. The responsibility for implementation is designated to the County, the Orange County Transportation Authority (OCTA), and other public agencies. In addition, the Public Services and Facilities Element includes policies and implementation programs related to waste management, which would also reduce GHG emissions. These policies are listed below.

1. **Land Use Compatibility:** To plan solid waste facilities in a manner compatible with surrounding land uses and to review planned land uses adjacent to landfills for their compatibility with landfill operations.

2. **County Solid Waste Management Plan:** To support and implement the adopted Solid Waste Management Plan to achieve waste management objectives.

3. **Solid Waste Recycling and Reuse:** To promote the utilization of waste recycling and reuse measures, which extend the operating life of existing solid waste facilities.

4.2.4.4 Local Regulations

Although not directly applicable to OCWR, local regulations that work to reduce GHG emissions in San Juan Capistrano and San Clemente are included below for informational purposes. These regulations would apply to many of the cumulative projects listed in **Table 4.A** in Chapter 4.0.

City of San Juan Capistrano General Plan. The San Juan Capistrano General Plan does not address GHG emissions; however, air quality is included within the Conservation and Open Space Element (2002) of the City of San Juan Capistrano's General Plan to fulfill Air Quality Management Plan (AQMP) requirements. The Conservation and Open Space Element contains the following goals and policies aimed at improving air quality within San Juan Capistrano through proper planning for land use, transportation, and energy use, which would also reduce GHG emissions.

Goal 6.0: Improve air quality.

- **Policy 6.1:** Cooperate with the South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.
- **Policy 6.2:** Cooperate and participate in regional air quality management planning, programs and enforcement measures.
- **Policy 6.3:** Implement City-wide traffic flow improvements.
- **Policy 6.4:** Achieve a greater balance between jobs and housing in San Juan Capistrano.
- **Policy 6.5:** Integrate air quality planning with land use and transportation planning.
- **Policy 6.6:** Promote energy conservation and recycling by the public and private sectors.

The Public Services and Utilities Element also contains Policy 7.4, which works to reduce the per capita production of solid waste in San Juan Capistrano.

City of San Clemente General Plan. The City Council adopted the City of San Clemente Centennial General Plan in February 2014 and last amended it in October 2022. The Natural Resources Element and Land Use Element of the Centennial General Plan outlines the following goals and policies that address GHG emissions and are applicable to the Proposed Project:

Goal: Reduce levels of air pollution and greenhouse gas emissions so that the City meets or exceeds regional, State, and Federal mandates.

- **Policy NR-5.01: New Development.** We require new development to utilize appropriate SCAQMD air quality mitigation measures.
- **Policy NR-5.05: Greenhouse Gases (GHG) Emissions Reductions.** We will reduce GHG emissions in accordance with regional, State and Federal regulations, consistent with the adopted Climate Action Plan.
- **Policy NR-5.05: Transportation.** We provide non-motorized, multi-modal mobility options (e.g. pedestrian and bicycle facilities) and work with other agencies and organizations to provide transit opportunities to reduce air pollutant emissions.
- **Policy NR-5.07: Street Trees.** We maintain a healthy stock of park, public area, and street trees and encourage the planting of trees with significant canopies that provide numerous benefits, including reduced urban heat gain, natural shading and wind screening, air filtration, and oxygen production.

In addition, the Public Services, Facilities, and Utilities Element includes the following policies related to waste management, which would also reduce GHG emissions:

> **Goal: Continue to implement a cost-effective solid waste management program (consisting of source reduction, collection, recycling and disposal that meets or exceeds State and Federal waste diversion and recycling standards.**
>
> - **Policy PSFU-8.01: Coordination.** We coordinate with contractors and other public agencies to identify and implement cost-effective solid waste and recycling strategies.
> - **Policy PSFU-8.02: AB 939 Monitoring.** We monitor our solid waste generation and disposal/recycling facilities to ensure we meet or exceed AB 939 requirements for the diversion of solid waste, including construction and demolition waste.
> - **PSFU-8.03: Education.** We provide educational materials on waste reduction and recycling to local residents, businesses, and schools, and support school recycling programs.
> - **PSFU-8.07: Building Materials.** We use recycled materials for building and facility construction, when financially feasible and safe to do so.
> - **PSFU-8.08: Collection.** We provide solid waste collection for commercial, industrial and residential uses and developments, in accordance with State law.
> - **PSFU-8.10: Program Development.** We update or develop new programs as needed to further reduce waste generation and increase recycling.

City of San Clemente Climate Action Plan. The City adopted a comprehensive Climate Action Plan (CAP) (City of San Clemente 2014) in January 2014, which provides goals and policies for reducing GHG emissions. These actions include a combination of General Plan programs, City Council policies, resolutions, and incentives, as well as outreach and education activities. The CAP focuses on the following categories of climate efforts:

- **Alternative Transportation**
    - **Expand Pedestrian Network:** Proving a pedestrian access network to access all areas of San Clemente encourages people to walk instead of driving, resulting in less people driving and thus reducing VMT. This includes the widening of sidewalks, completion of gaps in sidewalk networks, or the extension of existing sidewalks.
    - **Require Bicycle Parking:** Require bicycle parking for both public and private uses to facilitate travel. This strategy would identify additional opportunities to place public use bicycle parking or to modify parking requirements for bicycle with the aim of increasing the supply of parking.

- **Develop Off-Street Bicycle Facilities**: Develop and implement off-street bicycle trails which can be used for both recreational travel and commuting purposes.
- **Incorporate Bike Lane Street Design:** The City's Bicycle and Pedestrian Master Plan incorporates bicycle lanes, routes, and shared-use paths into the street systems, new subdivisions, and large developments.
- **Encourage the Use of Electric Vehicles:** consider designation and establishment of electric vehicle (EV) charging stations in applicable City projects.

- **Land Use**
  - **Encouraging Planting of New Trees:** Consider opportunities to plant trees in residential and commercial areas with an emphasis on parking lots.

- **Energy Efficiency**
  - **Residential and Commercial Retrofit Energy Conservation Policy:** Develop a Residential and Commercial Retrofit Energy Efficiency and Conservation Policy that is voluntary.
  - **Residential and Commercial New Construction Energy Conservation Policy:** Develop a Residential and Commercial New Construction Energy Efficiency and Conservation Policy That is Voluntary. If Participation Rates are Not Met, Investigate Converting to Mandatory Ordinance.
  - **Promote the California Solar Initiative's Solar Water Heating Incentive Program:** Develop a residential and commercial retrofit energy efficiency and conservation policy that is voluntary.

- **Waste Reduction**
  - **Waste Diversion Ordinance:** Adopt a waste diversion ordinance that would require waste diversion of 75 percent by 2020 and 90 percent by 2030.

As part of the efforts under each category, the CAP identifies a broad menu of feasible strategies for the local municipalities to enhance their efforts to reduce GHG emissions. The CAP set forth a GHG emission reduction target of 15 percent below 2009 levels by 2020 and 38 percent below 2009 levels by 2030. The strategies outlined in the CAP would achieve an annual citywide reduction of 235,609 MT CO_2e by 2030, meeting the goals of the CAP.

4.2.5 Methodology

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular and truck traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within a project area.

Consistent with the SCAQMD guidance for estimating emissions associated with the Proposed Project, the California Emissions Estimator Model version 2022.1 (CalEEMod) was used to calculate the long-term operational emissions associated with the Proposed Project. CalEEMod utilizes widely accepted methodologies for estimating emissions. Sources of these methodologies and default data include but are not limited to EPA AP-42 emission factors and CARB's vehicle emission models.

The Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. This increase is anticipated to take place gradually, and typical daily operations would likely remain below the maximum permitted amount similar to current operations. No change to the overall capacity of the Landfill would occur as well as no change to the volume of waste that would be accommodated as evaluated in prior environmental documents. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. No expansion of the permitted landfill footprint of either Zone 1 or Zone 4 would result from the Proposed Project. As discussed in Section 1.2, the actual demand for waste fluctuates based on many factors in addition to the permitted capacity. To the extent that the actual rate of waste received increases above the currently permitted 4,000 TPD, the remaining capacity of the Landfill would be correspondingly reduced faster than in the absence of the Proposed Project. The Proposed Project would not require any construction activities; therefore, this analysis focuses on operational emissions only.

Increasing the maximum amount of waste received daily would result in increased operational emissions associated with an increase in number and/or distance for vehicle and truck trips and an increase in on-site equipment operations. As discussed in the Traffic Volume and VMT Study in **Appendix E** of this Subsequent EIR, the Proposed Project would generate up to 3,041 average daily traffic (ADT), including 2,971 truck trips and 70 passenger vehicle trips, at the maximum permitted capacity of 8,000 TPD.[3] Note that typical daily operations are not anticipated to reach the maximum permitted capacity, consistent with existing conditions. Operation of the Proposed Project would also require the use of additional equipment, which are listed in **Table 4.2.C** (usage information is based on the maximum permitted capacity of 8,000 TPD).

[3] Note that the ADT used in air quality and GHG emissions modeling is based on forecast truck and passenger vehicle trips rather than passenger car equivalents (PCEs). PCEs are used for modeling transportation-related impacts to the circulation system.

Table 4.2.C: Proposed Project Equipment List

Vehicle Type	Fuel Type	Engine Tier Level	Quantity	Hours Per Day	Days Per Year	Horsepower	Load Factor
Track-type tractor	Diesel	Tier 4 Final	4	10	307	460	0.37
Track-type tractor	Diesel	Tier 4 Final	1	10	307	251	0.37
Track-type tractor	Diesel	Tier 4 Interim	1	10	307	110	0.37
Wheel dozer w/BG	Diesel	Tier 4 Final	2	10	307	354	0.40
Compactor	Diesel	Tier 4 Final	2	10	307	582	0.43
Scraper front	Diesel	Tier 3	3	10	307	500	0.48
Scraper rear	Diesel	Tier 3	3	10	307	283	0.48
Motor grader	Diesel	Tier 4 Final	1	10	307	253	0.41
Backhoe loader	Diesel	Tier 4 Final	1	5	307	115.3	0.37
Integrated tool carrier	Diesel	Tier 3	1	5	307	180	0.42
Skidsteer loader	Diesel	Tier 4 Interim	1	5	307	69	0.37
Wheel loader	Diesel	Tier 4 Final	1	10	307	182.2	0.36
Wheel loader	Diesel	Tier 4 Final	1	10	307	300	0.36
Water truck	Diesel	Tier 4 Final	3	10	307	370	0.38
Telehandler	Diesel	Tier 4 Final	1	5	307	73.7	0.42
Automatic tarping machine	Diesel	Average	2	5	307	50	0.40

Source: Compiled by LSA (2024).

The CalEEMod analysis was conducted using land use code *Other Non-Asphalt Surfaces*. Trip generation rates used in CalEEMod for the Proposed Project were based on the Proposed Project's trip generation of 3,041 ADT, including 2,971 truck trips and 70 passenger vehicle trips. Although these trips largely represent rerouted waste from the Olinda Alpha Landfill, reducing the number of active landfills in the County would inevitably result in some trips requiring a greater travel distance. The Olinda Alpha Landfill is over 43 miles (by road) from the Prima Deshecha Landfill, meaning that waste hauling trips may on average be up to 43 miles longer each way (but would vary depending on the origin). It is anticipated that contracted waste haulers will work with OCWR to identify efficient ways to reroute the Olinda Alpha Landfill waste stream to the two remaining landfills that will minimize overall miles traveled. This analysis assumes that the truck trips would travel approximately 40 miles, consistent with SCAQMD recommendations for heavy heavy-duty (HHD) trucks. To be conservative, separate CalEEMod analyses were prepared for the operational analysis. One CalEEMod run evaluated operational and vehicle trip emissions, and another CalEEMod run evaluated truck trip emissions. In addition, the equipment listed in **Table 4.2.C** was included in CalEEMod, assuming usage during the Landfill's operational hours of 7:00 a.m. to 5:00 p.m., Monday through Saturday, approximately 307 days per year,[4] except for the backhoe loader, integrated tool carrier, skidsteer loader, telehandler, and automatic tarping machine which would operate for 5 hours per day. As stated above, OCWR is currently incorporating Tier 4 Final engines into its fleet and plans to utilize only Tier 4 engines by 2026. However, to be conservative, the engine tier levels identified in **Table 4.2.C** were assumed in this analysis. CalEEMod output sheets are included in **Appendix B-1**.

[4] The number of annual operational days varies from year to year based on the number of Sundays and holidays.

4.2.6 Thresholds of Significance

The significance criteria used to evaluate the Proposed Project's impacts to GHG emissions are based on Appendix G of the *State CEQA Guidelines*. According to Appendix G, a significant impact related to GHG emissions would occur if a project would:

Threshold 4.2.1: Generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment; or

Threshold 4.2.2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group. Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development Projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

- **Tier 2. Consistency with a Locally Adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

  For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. The 10,000 MT CO_2e per year (MT CO_2e/yr) threshold for industrial uses would be recommended for use by all lead agencies. Under Option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e/yr), commercial projects (1,400 MT CO_2e/yr), and mixed-use projects (3,000 MT CO_2e/yr). Under Option 2, a single numerical screening-level threshold of 3,000 MT CO_2e/yr would be used for all non-industrial projects.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT CO_2e/yr per service population for project-level analyses and 6.6 MT CO_2e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

Rate of Emission: GHG Emissions (MT CO_2e/yr) ÷ Service Population

The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

For the purpose of this analysis, the Proposed Project will be compared to Tier 3, with the recommended threshold of 10,000 MT CO_2e/yr for industrial uses. To determine whether the project conflicts with an applicable plan, policy, or regulation, the project is also evaluated for compliance with the 2022 Scoping Plan and SCAG's 2024–2050 RTP/SCS.

4.2.7 Project Impacts

Threshold 4.2.1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact. The Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal.

This section describes the Proposed Project's operations-related GHG emissions and contribution to global climate change. As discussed above, the Proposed Project would not require any construction activities; thus, an evaluation of the Proposed Project's impacts related to the release of GHG emissions for the operational phase of the Proposed Project is described below.

The Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. Long-term GHG emissions from the Proposed Project would be associated with mobile sources (e.g., vehicle and truck trips) and off-road sources (e.g., use of off-road equipment).

As discussed in Section 4.2.5, Methodology, above, increasing the maximum amount of waste would result in an increase in vehicle and truck trips and equipment operations, which would generate GHG emissions. Indirect emissions of GHG emissions would occur from vehicle trips associated with solid waste transportation to the Landfill and employee vehicle emissions.

CalEEMod version 2022.1 was used to calculate the long-term operational emissions associated with the Proposed Project. Trip generation rates used in CalEEMod for the Proposed Project were based on the Proposed Project's trip generation of 3,041 ADT, including 2,971 truck trips and 70 passenger vehicle trips. This analysis assumes that the truck trips would travel approximately 40 miles. As

noted earlier, although these trips largely represent rerouted waste from the Olinda Alpha Landfill, reducing the number of active landfills in the County would inevitably result in some trips requiring a greater travel distance. The Olinda Alpha Landfill is over 43 miles (by road) from the Prima Deshecha Landfill, meaning that waste hauling trips may on average be up to 43 miles longer each way (but would vary depending on the origin). It is anticipated that contracted waste haulers will work with OCWR to identify efficient ways to reroute the Olinda Alpha Landfill waste stream to the two remaining landfills that will minimize overall miles traveled. To be conservative, separate CalEEMod analyses were prepared for the operational analysis. One CalEEMod run evaluated operational and vehicle trip emissions, and another CalEEMod run evaluated truck trip emissions. In addition, the equipment listed in **Table 4.2.C** was included in CalEEMod, assuming usage during the Landfill's operational hours of 7:00 a.m. to 5:00 p.m., Monday through Saturday, approximately 307 days per year, except for the backhoe loader, integrated tool carrier, skidsteer loader, telehandler, and automatic tarping machine, which would operate for 5 hours per day. **Table 4.2.D** shows the calculated GHG emissions for the Proposed Project at the permitted maximum daily capacity of 8,000 TPD. CalEEMod output sheets are included in **Appendix B-1.**

Table 4.2.D: Greenhouse Gas Emissions (tons/year)

Emission Source	CO_2	CH_4	N_2O	CO_2e
Mobile Source Emissions – Employee Vehicle Trips	96.2	<0.1	<0.1	97.2
Mobile Source Emissions – Heavy Heavy-Duty Truck Trips	59,156	4.5	9.5	62,139
Off-Road Equipment Source Emissions	5,785.6	0.2	<0.1	5,805.4
			Total Project Emissions	**68,041.6**
			SCAQMD Threshold	10,000
			Exceed?	**Yes**

Source: Compiled by LSA (2024).
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide
SCAQMD = South Coast Air Quality Management District

As discussed above, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 10,000 MT CO_2e/yr. Based on the analysis results, the Proposed Project would result in approximately 68,041.6 MT CO_2e/yr, which would exceed the SCAQMD threshold of 10,000 MT CO_2e/yr.

As described above, the 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR did not evaluate potential GHG impacts; however, these impacts are not new information that was not known or could not have been known at the time these previous environmental documents were certified. The issue of climate change and greenhouse gases was widely known prior to the certification of these EIRs. The United Nations Framework Convention on Climate Change was established in 1992. The regulation of GHG emissions to reduce climate change impacts was extensively debated and analyzed throughout the early 1990s. The studies and analyses of this issue resulted in the adoption of the Kyoto Protocol in 1997.

As demonstrated in Section 4.1, Air Quality, the Landfill development and operation set forth in the 2001 GDP generates emissions associated with the following sources: mobile sources; LFG combustion energy recovery facility (LFG-ERF);[5] fugitive combustion (flare); fugitive liquefied petroleum gas (LPG); and uncaptured LFG surface emissions. GHG emissions associated with these sources were not quantified as part of the previous 2001 GDP EIR, First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR; however, it is expected that the emissions associated with the Landfill development and operation set forth in the 2001 GDP would have exceeded SCAQMD thresholds. Therefore, it is expected that combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would also exceed the SCAQMD's thresholds. As shown in **Table 4.2.D**, the majority of the GHG emissions from the Proposed Project are associated with mobile sources. Emissions of motor vehicles and HHD trucks (i.e., trucks with a gross vehicle weight rating of over 33,000 pounds) are controlled by State and federal standards. However, HHD truck fleets would be required by law to meet applicable CARB regulations, potentially including the CARB's Statewide Truck and Bus regulations, as well as the Advanced Clean Truck and Advanced Clean Fleets regulations, which have a goal of achieving a zero-emission truck and bus fleet by 2045 and would substantially reduce mobile source emissions over the life of the Proposed Project.

Additionally, as discussed in Chapter 3.0, Project Description, the Proposed Project includes increasing the daily permitted capacity of the Landfill to allow for this diversion of waste once the Olinda Alpha Landfill closes. As such, the Proposed Project is expected to divert truck trips that would have been occurring at Olinda Alpha Landfill. As stated earlier, reducing the number of active landfills in the County would inevitably result in some trips requiring a greater travel distance. The Olinda Alpha Landfill is over 43 miles (by road) from the Prima Deshecha Landfill, meaning that waste hauling trips may on average be up to 43 miles longer each way (but would vary depending on the origin). It is anticipated that contracted waste haulers will work with OCWR to identify efficient ways to reroute the Olinda Alpha Landfill waste stream to the two remaining landfills that will minimize overall miles traveled. The trip distance of 40 miles each way recommended by SCAQMD to use in emissions modeling is a reasonable approximation.

As discussed above, long-term Landfill operational GHG emissions associated with the Proposed Project would exceed the SCAQMD thresholds primarily due to the increase in the number and/or distance of truck trips to the site.

Impact Conclusions. As shown in **Table 4.2.D**, the Proposed Project's GHG emissions would exceed the SCAQMD's thresholds. Additionally, as described above, it is expected that the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds. As such, the Proposed Project could generate significant GHG emissions that would have a significant effect on the environment.

Mitigation measures that would reduce GHG emissions from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project and would be implemented per the MMRP. These measures include 2001 GDP EIR Mitigation Measures 4.9-3 and 4.9-4 and the First Supplemental EIR to the 2001 GDP EIR Mitigation

[5] LFG-ERF operations are no longer occurring at the Landfill.

Measures 5.4-1 and 5.4-2. The 2001 GDP EIR mitigation measures require that OCWR construct and operate new landfill areas in Zones 1 and 4 with LFG systems to maximize the collection of LFG and continue regular inspections of the landfill cover and monitoring of LFG emissions to locate cracks or other defects or flaws in the landfill cover, which may allow LFG to escape, which would reduce operational GHG emissions associated with Landfill activities. In addition, the First Supplemental EIR to the 2001 GDP EIR mitigation measures require that the Landfill complies with SCAQMD rules and regulations and implements measures to reduce equipment emissions. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.2.10.2, Previously Adopted Mitigation.

While these mitigation measures would reduce GHG emissions generated during operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD thresholds.

Threshold 4.2.2: Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases?

Potentially Significant Impact. An evaluation of the Proposed Project's consistency with the 2022 Scoping Plan and the 2024–2050 RTP/SCS is provided below.

2022 Scoping Plan. The following discussion evaluates the Proposed Project according to the goals of the 2022 Scoping Plan, EO B-30-15, SB 32, and AB 197.

EO B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan (CARB 2017a), to reflect the 2030 target set by EO B-30-15 and codified by SB 32. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197 provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

In addition, the 2022 Scoping Plan assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

The 2022 Scoping Plan focuses on building clean energy production and distribution infrastructure for a carbon-neutral future, including transitioning existing energy production and transmission infrastructure to produce zero-carbon electricity and hydrogen, and utilizing biogas resulting from wildfire management or landfill and dairy operations, among other substitutes. The 2022 Scoping Plan states that in almost all sectors, electrification will play an important role. The 2022 Scoping Plan evaluates clean energy and technology options and the transition away

from fossil fuels, including adding four times the solar and wind capacity by 2045 and about 1,700 times the amount of current hydrogen supply. As discussed in the 2022 Scoping Plan, EO N-79-20 requires that all new passenger vehicles sold in California will be zero-emission by 2035, and all other fleets will have transitioned to zero-emission as fully possible by 2045, which will reduce the percentage of fossil fuel combustion vehicles.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The Proposed Project consists of increasing the maximum amount of waste that the Landfill is able to accept on a daily basis and does not include any new connections to the electrical grid or an increase in use of electricity nor does it include any new connections to the natural gas distribution system or an increase in use of natural gas. Therefore, the Proposed Project would not conflict with any of the energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the Proposed Project consists of increasing the maximum amount of waste that the Landfill is able to accept on a daily basis. As discussed in Section 4.1, Air Quality, water is used for on-site dust suppression for activities on unpaved roadways. The existing water reuse program at the Landfill would sufficiently address an increase in dust suppression efforts; increased water use for dust suppression is not anticipated with the Proposed Project because the primary need for dust suppression is on dirt access roads. The increase in maximum daily operations under the Proposed Project would predominantly use paved roads, which would not require dust suppression efforts. Since on-site water from the existing water reuse program is sufficient to support dust suppression on the site, the Proposed Project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the Proposed Project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the Proposed Project would not conflict with the identified transportation and motor vehicle measures.

2024–2050 Regional Transportation Plan/Sustainable Communities Strategy. SCAG's 2024–2050 RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2024–2050 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological

advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit-oriented communities. The 2024–2050 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2024–2050 RTP/SCS, would reach the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2024–2050 RTP/SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the 2024–2050 RTP/SCS, but provides incentives for consistency for governments and developers.

Implementing SCAG's 2024–2050 RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. The Proposed Project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. The Proposed Project does not include construction of new homes or extension of roads or other infrastructure to previously undeveloped areas. The Proposed Project would not substantially affect the number of jobs in the region in a manner that would result in substantial unplanned population growth, as the number of employees on site daily would increase by approximately 35. Thus, the Proposed Project would not substantially increase population, households, or employment in the area. As such, since the purpose of the Proposed Project is to increase the daily permitted capacity of the Prima Deshecha Landfill to allow for diversion of waste once the Olinda Alpha Landfill closes, the Proposed Project would not exceed the growth assumptions in the SCAG's 2024–2050 RTP/SCS.

Impact Conclusions. Although the Proposed Project would be consistent with the 2022 Scoping Plan and 2024–2050 RTP/SCS, the Proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As such, the Proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, EO B-30-15, and AB 197 and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the Proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

Based on the anticipated acceptance reduction of accepted waste and subsequent pending closure at Olinda Alpha Landfill, and in order to maintain systemwide capacity for Orange County, waste will need to be diverted to OCWR's other active landfills. The Proposed Project includes increasing the daily permitted capacity of the Prima Deshecha Landfill to allow for this diversion of waste once the Olinda Alpha Landfill closes. As such, the Proposed Project is expected to divert truck trips that would have been occurring at Olinda Alpha Landfill. As stated earlier, reducing the number of active landfills in the County would inevitably result in some trips requiring a greater travel distance. The Olinda Alpha Landfill is over 43 miles (by road) from the Prima Deshecha Landfill, meaning that waste hauling trips may on average be up to 43 miles longer each way (but would vary depending on the origin). It is anticipated that contracted waste haulers will work with OCWR to identify efficient ways to reroute the Olinda Alpha Landfill waste stream to the two remaining landfills that will

minimize overall miles traveled. The trip distance of 40 miles each way recommended by SCAQMD to use in emissions modeling is a reasonable approximation.

Mitigation measures that would reduce GHG emissions from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project and would be implemented per the MMRP. These measures include 2001 GDP EIR Mitigation Measures 4.9-3 and 4.9-4 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. The 2001 GDP EIR mitigation measures require that OCWR construct and operate new landfill areas in Zones 1 and 4 with LFG systems to maximize the collection of LFG and continue regular inspections of the landfill cover and monitoring of LFG emissions to locate cracks or other defects or flaws in the landfill cover, which may allow LFG to escape that would reduce operational GHG emissions associated with Landfill activities. In addition, the First Supplemental EIR to the 2001 GDP EIR mitigation measures require that the Landfill complies with SCAQMD rules and regulations and implements measures to reduce equipment emissions. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.2.10.2, Previously Adopted Mitigation.

While these mitigation measures would reduce GHG emissions generated during operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD thresholds.

4.2.8 Cumulative Impacts

Cumulative impacts are the collective impacts of one or more past, present, or future projects, that when combined, result in adverse changes to the environment. Climate change is a global environmental problem in which: (a) any given development project contributes only a small portion of any net increase in GHGs, and (b) global growth is continuing to contribute large amounts of GHGs across the world. Land use projects may contribute to the phenomenon of global climate change in ways that would be experienced worldwide, and with some specific effects felt in California. However, no scientific study has established a direct causal link between individual land use project impacts and global warming.

The analysis of impacts related to GHG emissions is inherently cumulative. As previously stated, GHG emissions associated with the Proposed Project would exceed SCAQMD thresholds. Since GHG is a global issue, it is unlikely that the Proposed Project would generate enough GHG emissions to influence global climate change on its own; however, because project-related CO_2e emissions would exceed the SCAQMD thresholds, the Proposed Project would have a significant contribution to cumulatively considerable GHG emissions impacts, even with implementation of 2001 GDP EIR Mitigation Measures 4.9-3 and 4.9-4 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.1.10.2, Previously Adopted Mitigation. While these mitigation measures would reduce GHG emissions generated during operational activities associated with the Proposed Project, the Proposed Project would still exceed the SCAQMD thresholds primarily as a result of the increase in the number and/or distance of truck trips. Therefore, impacts would be considered significant and unavoidable at the cumulative level.

4.2.9 Level of Significance Prior to Mitigation

As presented above, the Proposed Project would result in a significant GHG impact and would result in an increased impact as compared to Landfill operations set forth in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, and their Addenda.[6] Mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project and would be implemented per the MMRP.

4.2.10 Regulatory Compliance Measures and Mitigation Measures

4.2.10.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the Proposed Project.

4.2.10.2 Previously Adopted Mitigation

The following mitigation measures are currently in place for impacts associated with the landfill component of the 2001 GDP, as identified in the 2001 GDP EIR (numerical designations are from the 2001 GDP EIR) and the First Supplemental EIR to the 2001 GDP EIR. Although the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR did not specifically address GHG impacts, the following mitigation measures would reduce GHG emissions.

Note: The numbering in this section corresponds with the numbering in the 2001 GDP EIR. Also, the Integrated Waste Management Department (IWMD) is now the OCWR.

Previously Adopted Mitigation Measures, 2001 GDP EIR.

MM 4.9-3 The Integrated Waste Management District shall design, construct and operate new landfill areas in Zones 1 and 4 with landfill gas (LFG) systems to maximize the collection of LFG. The LFG systems will include continuous monitoring of the LFG collection system to maximize efficient collection of LFG generated in these areas.

MM 4.9-4 During landfill operations, the Integrated Waste Management Department (IWMD) shall continue regular visual inspections of the landfill cover and monitoring of LFG emissions throughout the entire refuse fill areas. The purpose of these inspections is to locate cracks or other defects or flaws in the landfill cover, which may allow LFG to escape. When such areas are identified, the IWMD will implement the appropriate corrective action as soon as feasible. These corrective actions may include application and compaction of additional cover material, adjustment of the existing LFG control system and/or installation of new LFG control facilities.

[6] As discussed in Section 4.2.2, prior CEQA documents did not explicitly quantify GHG emissions.

Adopted Mitigation Measures, First Supplemental EIR to the 2001 GDP EIR.

Note: The numbering in this section corresponds with the numbering in the First Supplemental EIR to the 2001 GDP EIR. **Tables 5.4-3 through 5.4-7,** which are cited in the text in the mitigation measures, are from First Supplemental to the 2001 GDP EIR. **Tables 5.4-3 through 5.4-5** reference the analysis in the First Supplemental EIR to the 2001 GDP EIR and are not repeated here. However, **Tables 5.4-6 and 5.4-7** include the standards referenced for the mitigation measures and are included below. For clarity, these tables are included on the pages following Section 4.2.11. All mitigation measures are included in **Appendix G, Mitigation Monitoring and Reporting Program**, of this Subsequent EIR.

MM 5.4-1 IWMD and its contractors shall be required to comply with regional rules to reduce air pollutant emissions. SCAQMD Rule 401 sets limits on the opacity of visible plumes of dust resulting from activities at the Landfill. SCAQMD Rule 402 requires that air pollutant emissions generated at the Landfill not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. Two options are presented in Rule 403: monitoring of particulate concentrations, or active control. Monitoring involves a sampling network around the project with no additional control measures unless specified concentrations are exceeded. The active control option does not require any monitoring, but requires that a list of measures be implemented on a daily basis.

SCAQMD Rule 403 requires that "best available control measures" be utilized whenever a dust-generating activity occurs in the Basin. These measures are listed in Table 1 of Rule 403 and called out in Table 5.4-6 below. It is important to note that all applicable measures from Table 5.4-6 should be implemented to achieve the required PM_{10} emissions reductions.

[To enhance readability, Table 5.4-6 has been moved to the end of the section.]

Rule 403 requires that "Large Projects" implement additional measures. A Large Project is defined as any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cy) or more than three times during the most recent 365-day period. The Prima Deshecha Landfill would be considered a Large Project under Rule 403. Therefore, the Landfill is required to implement the applicable actions specified in Table 2 of the Rule. Table 2 from Rule 403 is presented below as Table 5.4-7.

[To enhance readability, Table 5.4-7 has been moved to follow 5.4-6 at the end of the section.]

As a large operation, the landfill will also be required to:

- Submit a fully executed Large Operation Notification (SCAQMD Form 403N) to the SCAQMD Executive Officer within 7 days of qualifying as a Large Operation;
- Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
- Maintain daily records to document the specific dust-control actions taken, maintain such records for a period of not less than 3 years, and make such records available to the Executive Officer upon request;
- Install and maintain project signage with project contact signage that meets the minimum standards of the *Rule 403 Implementation Handbook*, prior to initiating any earthmoving activities;
- Identify a dust control supervisor that is employed by or contracted with the property owner or developer, is on the site or available on-site within 30 minutes during working hours, has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements, and has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and
- Notify the SCAQMD Executive Officer in writing within 30 days after the site no longer qualifies as a large operation.

MM 5.4-2 To reduce equipment emissions, the following measures shall be implemented when feasible:

- Use low emission mobile construction equipment. “CARB Certified” heavy construction equipment conforms to the latest off-road CARB emission standards and is the lowest polluting equipment available. The use of this equipment would reduce heavy equipment NO_X emissions by approximately 30 percent and heavy equipment PM_{10} emissions by approximately 50 percent from the emissions levels shown in Tables 5.4-3 through 5.4-5. This is a substantial reduction but will not reduce emissions to less than the significance thresholds.
- Maintain construction equipment engines by keeping them tuned.
- Use low-sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2.

- Utilize existing power sources (i.e., power poles) when feasible. This measure would minimize the use of higher polluting gas or diesel generators.

- Use aqueous diesel fuel where feasible and reasonably commercially available.

- Use cooled exhaust gas recirculation (EGR) where feasible and reasonably commercially available.

Several of the mitigation measures listed above are advanced emission control technologies that are currently not commercially available. For example, aqueous diesel fuel reduces NO_X formation by reducing combustion temperatures, resulting in lower NO_X emissions. According to SCAQMD, the current availability of this fuel technology is limited, and it may not be available for use at the Landfill. In addition, with EGR diesel engines, a small amount of hot exhaust gas is routed through a cooler and is mixed with fresh air entering the engine. The exhaust gas helps reduce the temperature during combustion, which lowers the formation of thermal NO_X. EGR technology is in the development phase and has not been fully commercialized. To the extent that the advanced emissions-control technologies become reasonably commercially available, or are required by the CARB from grading contractors, then such advanced emissions-control technologies will be used.

- Furthermore, a requirement to install diesel particulate filters on construction equipment used at the Landfill was considered to further reduce emissions. However, the availability of construction equipment retrofitted with diesel particulate filters is limited. This is a result of operational problems in diesel engines equipped with these filters. Therefore, this potential mitigation measure for construction is considered infeasible.

4.2.10.3 Additional Mitigation

Based on the analysis presented above, even with implementation of regulatory compliance measures and previously-adopted mitigation measures, impacts would be significant. No additional measures have been identified that would further reduce the severity of identified significant impacts.

4.2.11 Level of Significance after Mitigation

The Proposed Project would result in new significant GHG impacts that were not previously identified in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR. Impacts would be significant and unavoidable after implementing identified regulatory compliance measures and mitigation measures.

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Backfilling	
01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	• Mix backfill soil with water prior to moving • Dedicate water truck or high capacity hose to backfilling equipment • Empty loader bucket slowly so that no dust plumes are generated • Minimize drop height from loader bucket
Clearing and Grubbing	
02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	• Maintain live perennial vegetation where possible • Apply water in sufficient quantity to prevent generation of dust plumes
Clearing Forms	
03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	• Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	
04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	• Follow permit conditions for crushing equipment • Pre-water material prior to loading into crusher • Monitor crusher emissions opacity • Apply water to crushed material to prevent dust plumes
Cut and Fill	
05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	• For large sites, pre-water with sprinklers or water trucks and allow time for penetration • Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – Mechanical/Manual	
06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	• Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed Soil	
07-1 Stabilize disturbed soil throughout the construction site; and 07-02 Stabilize disturbed soil between structures	• Limit vehicular traffic and disturbances on soils where possible • If interior block walls are planned, install as early as possible • Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust • plumes

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Earth-Moving Activities	
08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	• Grade each project phase separately, timed to coincide with construction phase • Upwind fencing can prevent material movement on site • Apply water or a stabilizing agent in sufficient • quantities to prevent the generation of visible dust plumes
Importing/Exporting of Bulk Materials	
09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	• Use tarps or other suitable enclosures on haul trucks • Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage • Comply with track-out prevention/mitigation requirements • Provide water while loading and unloading to reduce visible dust plumes
Landscaping	
10-1 Stabilize soils, materials, slopes	• Apply water to materials to stabilize Maintain materials in a crusted condition • Maintain effective cover over materials • Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes • Hydroseed prior to rain season
Road Shoulder Maintenance	
11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	• Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs • Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder • maintenance costs
Screening	
12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	• Dedicate water truck or high capacity hose to screening operation • Drop material through the screen slowly and minimize drop height • Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop • point
Staging Areas	
13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	• Limit size of staging area • Limit vehicle speeds to 15 miles per hour • Limit number and size of staging area entrances/exists

Table 5.4-6 (from Mitigation Measure 5.4-1): Required Best Available Control Measures (SCAQMD Rule 403, Table 1)

Control Measure	Guidance
Stockpiles/Bulk Material Handling	
14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	• Add or remove material from the downwind portion of the storage pile • Maintain storage piles to avoid steep sides or faces
Traffic Areas for Construction Activities	
15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	• Apply gravel/paving to all haul routes as soon as possible to all future roadway areas • Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	
16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16.2 Stabilize soils at the completion of trenching activities.	• Pre-watering of soils prior to trenching is an effective preventive measure. • For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching • Washing mud and soils from equipment at the • conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck Loading	
17-1 Pre-water material prior to loading; and 17.2 Ensure that freeboard exceeds six inches (CVC 23114)	• Empty loader bucket such that no visible dust plumes are created • Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	
18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	• Haul waste material immediately off site
Unpaved Roads/Parking Lots	
19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	• Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant Land	
20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 5.4-7 (from Mitigation Measure 5.4-1): Fugitive Dust Control Actions (SCAQMD Rule 403, Table 1)

Fugitive Dust Source Category Control Actions	
Earth-Moving (Except Construction Cutting and Filling Areas, and Mining Operations)	
(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by the ASTM [American Society for Testing and Materials] method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; **OR**
(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-Moving: Construction Fill Areas	
(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.
Earth-Moving: Construction Cut Areas and Mining Operations	
(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed Surface Areas (Except Completed Grading Areas)	
(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed Surface Areas: Completed Grading Areas	
(2c)	Apply chemical stabilizers within five working days of grading completion; **OR**
(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive Disturbed Surface Areas	
(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; **OR**
(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; **OR**
(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all
(3d)	times thereafter; **OR** Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	
(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; **OR**
(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; **OR**
(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.

Table 5.4-7 (from Mitigation Measure 5.4-1): Fugitive Dust Control Actions (SCAQMD Rule 403, Table 1)

Fugitive Dust Source Category Control Actions	
Open Storage Piles	
(5a)	Apply chemical stabilizers; **OR**
(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; **OR**
(5c)	Install temporary coverings; **OR**
(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	
(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

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4.3 NOISE

This section discusses the existing noise environment, summarizes existing noise and vibration regulations, and evaluates potential noise and vibration impacts associated with the Proposed Project. The existing conditions at the Landfill represent the environmental baseline in this Subsequent EIR. This section also presents the Proposed Project's impact assessment methodology, potential impacts, and mitigation measures. The Proposed Project's impacts are compared to the impacts identified in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR. The noise measurement sheets are included as **Appendix D** of this Subsequent EIR.

4.3.1 Scoping Process

OCWR received eight comment letters from Public Agencies and 103 comment letters from individuals during the public review period of the Initial Study/Notice of Preparation (IS/NOP). **Appendix A** of this Subsequent EIR includes the NOP and Initial Study, the NOP distribution list, a summary of comments received during public scoping, and comment letters from Public Agencies. None of the comment letters from Public Agencies included comments related to noise. Many comments from individuals were related to noise, which are summarized below.

The comments received during the public review period related to noise expressed general concern for the increase in noise generated from additional truck trips, backup alarms, gas explosions,[1] and blasting activities. Comments related to "gas explosions" were likely referring to occasional loud backfiring events at a gas-to-energy plant while the plant was in operation at the Prima Deshecha Landfill (Landfill); the plant has since been decommissioned, and the Proposed Project does not include any changes to landfill gas (LFG) collection. In addition, the Proposed Project would not affect blasting activities, which were addressed in the Second Supplemental EIR to the 2001 GDP EIR.

4.3.2 Summary of Previous Environmental Documents

A summary of the noise analysis in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and the applicable addenda to those documents related to noise and vibration are provided below.

4.3.2.1 2001 GDP EIR

The noise effects of the 2001 GDP were identified and analyzed in Section 4.10, Noise, of the 2001 GDP EIR. The Addenda to the 2001 GDP EIR did not change any of the conclusions of the 2001 GDP EIR.

The noise analysis within the 2001 GDP EIR assessed impacts related to potentially expanded daily operations at the Landfill and the future incorporation of a golf course on Zone 1 as well as traffic

[1] Landfill gas (LFG) is collected via the landfill gas collection system and is carefully monitored to ensure proper management.

impacts associated with the completion of Avenida La Pata southward through the site to Avenida Pico.

The analysis of operations within Zone 1 determined that noise impacts associated with the 2001 GDP to the nearest receptor with a line of sight to the landfill (i.e., single-family homes at Forster Ranch)[2] would not substantially increase and that noise levels would likely decrease over time as operations moved farther away. Potential noise impacts associated with Zone 4 were screened out due to there being no line of sight to surrounding receptors.

As it relates to traffic noise, the increase in noise was determined to be less than 1 A-weighted decibel (dBA), which was considered to be less than significant. Furthermore, the anticipated recreational uses were qualitatively discussed and, due to the passive nature of uses such as a golf course and park, it was determined that these uses would not generate noise impacts to surrounding receptors.

Finally, a qualitative discussion of construction noise impacts indicated that construction noise impacts would be no louder than existing Landfill operations due to the use of similar heavy equipment. While no specific impacts were found related to noise in the 2001 GDP EIR, mitigation was provided. Mitigation measures from the 2001 GDP EIR are provided in **Appendix G** of this Subsequent EIR. All the mitigation measures from the 2001 GDP EIR remain as project commitments that apply to the Proposed Project.

4.3.2.2 First Supplemental EIR to the 2001 GDP EIR

The First Supplemental EIR to the 2001 GDP EIR determined that while there would be an incremental change to construction activities at the Landfill as a result of proposed landslide stabilization measures, it was not expected to be greater than the noise levels associated with landslide stabilization construction previously analyzed in the 2001 GDP EIR and was not expected to contribute significantly to noise levels because of ongoing disposal operations at the Landfill. Further, much of this landslide remediation activity was to take place in and around Zone 4, farther from sensitive receptor sites than current operations within Zone 1. The Pre-Mitigation and Regional Environmental Enhancement Plans would support the open space quality of the area and would reduce noise from post-closure activities by acting as a buffer space between the landfill operations and surrounding residences. Based on these determinations, no further analysis was warranted and no additional mitigation was required.

4.3.2.3 Addendum No. 1 to the First Supplemental EIR to the 2001 GDP EIR

During the course of geotechnical investigations and report preparation for Zone 4 occurring in 2008–2009, the extent of hard rock (San Onofre Breccia Formation) within the Zone 4 development

[2] Although Talega was/is geographically closer to Zone 4, the 2001 GDP EIR determined that Forster Ranch was the closest sensitive receptor with a line of sight to Landfill operations and, as such, was the only sensitive receptor analyzed. In the analysis in Section 4.3.8 of this Subsequent EIR, the closest sensitive receptors in each of the surrounding neighborhoods of the Proposed Project site are analyzed, regardless of line of sight. Refer to **Table 4.3.A** in Section 4.3.4, Existing Environmental Setting, of this Subsequent EIR, for a list of sensitive receptors analyzed in this Subsequent EIR.

was evaluated. It was determined that the hard rock would require controlled blasting to allow excavation pursuant to the approved development plan. The blasted rock, once excavated, would be crushed to create an aggregate byproduct material that may be used in road base or for other on-site construction materials. The purpose of Addendum No. 1 to the First Supplemental EIR to the 2001 GDP EIR was to evaluate these blasting and crushing/processing operations at the Landfill site and the potential impacts of these operations.

To support Addendum No. 1 to the First Supplemental EIR to the 2001 GDP EIR, a noise and vibration assessment was prepared to address potential in noise and vibration effects from blasting and rock crushing/processing that were not analyzed in the First Supplemental EIR to the 2001 GDP EIR. The assessment determined that the Breccia project would not result in any new significant impacts that would require mitigation or any new unavoidable significant adverse impacts. Additionally, as discussed in Section 4.3.2.5 below, the noise analysis for the Second Supplemental EIR to the 2001 GDP EIR found that noise levels at sensitive receptors associated with blasting, pulverizing, and stockpiling would be well below the maximum daytime noise level threshold of 75 dBA maximum instantaneous noise level (L_{max}) and maximum nighttime noise level threshold of 70 dBA L_{max}. Therefore, noise levels associated with blasting, pulverizing, and stockpiling would not exceed thresholds at nearby sensitive receptors, and the impacts would be less than significant.

4.3.2.4 Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR

On September 27, 2018, the Director of OCWR approved Addendum No. 6 to the 2001 GDP EIR/ Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR, which addressed the following changes to the GDP:

- Revised the Landfill closure dates from 2019 to 2050 for Zone 1 and from 2067 to 2102 for Zone 4.

- Reduced the Zone 1 landfill development footprint by 1.8 acres.

These changes did not result in any increases to the following: (1) volume of accepted solid waste, (2) development footprint, (3) design capacity, (4) slopes of the ultimate fill grading plans, (5) permitted depth of waste, or (6) landfill final elevations for the Zone 1 and Zone 4 landfill development areas as analyzed in the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR found that the revised Landfill closures dates would not result in any significant impacts to noise after the incorporation of mitigation measures. According to the Addendum, the average daily tonnage received at the Landfill from 2002–2017 was 1,780 tons per day (TPD), compared to the 4,000 TPD that was analyzed in the 2001 GDP EIR. The Addendum concluded that existing Landfill operation and construction and demolition waste recycling operations did not result in any significant noise impacts to sensitive receptors located near the Landfill, and that the continuation of Landfill operations to 2102 would also not result in any noise that would exceed those noise levels analyzed in the 2001 GDP EIR.

4.3.2.5 Second Supplemental EIR to the 2001 GDP EIR

The Second Supplemental EIR to the 2001 GDP EIR determined that concurrent operation of the Proposed Project would not exceed noise thresholds at sensitive receptors. The Second Supplemental EIR to the 2001 GDP EIR included updated noise analyses to determine if noise levels associated with blasting, pulverizing, and stockpiling would exceed maximum noise level thresholds at sensitive receptors. It was determined that noise levels would be well below the maximum daytime noise level threshold of 75 dBA L_{max} and maximum nighttime noise level threshold of 70 dBA L_{max}. Additionally, it was found that if the maximum noise increase associated with off-site hauling of pulverized material and soil import truck trips for liner installation were to occur closer to the project site, it would not result in a significant impact because maximum daily operational noise levels are well below applicable thresholds. Further, it was determined that even if maximum vibration levels were reached in the project area, the combined vibration impact would still be below that most sensitive criteria of 0.12 peak particle velocity (PPV) measured in inches per second (in/sec) for fragile structures. Overall, the Second Supplemental EIR to the 2001 GDP EIR determined the concurrent operations would have a less than significant impact related to noise and vibration with mitigation incorporated. All mitigation commitments are contained within the 2001 GDP, the 2001 GDP EIR, and the First Supplemental EIR to the 2001 GDP EIR. Due to these determinations, no further analysis was warranted and no additional mitigation was required.

4.3.3 Technical Background

The following provides an overview of the characteristics of sound and the regulatory framework that applies to noise within the vicinity of the project site. Supporting calculations are included in the appendices of this environmental document.

4.3.3.1 Characteristics of Sound

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel is a unit of measurement that indicates the relative intensity of a sound. Sound levels in decibels are calculated on a logarithmic basis.

An increase of 10 decibels (dB) represents a tenfold increase in acoustic energy, 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements, which better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy; therefore, the farther away the noise receiver is from the noise source, the lower the perceived noise level. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise-sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the Community Noise Equivalent Level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels.

CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring between 7:00 p.m. and 10:00 p.m. (defined as relaxation hours), and a 10 dBA weighting factor applied to noises occurring between 10:00 p.m. and 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. Typically, local jurisdictions will use the CNEL noise scale for long-term noise impact assessment. When assessing the annoyance factor, other noise rating scales of importance include the maximum instantaneous noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels (3 dB or greater) are considered potentially significant.

4.3.3.2 Characteristics of Vibration

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors where the motion may be discernible. However, without the effects associated with the shaking of a building, there is less adverse reaction. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Building damage is not a factor for normal operation and heavy equipment activities, with the occasional exception of blasting and pile driving during construction.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Impacts with ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet of the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet, based on the Federal

Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. For most projects, it is assumed that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, heavy equipment operational activities have the potential to result in ground-borne vibration that could be perceptible and annoying. Ground-borne noise is not likely to be a problem because noise arriving via the normal airborne path usually will be greater than ground-borne noise.

Ground-borne vibration has the potential to disturb people as well as damage buildings. Although it is very rare for ground-borne vibration to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings (FTA 2018). Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or PPV. RMS is best for characterizing human response to building vibration, and PPV is used to characterize the potential for damage. Decibel notation acts to compress the range of numbers required to describe vibration. Vibration velocity level in decibels is defined as:

$$L_V = 20 \log_{10} [V/V_{ref}]$$

where L_V is the vibration velocity in decibels (VdB), "V" is the RMS velocity amplitude, and "V_{ref}" is the reference velocity amplitude, or 1 x 10^{-6} in/sec used in the United States.

4.3.4 Existing Environmental Setting

The Landfill site is 1,530 acres in southeastern Orange County, partially within San Juan Capistrano, San Clemente, and unincorporated Orange County. The Landfill is located at 32250 Avenida La Pata, and access is provided by Interstate 5 (I-5), State Route 74 (SR-74), and Avenida La Pata. Traffic noise on Avenida La Pata and existing operations at the Landfill property are the dominant noise sources to surrounding uses, while local traffic and maintenance activities in the surrounding communities make up the remainder of the existing noise environment. **Table 4.3.A** describes the surrounding noise-sensitive land uses, which are also presented graphically on **Figure 4.3.1**, **Surrounding Sensitive Receptors.**

Table 4.3.A: Surrounding Noise-Sensitive Land Uses

Receptor	Distance (ft) / Direction Relative to Zone 1	Distance (ft) / Direction Relative to Zone 4
San Juan Hills High School	3,450 / North	3,230 / Northwest
Church of Jesus Christ of Latter Day Saints	3,455 / North	2,400 / Northwest
Rancho San Juan Community	550 / North	1,775 / West
Rancho San Juan Hills Estates Community	1,140 / West	6,800 / West
Forster Ranch Community	2,840 / Southeast	3,200 / Southwest
Talega Residential Community	4,830 / Southeast	1,225 / South

Source: Compiled by LSA (2024).
ft = foot/feet



LSA

LEGEND

- Prima Deshecha Landfill (PDLF) Boundary
- Operations
- Modeled Receptors

0 550 1100
FEET

SOURCE: OCWR (2001, 2005, 2010, 2017, 6/2020); Google (2019)

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FIGURE 4.3.1

Increase in Maximum Daily Operations at Prima Deshecha Landfill

Surrounding Sensitive Receptors

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To assess the existing noise conditions in the area, noise measurements were gathered at the Proposed Project site. The locations of those noise measurements are shown on **Figure 4.3.2, Existing Noise Monitoring Locations**. Five long-term, 24-hour measurements (LT-1 through LT-5) and two 20-minute short-term measurement (ST-1) were taken from December 5 to December 6, 2023. **Table 4.3.B** shows the results of the noise measurements. Existing noise levels range from 42.3 dBA CNEL to 51.3 dBA CNEL at the surrounding sensitive receptors.

Table 4.3.B: Existing Noise Level Measurements

Location	Description	Range of Daytime Noise Levels (dBA L_{eq})	Range of Evening Noise Levels (dBA L_{eq})	Range of Nighttime Noise Levels (dBA L_{eq})	Average Daily Noise Level (dBA CNEL)
LT-1	At the corner of Via Granada and Paseo Carmona in the Rancho San Juan Community.	45.9-53.3	42.1-48.9	36.3-43.3	49.6
LT-2	Across the street from 28552 Avenida Placida in the Rancho San Juan Hills Estates Community	41.6-46.4	39.8-41.2	34.2-43.1	46.1
LT-3	Located near 3725 Diamante in the Forster Ranch Community.	38.8-46.6	37.5-39.5	34.9-39.4	44.8
LT-4	Located across the street from 23 Calle Canela in the Talega Residential Community.	42.9-58.3	41.8-44.7	35.4-44.3	51.3
LT-5	Located at the northern corner of 32 Via Balcon in the Talega Residential Community.	38.5-48.6	45.1-45.8	34.3-39.2	46.3
ST-1[1]	Located at San Juan Hills High School, 29211 Stallion Ridge, approximately 30 ft south of Building J.	43.4-50.8	39.6-46.4	33.8-40.8	47.1
ST-2[1]	Located near the center of Prima Deshecha Landfill, approximately 500 ft west of equipment operations.	38.6-46.0	34.8-41.6	29.0-36.0	42.3

Source: Compiled by LSA (2023).
[1] Hourly and daily noise levels are estimated based on the noise contour for LT-1, which has a similar noise environment.
CNEL= Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet
L_{eq} = equivalent continuous sound level

4.3.4.1 Existing Traffic Noise

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) (FHWA 1977) was used to evaluate traffic-related noise conditions along roadway segments in the Proposed Project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Existing average daily traffic (ADT) volumes in the Proposed Project area were obtained from the Traffic Volume and Vehicle Miles Traveled (VMT) Study (**Appendix E** of this Subsequent EIR) (LSA 2025). The standard vehicle mix for Southern California roadways was used for roadways in the Proposed Project area. **Table 4.3.C** lists the existing traffic noise levels in the Proposed Project area. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in **Appendix D**.

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LSA

LEGEND

- Prima Deshecha Landfill (PDLF) Boundary
- Long-Term Monitoring Location
- Short-Term Monitoring Location

0 550 1100
FEET

SOURCE: OCWR (2001, 2005, 2010, 2017, 6/2020); Google (2022)

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FIGURE 4.3.2

Increase in Maximum Daily Operations at Prima Deshecha Landfill

Existing Noise Monitoring Locations

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Table 4.3.C: Existing Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane
Ortega Highway between I-5 Southbound Ramps and I-5 Northbound Ramps	39,852	71	130	269	67.7
Ortega Highway between I-5 Northbound Ramps and Rancho Viejo Road	45,584	72	139	293	68.6
Ortega Highway between Rancho Viejo Road and La Novia Avenue	37,254	74	150	317	69.4
Ortega Highway between La Novia Avenue and Calle Entradero	36,212	82	176	377	71.9
Ortega Highway between Calle Entradero and Reata Road	32,909	77	165	354	71.5
Ortega Highway between Reata Road and Antonio Parkway–Avenida La Pata	30,706	104	221	474	72.9
Avenida La Pata between Ortega Highway and Stallion Ridge	25,508	69	141	299	69.3
Avenida La Pata between Stallion Ridge and Prima Deshecha Landfill	20,379	66	124	259	67.8
Avenida La Pata between Prima Deshecha Landfill and Camino Del Rio	17,501	55	110	233	67.9
Avenida La Pata between Camino Del Rio and Avenida Vista Hermosa	18,979	58	116	246	68.2
Avenida Vista Hermosa between Avenida La Pata and Target–Sports Park	19,740	< 50	99	208	67.1
Avenida Vista Hermosa between Target-–Sports Park and Camino Vera Cruz	19,771	< 50	99	209	67.1
Avenida Vista Hermosa between Camino Vera Cruz and Via Turqueza	25,580	58	117	247	68.2
Avenida Vista Hermosa between Via Turqueza and Camino Faro–Camino Laurel	26,165	59	118	251	68.3
Avenida Vista Hermosa between Camino Faro–Camino Laurel and Calle Frontera	25,804	58	117	248	68.2
Avenida Vista Hermosa between Calle Frontera and I-5 Northbound Ramps	30,499	71	134	279	68.1
Avenida Vista Hermosa between I-5 Northbound Ramps and I-5 Southbound Ramps	22,587	< 50	109	228	67.3

Source: Compiled by LSA (2024).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels
ft = foot/feet

4.3.5 Regulatory Setting

4.3.5.1 Federal Regulations

Federal Transit Administration (FTA). The County and the two cities of San Juan Capistrano and San Clemente do not have specific limits or thresholds for vibration. Vibration standards included in the

FTA's *Transit Noise and Vibration Impact Assessment Manual* (2018) are used in this analysis for ground-borne vibration impacts on human annoyance, as shown in **Table 4.3.D**.

Table 4.3.D: Vibration Annoyance Criteria

Land Use	Maximum L_v (VdB)[1]	Description of Use
Workshop	90	Distinctly feelable vibration. Appropriate to workshops and non-sensitive areas.
Office	84	Feelable vibration. Appropriate to offices and non-sensitive areas.
Residential Day	78	Feelable vibration. Appropriate for computer equipment and low-power optical microscopes (up to 20X).
Residential Night and Operating Rooms	72	Vibration not feelable, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power microscopes (100X) and other equipment of low sensitivity.

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018)
[1] As measured in 1/3-octave bands of frequency over the frequency range 8 to 80 hertz.
FTA = Federal Transit Administration VdB = vibration velocity decibels
L_V = velocity in decibels

The criteria for environmental impact from ground-borne vibration and noise are based on the maximum levels for a single event. **Table 4.3.E** lists the potential vibration building damage criteria, as suggested in the FTA *Transit Noise and Vibration Impact Assessment Manual* (2018). FTA guidelines show that a vibration level of up to 0.5 PPV in/sec (FTA 2018) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster) and would not result in any vibration damage. For a non-engineered timber and masonry building, the building vibration damage criterion is 0.2 PPV in/sec.

Table 4.3.E: Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inch/inches per second

4.3.5.2 Regional Regulations

Noise Element of the County General Plan. Chapter VIII, Noise Element, of the County of Orange General Plan (County of Orange 2005) has developed noise standards for all noise sources. The County specifies outdoor and indoor noise limits for residential uses, places of worship, educational facilities, hospitals, hotels/motels, and commercial and other land uses. The noise standard for exterior living areas is 65 dBA CNEL. The County prohibits new residential land uses within the 65 dBA CNEL contour from any noise sources, including highways and airports.

Non-residential, noise-sensitive land uses such as hospitals, rest homes, convalescent hospitals, places of worship, and schools will not be permitted within the 65 dBA CNEL area from any source

unless appropriate mitigation measures are included such that the standards contained in the Noise Element and in appropriate State and federal codes are met. The indoor noise standard is 45 dBA CNEL, which is consistent with the standard in the California Noise Insulation Standard. The County also enforces building sound transmission and indoor fresh air ventilation requirements specified in Chapter 35 of the Uniform Building Code.

Outdoor living area is a term used by the County to define spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include backyards, balconies, patio areas, barbecue areas, jacuzzi areas, etc. that are associated with residential uses; outdoor patient recovery or resting areas, etc. associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship that have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes that may be adversely impacted by noise. Outdoor areas that are not usually included in this definition are: front yard areas, driveways, greenbelts, and maintenance areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and outdoor areas associated with school facilities that are not typically associated with educational uses and which are prone to adverse noise impacts (e.g., school play yard areas). The County does not specify outdoor noise standards for non-outdoor living areas.

County Standard Conditions of Approval. The County's Standard Conditions of Approval require that all heavy vehicles or equipment, fixed or mobile, operated within 1,000 feet of a dwelling shall be equipped with properly operating and maintained mufflers. All operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control). Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings.

County Noise Control Ordinance. The County's Noise Control Ordinance requires that exterior noise levels at residential properties not exceed the basic noise standard of 55 dBA between the hours of 7:00 a.m. and 10:00 p.m. and shall not exceed 50 dBA between the hours of 10:00 p.m. and 7:00 a.m., plus the following limits:

- Basic noise level for a cumulative period of not more than 30 minutes in any 1 hour; or
- Basic noise level plus 5 dBA for a cumulative period of not more than 15 minutes in any 1 hour; or
- Basic noise level plus 10 dBA for a cumulative period of not more than 5 minutes in any 1 hour; or
- Basic noise level plus 15 dBA for a cumulative period of not more than 1 minute in any 1 hour; or
- Basic noise level plus 20 dBA for any period of time.

The basic interior noise standards for residential uses are set at 45 dBA between 10:00 p.m. and 7:00 a.m. and 55 dBA between 7:00 a.m. and 10:00 p.m., plus the following limits:

- Basic noise level for a cumulative period of not more than 5 minutes in any 1 hour; or
- Basic noise level plus 5 dBA for a cumulative period of not more than 1 minute in any 1 hour; or
- Basic noise level plus 10 dBA for any period of time.

In the event that the ambient noise level exceeds any of the above noise limits, the cumulative period applicable to that category shall be increased to reflect that ambient noise level. It shall be unlawful for any person at any location within the unincorporated area of the County to create any noise or to allow the creation of any noise that causes the noise level to exceed the residential noise standards stated above. Each of the noise limits above shall be reduced 5 dBA for noise consisting of impact noise, simple tone noise, speech, music, or any combination thereof. Noise sources associated with construction, repair, remodeling, or grading of any real property are exempt, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday.

4.3.5.3 Local Regulations

While the Proposed Project is located within the limits of Orange County, portions of the Proposed Project site and surrounding sensitive receptors are also located within the cities of San Juan Capistrano and San Clemente. Although not directly applicable to OCWR, local noise regulations are included below for informational purposes and to evaluate whether the Proposed Project would be consistent with "standards established in the local general plan or noise ordinance, or applicable standards of other agencies." These regulations would apply to many of the cumulative projects listed in **Table 4.A** in Chapter 4.0 of this Subsequent EIR.

City of San Juan Capistrano Noise Element of the General Plan. To ensure that noise procedures do not adversely affect sensitive receptors, the City of San Juan Capistrano uses land use compatibility standards when planning and making development decisions. **Table 4.3.F** summarizes City noise standards for various types of land uses. The standards represent the maximum acceptable noise level and are used to determine noise impacts.

Table 4.3.F: City of San Juan Capistrano Interior and Exterior Noise Standards

Land Use	Noise Standard (dBA CNEL)	
	Interior	Exterior
Residential (all) – Single-family, multifamily, duplex, mobile home	65	45
Residential – Transient lodging, hotels, motels, nursing homes, hospitals, assisted care facilities	65	45
Private offices, churches, libraries, theaters, concert halls, meeting halls, schools	65	45
General commercial, retail, reception, restaurant	65	50
Manufacturing, industrial[1]	—	—
Parks, playgrounds	65[2]	—
Golf courses, outdoor spectator sports	70[2]	—

Source: Noise Element (City of San Juan Capistrano 1999).
[1] Noise standards not applicable to industrial districts.
[2] Outdoor environment is limited to playground areas, picnic areas, and other areas of frequent human use.
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

The City of San Juan Capistrano Noise Element also contains goals and policies to be used to guide decisions concerning land uses that are common sources of excessive noise levels. The City's General Plan policies most applicable to the Proposed Project include the following:

- **Policy 1.2:** Provide noise control measures and sound attenuating construction in areas of new construction or rehabilitation.

- **Policy 3.1:** Reduce the impacts of noise-producing land uses and activities on noise-sensitive land uses.

City of San Juan Capistrano Municipal Code. The City of San Juan Capistrano Municipal Code (Title 9, Chapter 3, Article 5, Noise Standards [residential and nonresidential]) regulates noise from stationary sources. These standards provide restrictions on the amount and duration of noise generated by stationary sources at a property, as measured at the property line of a noise receptor. These stationary-source noise standards are shown in **Table 4.3.G**.

Table 4.3.G: City of San Juan Capistrano Noise Standards for Stationary Noise Sources

Exterior Noise Level	Time Period
Residential, Public, and Institutional Land Uses	
65 dBA L_{eq}	7:00 AM to 7:00 PM
55 dBA L_{eq}	7:00 PM to 10:00 PM
45 dBA L_{eq}	10:00 PM to 7:00 AM
Commercial Land Uses	
65 dBA L_{eq}	At any time during the day

Source: City of San Juan Capistrano Municipal Code, Title 9: Land Use, Chapter 3: Zoning Districts and Standards, Article 5: Supplemental District Regulations, Section 9-3.531: Noise Standards (Residential and Nonresidential).
dBA = A-weighted decibels
L_{eq} = equivalent continuous sound level

The following limits, as presented in Table 3-31 of the City of San Juan Capistrano's Municipal Code, are applied to the standards in **Table 4.3.G** as applicable to the source of noise operations:

- Allowable exterior noise level for a cumulative period of not more than 30 minutes in any 1 hour; or

- Allowable exterior noise level plus 5 dBA for a cumulative period of not more than 15 minutes in any 1 hour; or

- Allowable exterior noise level plus 10 dBA for a cumulative period of not more than 5 minutes in any 1 hour; or

- Allowable exterior noise level plus 15 dBA for a cumulative period of not more than 1 minutes in any 1 hour; or

- Allowable exterior noise level plus 20 dBA for any period of time.

The City of San Juan Capistrano exempts noise sources associated with construction, repairs, remodeling, or the grading of any real property, except that such activities shall not be exempt from the provisions of this section if conducted from 6:00 p.m. to 7:00 a.m. on Monday through Friday, or from 4:30 p.m. to 8:30 a.m. on Saturday, or at any time on Sunday or a national holiday.

City of San Clemente Safety Element of the General Plan. As presented in the Safety Element of the City of San Clemente General Plan, the following represent the applicable goals and policies related to noise:

- **Goal:** Minimize exposure to excessive noise levels by taking appropriate actions to avoid or mitigate the detrimental effects of exposure to excessive noise levels on humans and animals and, in particular, on sensitive land uses.

- **Policy S-4.01: Noise Control.** Effectively control ambient and stationary noise conditions by maintaining baseline information, monitoring conditions, following State guidelines, and enforcing locally adopted ordinances and building codes.

- **Policy S-4.03: Interagency Collaboration.** Encourage and collaborate with local, regional, and statewide transportation agencies to minimize transportation related noise impacts and provide appropriate mitigation measures that also consider impacts to community character and on natural resources (e.g., views).

- **Policy S-4.06: Truck Routes.** To minimize truck traffic noise impacts to sensitive land uses, designate areas where truck traffic is prohibited.

The Safety Element also specifies that specific standards regulating the noise environment are provided by the City of San Clemente Noise Control Ordinance.

City of San Clemente Noise Control Ordinance. Section 8.48.050, Exterior Noise Standards, of the City's Noise Control Ordinance states that exterior noise levels at residential properties shall not exceed the allowable exterior noise standard of 55 dBA between the hours of 7:00 a.m. and 10:00 p.m. and shall not exceed 50 dBA between the hours of 10:00 p.m. and 7:00 a.m., plus the following limits:

- Allowable exterior noise level for a cumulative period of not more than 30 minutes in any 1 hour; or

- Allowable exterior noise level plus 5 dBA for a cumulative period of not more than 15 minutes in any 1 hour; or

- Allowable exterior noise level plus 10 dBA for a cumulative period of not more than 5 minutes in any 1 hour; or

- Allowable exterior noise level plus 15 dBA for a cumulative period of not more than 1 minute in any 1 hour; or

- Allowable exterior noise level plus 20 dBA for any period of time.

The allowable interior noise standard for residential uses are set at 40 dBA between 10:00 p.m. and 7:00 a.m. and 50 dBA between 7:00 a.m. and 10:00 p.m., plus the following limits:

- The allowable interior noise level plus 5 dBA for a cumulative period of more than 5 minutes in any 1 hour; or

- The allowable interior noise level plus 10 dBA for a cumulative period of more than 1 minute in any 1 hour; or

- The allowable interior noise level plus 15 dBA for any period of time.

In the event that the ambient noise level exceeds any of the above noise limits, the cumulative period applicable to that category shall be increased to reflect that ambient noise level.

Section 8.48.090, Exemptions from Chapter, of the City of San Juan Capistrano, City of San Clemente, and/or County of Orange Noise Control Ordinance states that noise sources associated with construction activity are exempt, provided said activities take place only between the hours of 7:00 a.m. and 6:00 p.m. on Monday through Friday, between the hours of 8:00 a.m. and 6:00 p.m. on Saturday, and at no time on a Sunday or a City-recognized holiday, and provided all grading activities also comply with Section 15.36.190 of the City's Municipal Code regarding time of grading operations.

4.3.6 Methodology

The County, the City of San Juan Capistrano, and the City of San Clemente documents that provide criteria for assessing noise impacts are the Noise Elements of the General Plans and the Noise Ordinances within the Municipal Codes. Where appropriate, if the County or local agencies do not provide criteria to analyze a potential impact (i.e., vibration damage), guidance from the federal level is often used. Therefore, for the purposes of this analysis, the FTA criteria will be utilized to evaluate potential vibration impacts. The evaluation of noise and vibration impacts associated with the Proposed Project includes the following:

- Determination of the noise levels from vehicular traffic associated with the Proposed Project using guidelines provided by the FHWA and from on-site stationary sources associated with the Proposed Project using reference noise data at off-site noise-sensitive uses, and comparison of these levels to the Cities' and County's pertinent noise standards.

- Determination of the vibration levels at off-site noise-sensitive uses and comparison to the vibration building damage and/or human annoyance criteria recommended by the FTA.

- Determination of the potential mitigation measures to reduce operational noise and vibration impacts to all off-site noise-sensitive land uses.

4.3.7 Thresholds of Significance

A project would normally have a significant effect on the environment related to noise and vibration if any of the following occurs:

Threshold 4.3.1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Threshold 4.3.2: Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Threshold 4.3.3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The following were used to respond to the questions above to determine whether the Proposed Project would result in a significant noise impact.

- For off-site transportation-related impacts:
    - Where the existing ambient noise level is less than 65 dBA and a project-related permanent increase in ambient noise levels of 5 dBA CNEL or greater occurs, or
    - Where the existing ambient noise level is greater than 65 dBA and a project-related permanent increase in ambient noise levels of 3 dBA CNEL or greater occurs.
- For off-site non-transportation-related stationary source impacts, including operations:
    - If project operations would generate noise levels in excess of the maximum allowable noise levels for the surrounding receptors.
- For off-site vibration impacts:
    - Exceedance of the FTA standards of 0.2 PPV in/sec and 72 VdB as listed above in **Tables 4.3.C** and **4.3.D** for vibration.

4.3.8 Project Impacts

As stated in Chapter 3.0, Project Description, of this Subsequent EIR, the Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. The approval for the increased daily tonnage is anticipated to occur in 2026. However, the increase in daily tonnage is anticipated to take place gradually. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. The Proposed Project would also allow for up to 36 operational emergency days during which the 8,000 TPD limit

could be exceeded by up to 2,000 TPD (i.e., up to 10,000 TPD could be processed on operational emergency days). Such operational emergency days could occur in the event that another OCWR facility is temporarily closed, necessitating diversion of waste to the Landfill. As discussed in Section 1.2, the actual demand for waste fluctuates based on many factors in addition to the permitted capacity. The locations of the Landfill zones are shown on **Figure 3.3, Landfill Zones,** in Chapter 3.0.

The Proposed Project would allow for an increase in daily tonnage that may be processed in Zones 1 and 4 and, to be conservative, the analysis below includes simultaneous daily landfill acceptance operations at both Zones 1 and 4.

The proposed changes to the Landfill operations have the potential to generate noise and vibration impacts in excess of existing and approved operations. The analysis contained in this section includes an evaluation of potential noise and vibration impacts due to each of these sources generated by the Proposed Project. Due to the long-term nature of the proposed operational changes analyzed in this Subsequent EIR, all activities will be assumed to be operational impacts and not construction impacts.

Threshold 4.3.1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. Operations associated with the Proposed Project would utilize additional heavy equipment that has the potential to generate noise impacts at surrounding receptors. This noise analysis considers the potential increase in noise that would occur with implementation of the Proposed Project from the increased use of on-site equipment as well as off-site impacts from traffic noise.

In order to conduct this evaluation, reference noise levels were first determined. **Table 4.3.H** lists the maximum noise levels from typical equipment that could be used at the Landfill as recommended for noise impact assessments based on a distance of 50 feet between the equipment and a noise receptor.

Table 4.3.H: Typical Maximum Equipment Noise Levels (L_{max})

Type of Equipment	Acoustical Usage Factor	Suggested Maximum Sound Levels for Analysis (dBA L_{max} at 50 ft)
Excavator	40	85
Generator	50	82
Grader	40	85
Loader	40	80
Rubber Tire Dozer	40	85
Scraper	40	85
Tractor	40	84
Truck	40	84

Source: *Highway Construction Noise Handbook* (FHWA 2006).
dBA = A-weighted decibels
FHWA = Federal Highway Administration
ft = foot/feet
L_{max} = maximum instantaneous noise level

Each piece of equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Lmax\,(composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Using the equations from the methodology above and the reference information in **Table 4.3.H**, the composite existing and projected noise levels at a distance of 50 feet are presented in **Table 4.3.I**.

Table 4.3.I: Potential Noise Impacts

Phase	Equipment	Composite Maximum Noise Level at 50 ft (dBA L_{max})
Daily Operations – Existing	Scraper, Dozer, Compactor, Garbage Truck	89
Daily Operations – Projected	Scraper, Dozer, Compactor, Garbage Truck	92

Source: Compiled by LSA (2024).
dBA = A-weighted decibels
ft = foot/feet
L_{max} = maximum instantaneous noise level

In addition to the noise level measurements at the surrounding sensitive uses, LSA collected reference noise level measurements on September 17, 2020, to identify the specific noise levels associated with each piece of equipment used in daily Landfill operations. A doubling of equipment in operation would cause an increase of approximately 3 dBA. The composite maximum noise levels measured and projected are provided in **Table 4.3.I**.

4.3.8.1 Operations For Zones 1 and 4 (Increased Equipment Use)

Less than Significant Impact. In order to calculate the noise levels expected to result from an increase in Landfill operational stationary source activities, the software SoundPLAN was used. SoundPLAN is a noise modeling program that allows 3-D calculations to be made taking into account topography, ground attenuation, and shielding from structures and walls. Within the model, the noise library allows for the input of many noise sources and calculates the composite noise levels experienced at any receptor necessary. The results from any calculation can be presented in both tabular and graphic formats. Model results indicate that maximum noise levels associated with the Proposed Project's combination of equipment used on a daily basis at a distance of 50 feet would approach 92 dBA L_{max}. Due to the intervening topography, the results of the SoundPLAN model indicate that maximum noise levels at the surrounding receptors have the potential to occur when equipment is located farther from the activity boundaries because the existing hills will provide more reduction when activities are located closer to terrain.

The results of the modeling at each surrounding receptor is presented in **Table 4.3.J** and in graphic format on **Figure 4.3.3, Operational Noise Levels**. As shown, noise levels associated with operation of Zones 1 and 4 would not exceed thresholds, and the impacts would be less than significant.

Table 4.3.J: Summary of Zone 1 and Zone 4 Operational Noise Levels

Receptor	Distance[1] (ft)	Maximum Noise Level (dBA L_{max})	Maximum Noise Level Threshold Daytime/Nighttime (dBA L_{max}) [2]
San Juan Hills High School	3,450	44.9	75 / 70
Church of Jesus Christ of Latter Day Saints	2,400	53.3	75 / 70
Rancho San Juan Community	550	58.0	75 / 70
Rancho San Juan Hills Estates Community	1,140	42.1	75 / 70
Forster Ranch Community	1,740	52.2	75 / 70
Talega Residential Community	1,225	52.9	75 / 70

Source: Compiled by LSA (2024).

[1] Distances reflect the nearest structure of each land use category in a given direction to the nearest activity boundary. The SoundPLAN modeling will determine the maximum noise level at the receptor regardless of distance to the boundary.

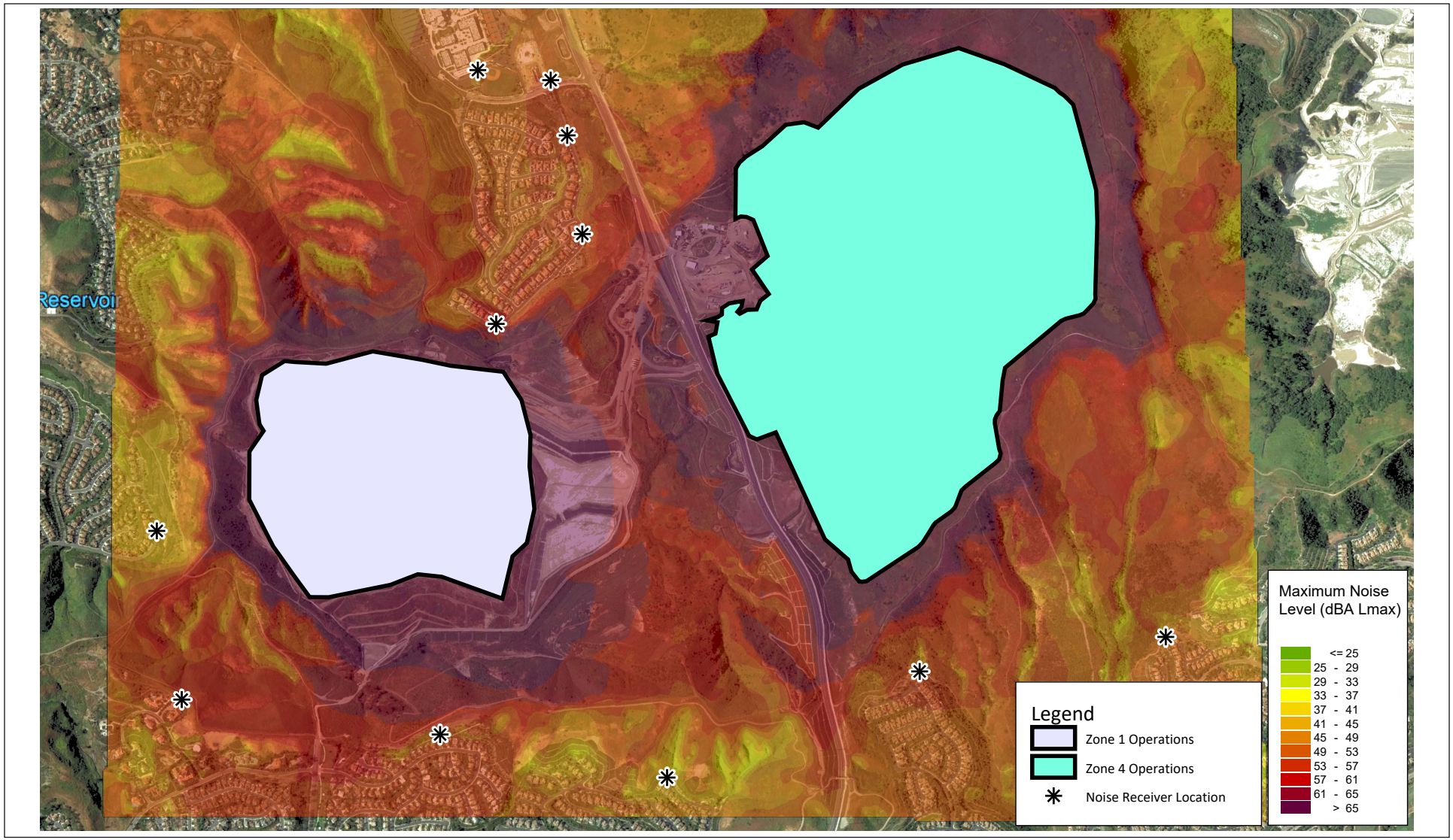
[2] Per the City Municipal Codes and the County Code, the maximum noise level threshold is established by adding 20 dBA to the allowable daytime/nighttime exterior or basic noise level.

dBA = A-weighted decibels
ft = foot/feet
L_{max} = maximum instantaneous noise level

In addition to daily equipment operations, landfill activities at Zones 1 and 4 include the safety-required operation of back-up alarms. In order to maintain safety at the Landfill, equipment back-up alarms are required by the California Code of Regulations (CCR), Title 8 Section §1592, Warning Methods. OCWR utilizes back-up alarms that are designed and installed by original equipment manufacturers (OEM) to meet this standard. Back-up alarms, also known as vehicle motion alarms or back-up beepers, typically produce a volume of 97–112 dB at the source.

This is loud enough to damage hearing and can be heard from blocks away. The Society of Automotive Engineers (SAE) and Occupational Safety and Health Administration (OSHA) have mandated that the signal and sound level of a back-up alarm should be 87–112 dB at 4 feet. Assuming the maximum noise level of 112 dB at a distance of 4 feet could occur, the resulting noise level at the nearest receptor would be 69.2 dBA L_{max} when beepers are active at the border of Zone 1. This level is below the daytime and nighttime noise level standards of 75 dBA L_{max} and 70 dBA L_{max}, respectively. The noise level would not exceed thresholds, and the impacts would be less than significant. No mitigation is required.

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LSA

FIGURE 4.3.3

0 850 1700
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SOURCE: LSA

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Increase in Maximum Daily Operations at Prima Deshecha Landfill
Zones 1 & 4 Operational Noise Levels

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4.3.8.2 Long-Term Operational (Traffic) Noise Impacts

Less than Significant Impact. The FHWA Highway Traffic Noise Prediction Model (FHWA RD-77-108) (FHWA 1977) was used to evaluate traffic-related noise conditions along roadway segments in the Proposed Project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resulting noise levels are weighted and summed over 24-hour periods to determine the CNEL values. The existing (2023), future build-out (2045), and future build-out (2045) with the Los Patrones Parkway Extension (LPPE) ADT volumes were obtained from the Traffic Volume and VMT Study (**Appendix E**). The standard vehicle mix for Southern California roadways was used for roadways in the Proposed Project area for the existing conditions, and the trip distribution was combined with the standard vehicle mix for the with-project scenarios. **Tables 4.3.K, 4.3.L, and 4.3.M** show the existing (2023), future build-out (2045), and future build-out (2045) with LPPE traffic noise levels without and with the Proposed Project (when operating at the maximum permitted daily amount of 8,000 TPD), respectively, on roadway segments in the Proposed Project area. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and the model printouts are provided in **Appendix D**.

Tables 4.3.K, **4.3.L, and 4.3.M** show that the Proposed Project-related traffic noise would increase by up to 1.1 dBA along Avenida La Pata when operating at the maximum permitted daily amount of 8,000 TPD. All other roadway segments in the Proposed Project vicinity would experience a lower increase in Proposed Project-related traffic noise. Noise level increases less than 3 dBA would not be perceptible to the human ear in an outdoor environment. Therefore, traffic noise impacts from Proposed Project-related traffic on off-site sensitive receptors would be less than significant. No mitigation measures are required.

4.3.8.3 Conclusions

The Proposed Project would not result in a new significant or unavoidable impact. Proposed project-related increases in daytime noise levels would be less than significant, and no additional mitigation measures would be required. Utilizing the same criteria used in the previous 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and applicable Addenda, and the Second Supplemental EIR to the 2001 GDP EIR, this analysis has determined that there would be no new significant impacts related to noise.

All mitigation measures from the 2001 GDP EIR remain as commitments that apply to the Proposed Project. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.3.11.2, Previously Adopted Mitigation. As stated in 4.3.11.3, Additional Mitigation, no additional mitigation measures are required.

Table 4.3.K: Existing (2023) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Ortega Highway between I-5 Southbound Ramps and I-5 Northbound Ramps	39,852	71	130	269	67.7	42,534	75	140	291	68.2	0.5
Ortega Highway between I-5 Northbound Ramps and Rancho Viejo Road	45,584	72	139	293	68.6	48,679	77	151	318	69.1	0.5
Ortega Highway between Rancho Viejo Road and La Novia Avenue	37,254	74	150	317	69.4	40,348	81	164	349	70.1	0.7
Ortega Highway between La Novia Avenue and Calle Entradero	36,212	82	176	377	71.9	39,306	90	193	415	72.5	0.6
Ortega Highway between Calle Entradero and Reata Road	32,909	77	165	354	71.5	36,003	85	183	393	72.2	0.7
Ortega Highway between Reata Road and Antonio Parkway–Avenida La Pata	30,706	104	221	474	72.9	33,800	115	244	525	73.6	0.7
Avenida La Pata between Ortega Highway and Stallion Ridge	25,508	69	141	299	69.3	28,602	78	160	341	70.2	0.9
Avenida La Pata between Stallion Ridge and Prima Deshecha Landfill	20,379	66	124	259	67.8	23,473	74	144	303	68.8	1.0
Avenida La Pata between Prima Deshecha Landfill and Camino Del Rio	17,501	55	110	233	67.9	18,533	58	117	249	68.4	0.5
Avenida La Pata between Camino Del Rio and Avenida Vista Hermosa	18,979	58	116	246	68.2	20,011	61	123	262	68.6	0.4
Avenida Vista Hermosa between Avenida La Pata and Target–Sports Park	19,740	< 50	99	208	67.1	20,772	< 50	105	221	67.5	0.4

Table 4.3.K: Existing (2023) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Avenida Vista Hermosa between Target-–Sports Park and Camino Vera Cruz	19,771	< 50	99	209	67.1	20,803	< 50	105	222	67.5	0.4
Avenida Vista Hermosa between Camino Vera Cruz and Via Turqueza	25,580	58	117	247	68.2	26,612	61	122	259	68.5	0.3
Avenida Vista Hermosa between Via Turqueza and Camino Faro–Camino Laurel	26,165	59	118	251	68.3	27,197	61	124	263	68.6	0.3
Avenida Vista Hermosa between Camino Faro–Camino Laurel and Calle Frontera	25,804	58	117	248	68.2	26,836	61	123	261	68.5	0.3
Avenida Vista Hermosa between Calle Frontera and I-5 Northbound Ramps	30,499	71	134	279	68.1	31,531	73	139	290	68.4	0.3
Avenida Vista Hermosa between I-5 Northbound Ramps and I-5 Southbound Ramps	22,587	< 50	109	228	67.3	23,103	58	112	234	67.4	0.1

Source: Compiled by LSA (2024).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = foot/feet

Table 4.3.L: Future Build-Out (2045) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Ortega Highway between I-5 Southbound Ramps and I-5 Northbound Ramps	47,267	77	144	300	68.4	50,417	81	156	325	68.9	0.5
Ortega Highway between I-5 Northbound Ramps and Rancho Viejo Road	55,335	80	158	332	69.4	58,970	85	170	360	69.9	0.5
Ortega Highway between Rancho Viejo Road and La Novia Avenue	51,224	89	184	392	70.8	54,858	96	199	425	71.4	0.6
Ortega Highway between La Novia Avenue and Calle Entradero	52,011	104	223	480	73.5	55,645	113	241	519	74.0	0.5
Ortega Highway between Calle Entradero and Reata Road	47,711	98	211	454	73.1	51,345	107	229	494	73.6	0.5
Ortega Highway between Reata Road and Antonio Parkway–Avenida La Pata	44,986	133	284	611	74.5	48,620	144	309	664	75.1	0.6
Avenida La Pata between Ortega Highway and Stallion Ridge	31,132	78	160	342	70.2	34,766	87	181	387	71.0	0.8
Avenida La Pata between Stallion Ridge and Prima Deshecha Landfill	24,549	72	140	293	68.6	28,183	82	162	341	69.6	1.0
Avenida La Pata between Prima Deshecha Landfill and Camino Del Rio	21,789	62	127	269	68.9	23,001	65	135	287	69.3	0.4
Avenida La Pata between Camino Del Rio and Avenida Vista Hermosa	24,660	67	138	293	69.3	25,872	71	145	309	69.7	0.4
Avenida Vista Hermosa between Avenida La Pata and Target–Sports Park	20,736	< 50	102	215	67.3	21,948	< 50	109	230	67.7	0.4

Table 4.3.L: Future Build-Out (2045) Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Avenida Vista Hermosa between Target-–Sports Park and Camino Vera Cruz	20,767	< 50	102	215	67.3	21,979	< 50	109	231	67.7	0.4
Avenida Vista Hermosa between Camino Vera Cruz and Via Turqueza	26,821	60	120	255	68.4	28,033	63	127	269	68.7	0.3
Avenida Vista Hermosa between Via Turqueza and Camino Faro–Camino Laurel	27,406	60	122	259	68.5	28,618	63	128	272	68.8	0.3
Avenida Vista Hermosa between Camino Faro–Camino Laurel and Calle Frontera	27,045	60	121	256	68.4	28,257	63	127	270	68.8	0.4
Avenida Vista Hermosa between Calle Frontera and I-5 Northbound Ramps	31,654	72	137	286	68.3	32,866	74	143	299	68.6	0.3
Avenida Vista Hermosa between I-5 Northbound Ramps and I-5 Southbound Ramps	23,308	< 50	111	233	67.4	23,914	59	115	240	67.6	0.2

Source: Compiled by LSA (2024).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = foot/feet

Table 4.3.M: Future Build-Out (2045) with LPPE Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Ortega Highway between I-5 Southbound Ramps and I-5 Northbound Ramps	46,424	76	143	297	68.3	49,574	81	154	322	68.9	0.6
Ortega Highway between I-5 Northbound Ramps and Rancho Viejo Road	53,874	79	155	327	69.3	57,509	84	168	354	69.8	0.5
Ortega Highway between Rancho Viejo Road and La Novia Avenue	49,568	88	180	383	70.7	53,202	95	195	417	71.2	0.5
Ortega Highway between La Novia Avenue and Calle Entradero	50,165	102	218	469	73.3	53,799	110	236	508	73.8	0.5
Ortega Highway between Calle Entradero and Reata Road	45,868	96	205	442	72.9	49,502	105	224	482	73.5	0.6
Ortega Highway between Reata Road and Antonio Parkway–Avenida La Pata	43,189	129	277	595	74.4	46,823	141	302	649	74.9	0.5
Avenida La Pata between Ortega Highway and Stallion Ridge	25,840	70	142	302	69.4	29,474	80	164	350	70.3	0.9
Avenida La Pata between Stallion Ridge and Prima Deshecha Landfill	21,398	68	128	267	68.0	25,032	77	151	318	69.1	1.1
Avenida La Pata between Prima Deshecha Landfill and Camino Del Rio	26,044	69	142	303	69.7	27,256	72	150	320	70.0	0.3
Avenida La Pata between Camino Del Rio and Avenida Vista Hermosa	26,161	70	143	304	69.6	27,373	73	150	321	69.9	0.3
Avenida Vista Hermosa between Avenida La Pata and Target–Sports Park	21,206	< 50	104	218	67.4	22,418	55	110	233	67.8	0.4

Table 4.3.M: Future Build-Out (2045) with LPPE Traffic Noise Levels Without and With Project

Roadway Segment	Without Project Conditions					With Project Conditions					
	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	ADT	Centerline to 70 dBA CNEL (ft)	Centerline to 65 dBA CNEL (ft)	Centerline to 60 dBA CNEL (ft)	CNEL (dBA) 50 ft from Centerline of Outermost Lane	Increase from Baseline Conditions
Avenida Vista Hermosa between Target-–Sports Park and Camino Vera Cruz	21,237	< 50	104	219	67.4	22,449	56	111	234	67.8	0.4
Avenida Vista Hermosa between Camino Vera Cruz and Via Turqueza	26,983	60	121	256	68.4	28,195	63	127	270	68.8	0.4
Avenida Vista Hermosa between Via Turqueza and Camino Faro–Camino Laurel	27,568	61	122	260	68.5	28,780	63	129	273	68.9	0.4
Avenida Vista Hermosa between Camino Faro–Camino Laurel and Calle Frontera	27,207	60	121	257	68.5	28,419	63	128	271	68.8	0.3
Avenida Vista Hermosa between Calle Frontera and I-5 Northbound Ramps	31,838	72	137	287	68.3	33,050	75	143	300	68.6	0.3
Avenida Vista Hermosa between I-5 Northbound Ramps and I-5 Southbound Ramps	23,394	< 50	112	234	67.4	24,000	60	115	241	67.6	0.2

Source: Compiled by LSA (2024).
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = foot/feet

Threshold 4.3.2: Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Less than Significant Impact. During the daily operations of Zones 1 and 4, heavy equipment similar to large bulldozers would be used. Based on the FTA's *Transit Noise and Vibration Impact Assessment Manual*, vibration levels associated with heavy equipment are estimated to be 0.089 PPV in/sec and 87 VdB. **Table 4.3.N** presents the results of the vibration assessment during daily operations when operating at the maximum permitted daily amount of 8,000 TPD. The results show that vibration levels related to operations at Zones 1 and 4 would be well below the applicable thresholds.. Therefore, no mitigation is required.

Table 4.3.N: Summary of Zone 1 and Zone 4 Operational Vibration Levels

Receptor	Distance[1] (ft)	Vibration Damage Threshold (PPV in/sec)	Vibration Annoyance Threshold (VdB)	Maximum Vibration Level (PPV)	Maximum Vibration Level (VdB)
San Juan Hills High School	3,220	0.2	72	0.0004	23.7
Church of Jesus Christ of Latter Day Saints	2,360	0.2	72	0.0006	27.8
Rancho San Juan Community	525	0.2	72	0.0031	47.3
Rancho San Juan Hills Estates Community	1,110	0.2	72	0.0014	37.6
Forster Ranch Community	1,710	0.2	72	0.0009	31.9
Talega Residential Community	1,185	0.2	72	0.0013	36.7

Source: Compiled by LSA (2024).
[1] Distances reflect the nearest structure of receptor in a given direction to the nearest project zone boundary. All other structures of each land use category in the given direction would experience lower vibration levels.
ft = foot/feet PPV = peak particle velocity
in/sec = inches per second VdB = vibration velocity decibels

The Proposed Project would not result in a new significant or unavoidable impact. It is extremely unlikely that maximum vibration levels would be generated from each piece of heavy equipment simultaneously because impacts associated with vibration are generally very local to the operation. In addition, vibration levels are not additive because of the different transmission paths (i.e., different distances and ground densities). Though not additive, in the event that maximum vibration levels are generated by multiple pieces of heavy equipment simultaneously, each individual vibration impact level at any given receptor would be well below the most sensitive criteria of 0.12 PPV in/sec for structures that are fragile, and the combined effect would be well below the most sensitive criteria. Vibration impacts would be less than significant, and no additional mitigation would be required. Compared to the impacts identified in the previous 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and applicable Addenda, this analysis has determined there would be no new significant impacts related to operational vibration.

All mitigation measures from the 2001 GDP EIR remain as commitments that apply to the Proposed Project. The mitigation measures from the 2001 GDP EIR are reiterated in Section 4.3.11.2, Previously Adopted Mitigation. Additional mitigation measures, if any, are indicated under Section 4.3.11.3, Additional Mitigation.

Threshold 4.3.3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Landfill is not within an airport land use plan or within 2 miles of a public airport or public use airport. The nearest public use airport is John Wayne Airport in unincorporated Orange County, between the cities of Costa Mesa, Irvine, and Newport Beach, approximately 18.4 miles northwest of the Proposed Project site (JWA 2020). As a result, the Proposed Project would not expose people residing or working in the Proposed Project area to excessive noise levels from aircraft. Therefore, no noise related to proximity to a public airport or any airport land use plan would occur, and no mitigation is required.

The Proposed Project would not result in a new significant or unavoidable impact related to proximity to a public or private airport or airstrip, and no mitigation is required. Utilizing the same criteria used in the previous 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and applicable Addenda, this analysis has determined that there would be no new significant impacts related to proximity to a public or private airport or airstrip.

4.3.9 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. The cumulative study area analyzed for potential noise impacts in close proximity to sensitive receptors.

Less than Significant Impact. A cumulative noise impact would occur if multiple sources of noise from cumulative projects or multiple project components combine to create impacts in close proximity to a sensitive receptor. Because noise and vibration impacts associated with the Proposed Project are localized and rapidly attenuate with distance, as identified in the analysis above, any cumulative projects would be located too far from the Landfill site to contribute to cumulative impacts related to noise levels due to typical construction or operational activities. The location of potential traffic noise impacts is over 1.25 miles from Landfill operations.

Cumulative traffic noise impacts could occur as a result of increased traffic volumes on local roadways due to future growth from cumulative projects in the project area. Cumulative traffic noise impacts are based on the difference between existing traffic volumes and future traffic volumes with the Proposed Project and in combination with related projects currently being proposed or built in the vicinity of the Proposed Project site. An increase of 5 dBA CNEL where the existing ambient noise level is less than 65 dBA and an increase of 3 dBA CNEL where the existing ambient noise level is greater than 65 dBA is considered a significant impact. **Tables 4.3.J**, **4.3.K, and 4.3.L** include cumulative projects in the with-project scenarios, and the increase in Proposed Project-related traffic noise would be no greater than 1.1 dBA CNEL along the haul route roadway segments. Noise level increases below 3.0 dBA are considered barely perceptible to humans in an outdoor environment as well as being below the significance thresholds. Therefore, the Proposed

Project would not contribute substantially to cumulative roadway noise impacts and would have a less than cumulatively considerable impact. No additional mitigation is required.

In addition to traffic noise generated by cumulative projects in the area, the La Pata Transfer Station, which is located over 0.5 mile north of Zone 4, would potentially generate noise impacts to surrounding areas. Based on information provided in the OC Public Works' (OCPW) 2019 *Addendum 10 to Final EIR Nos. 584 and 589 to The Ranch Plan – La Pata Transfer Station Project*, exterior operations at the transfer station would generate minimal noise levels at the closest common receptor (i.e., San Juan Hills High School). The minimal noise level combined with the Proposed Project noise levels would still remain well below the applicable noise level standards. Therefore, the Proposed Project would not contribute substantially to cumulative operational noise impacts and would not result in a cumulatively considerable impact. No mitigation is required.

4.3.10 Level of Significance Prior to Mitigation

As presented above, operation of the Proposed Project would not result in any new significant impacts as compared to the applicable noise and vibration standards and would not result in any new impacts as compared to the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and applicable Addenda. No further mitigation measures are required.

4.3.11 Regulatory Compliance Measures and Mitigation Measures

4.3.11.1 Regulatory Compliance Measures

The implementation of the following regulatory compliance measures would reduce or minimize operational noise under the Proposed Project.

Regulatory Compliance Measure NOI-1 As presented in Section 4.3.5.2, the County of Orange Noise Ordinance, the County's Standard Conditions of Approval require that all heavy vehicles or equipment, fixed or mobile, operated within 1,000 feet of a dwelling shall be equipped with properly operating and maintained mufflers. Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings**.**

4.3.11.2 Previously Adopted Mitigation

Mitigation measures are currently in place for impacts associated with the landfill component of the 2001 GDP, as identified in the 2001 GDP EIR (numerical designations are from the 2001 GDP EIR) and the First Supplemental EIR to the 2001 GDP EIR. All mitigation commitments contained within the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, the Second Supplemental EIR to the 2001 GDP EIR, and applicable Addenda will continue to be applicable to the Landfill operations. All mitigation measures are included in **Appendix G**. Because no mitigation is required to address the impacts of the Proposed Project, mitigation measures are not restated here.

4.3.11.3 Additional Mitigation

Based on the analysis presented above and impact determinations shown in Section 4.3.8, no additional mitigation is necessary.

4.3.12 Level of Significance after Mitigation

Based on the analysis presented above, the implementation of the Proposed Project would result in a less than significant impact to surrounding sensitive uses.

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5.0 ENVIRONMENTAL ISSUES NOT REQUIRING SUBSTANTIAL ADDITIONAL ANALYSIS

5.1 INTRODUCTION

This section provides a brief summary of the environmental issues associated with implementation of the Proposed Project that did not require substantial additional analysis. Pursuant to Section 15126.2 and 15126.4 of the *State CEQA Guidelines,* the Subsequent EIR should identify any new potentially significant adverse impacts or impacts that are substantially increased from those previously identified significant effects and recommend mitigation that would reduce or eliminate these impacts to levels of insignificance.

The existing conditions at the Prima Deshecha Landfill (Landfill) at the time the Notice of Preparation (NOP) was issued (September 2023) represent the environmental baseline in this Subsequent EIR. Impacts are evaluated in the context of the impacts identified in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR), the Second Supplemental EIR to the 2001 GDP EIR, and associated addenda (collectively, prior CEQA documentation for the Landfill). **Table 5.A** below presents the environmental topics evaluated in the prior CEQA documentation for the Landfill. Refer to Section 2.1.4 in Chapter 2.0, Introduction, for a discussion on the project components evaluated in prior CEQA documentation. This section is largely consistent with the information and findings in the Initial Study prepared for the Proposed Project (**Appendix A** of this Subsequent EIR) and includes a summary of comments received during the scoping process for the Proposed Project relevant to each topic. Because energy was not evaluated in prior CEQA documentation for the Landfill, a summary of the analysis is included that supports the determination that there would be no significant impacts and no mitigation required. As noted in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures, the thresholds of significance in this Subsequent EIR consider all revisions made to the *State CEQA Guidelines* since the 2001 GDP EIR, including energy, tribal cultural resources, and wildfire.

All mitigation measures contained within the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR will apply to the Proposed Project and are listed in the Mitigation Monitoring and Reporting Program (MMRP) (**Appendix G** of this Subsequent EIR). These mitigation measures are currently in place for impacts associated with the landfill component of the 2001 GDP, as identified in the 2001 GDP EIR.

5.2 SUMMARY OF ISSUES NOT REQUIRING SUBSTANTIAL ADDITIONAL ANALYSIS

5.2.1 Aesthetics

5.2.1.1 Scoping Comments

Comments received during the scoping process for the Proposed Project expressed concerns related to the need to evaluate impacts to aesthetic resources and concerns regarding the aesthetic effects of the use of Zone 4 for landfilling. The Proposed Project does not include any changes to previously approved Zone 4 operations.

Table 5.A: Environmental Topics Evaluated in Prior CEQA Documentation

Prior CEQA Documentation	Environmental Topics Evaluated
2001 GDP EIR	All
Addenda to the 2001 GDP EIR	
Addendum No. 1 to the 2001 GDP EIR	None
Addendum No. 2 to the 2001 GDP EIR	Biological Resources
Addendum No. 3 to the 2001 GDP EIR	Transportation
Addendum No. 4 to the 2001 GDP EIR	None
Addendum No. 5 to the 2001 GDP EIR	None
Addendum No. 6 to the 2001 GDP EIR	All except Energy, Tribal Cultural Resources, and Wildfire
Addendum No. 7 to the 2001 GDP EIR	All except Energy, Tribal Cultural Resources, and Wildfire
Addendum No. 8 to the 2001 GDP EIR	Biological Resources
Addendum No. 9 to the 2001 GDP EIR	Biological Resources
Addendum No. 10 to the 2001 GDP EIR	None
Addendum No. 11 to the 2001 GDP EIR	All except Agriculture and Forestry Resources, Energy, Mineral Resources, Tribal Cultural Resources, and Wildfire
Addendum No. 12 to the 2001 GDP EIR	Air Quality and Greenhouse Gas
Los Patrones Parkway Extension Project – Addendum to the 2001 GDP EIR	All except Energy
First Supplemental EIR to the 2001 GDP EIR	All
Addenda to the First Supplement EIR to the 2001 GDP EIR	
Addendum No. 1 to the First Supplemental EIR to the 2001 GDP EIR	Air Quality and Noise
Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR	All except Energy, Tribal Cultural Resources, and Wildfire
Addendum No. 3 to the First Supplemental EIR to the 2001 GDP EIR	Air Quality and Greenhouse Gas
Second Supplemental EIR to the 2001 GDP EIR	All except Energy, Tribal Cultural Resources, and Wildfire

Source: Compiled by LSA (2024).
CEQA = California Environmental Quality Act
EIR = Environmental Impact Report
GDP = General Development Plan

5.2.1.2 Summary of Prior Environmental Documentation

The prior CEQA documentation that included an analysis of impacts related to Aesthetics is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in an unavoidable significant adverse impact to aesthetics even after the implementation of mitigation measures, specifically in non-urbanized areas. The Landfill is visible from various areas within San Clemente and San Juan Capistrano. It was determined that the Landfill would substantially degrade the existing visual character or quality of public views of the site and its surroundings even after the implementation of mitigation measures. The 2001 GDP EIR found that operation of the GDP would result in no impacts to scenic resources. Although Interstate 5 (I-5) and State Route 74 (SR-74) are eligible State Scenic Highways, as designated by Caltrans, the Landfill is not visible from either highway due to the site's distance and topography of the intervening land. Additionally, Avenida La Pata is not an eligible or designated County or State Scenic Highway. Therefore, the 2001 GDP EIR concluded there would be no significant impacts associated with

proximity to scenic highways. The 2001 GDP EIR did not specify whether the Landfill's operation through completion of the GDP would result in a potentially significant impact to a scenic vista.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR determined that the buildout of the Zone 1 and Zone 4 landfill areas would not change, the development limits and final landfill elevations would not change, and the development through buildout of these landfill areas would continue to result in an unavoidable significant impact to aesthetics/views by the creation of a large artificial landform adjacent to native hillsides. Therefore, it was determined that there would be no change to the unavoidable significant impact conclusion for aesthetics in the 2001 GDP EIR.

Addendum No. 7 to the 2001 GDP EIR indicated that landscaping designed to blend the Landfill operation in with the native hillsides is ongoing and would continue through buildout of the Landfill. Therefore, it was determined that there would be no change to the unavoidable significant impact conclusion for aesthetics in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR indicated that landscaping would be redesigned and replaced to mimic existing landscaping conditions after construction, and the reconstructed fee booth and entrance way would not result in any changes to the existing condition for light and glare at the existing fee booth and flare station. Therefore, it was determined that there would be no change to the unavoidable significant impact conclusion for aesthetics in the 2001 GDP EIR.

The First Supplemental EIR to the 2001 GDP EIR determined that although there will be an incremental change to the landscape as a result of proposed landslide stabilization measures, it will not significantly change final surface grading or fill slopes. It was anticipated that aesthetic impacts from grading and cut slopes associated with landslide remediation within the revised limits of disturbance would be temporary in nature and less than significant. Therefore, it was determined that there would be no change to the unavoidable significant impact conclusion for aesthetics in the 2001 GDP EIR.

The Transportation Element Amendment 20-1 Los Patrones Parkway Extension (LPPE), which amended the 2001 GDP, determined that there are no scenic vistas within or adjacent to the Landfill, and there are no designated highways in the vicinity of the Landfill. Intervening ridgelines would screen views of the portion of the LPPE that traverses the Landfill from roadways designated on the County's Scenic Highway Plan. Additionally, it was found that if LPPE is constructed prior to the grading for Landfill activities, the visual change may appear more evident because they would be viewed in an open space context rather than in the suburban context that will be constructed with surrounding development and landfill operations. Therefore, it was determined that there would be no change to the unavoidable significant impact conclusion for aesthetics in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that the significant and unavoidable impact on aesthetics from the 2001 GDP EIR would remain. It was determined that potentially significant aesthetic impacts of the 2001 GDP landfilling activities from vantage points within San Juan Capistrano would be reduced to a less than significant level through the implementation of mitigation measures; however, potentially significant impacts from the landfilling activities within

the San Clemente viewshed would not be reduced to a less than significant level, even with the implementation of mitigation.

5.2.1.3 Proposed Project

As discussed above, the 2001 GDP EIR did not specify whether the Landfill's operation through completion of the GDP would result in a potentially significant impact to a scenic vista. A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the public's benefit. It is usually viewed from some distance away. The Landfill is visible from various areas within the cities of San Clemente and San Juan Capistrano. The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. Therefore, the Proposed Project would not alter the existing topography of the area or impact public vantage points and scenic vistas beyond what has been previously analyzed for Landfill operations. As a result, the Proposed Project would not have a substantial adverse effect on a scenic vista.

The Proposed Project would not expand the Landfill's footprint horizontally or vertically or alter the existing topography of the area, impacting scenic resources, beyond what has been previously analyzed for Landfill operations in the prior CEQA documentation. The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage; as a result, the Proposed Project would not result in any new significant impacts or increased impacts to aesthetic resources beyond what was previously analyzed in the prior CEQA documentation.

The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. Accordingly, no new impacts related to aesthetic resources would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures adopted as part of the 2001 GDP EIR. Therefore, the Proposed Project would not require mitigation with respect to aesthetics, and no further analysis or additional mitigation is required.

5.2.2 Agriculture and Forestry

5.2.2.1 Scoping Comments

No comments received during the scoping process expressed concerns related to agriculture and forestry resources.

5.2.2.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to agriculture and forestry resources is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR concluded that there were no prime or locally/regionally significant agricultural soils on the site, and no part of the Landfill was included in a Williamson Act contract. Therefore, the buildout of the 2001 GDP would not result in impacts to agricultural resources. Forestry and

timberland resources were not a topic that required evaluation at the time the 2001 GDP EIR was prepared. As discussed in Section 4.0 under the topic "Thresholds," this Subsequent EIR reflects all updates to the *State CEQA Guidelines* that are in effect at the time of the Notice of Preparation (NOP) issuance.

The First Supplemental EIR to the 2001 GDP EIR determined that there would be no effect on agricultural uses other than potentially removing the possibility of grazing as an acceptable land use in Zone 4 over the post-closure time period once the Pre-mitigation and Regional Environmental Enhancement plans were approved. Therefore, it was determined that there would be no change to the no impact conclusion included for agriculture resources in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum No. 7 to the 2001 GDP EIR determined that the expansion of the Landfill would not result in any significant impacts to agriculture and forestry resources because there are no agricultural or forestry resources within the Landfill property boundary. Therefore, it was determined that there would be no change to the no impact conclusion included for agriculture resources in the 2001 GDP EIR.

The LPPE addendum determined that the LPPE would not convert Important Farmland to non-agricultural use or conflict with agricultural zoning or a Williamson Act contract. Additionally, it was identified that no forestry resources were on the Landfill site, and the LPPE would not conflict with zoning of forest land or result in the loss or conversion of forest land. Therefore, it was determined that there would be no change to the no impact conclusion included for agriculture resources in the 2001 GDP EIR. Further, the LPPE would result in no impact to forestry resources.

The Second Supplemental EIR to the 2001 GDP EIR determined that the project would not result in substantial change from the previous analyses contained within the 2001 GDP EIR, and the analyses and mitigation measures outlined in the 2001 GDP EIR are adequate to support the project. Therefore, it was determined that there would be no change to the no impact conclusion included for agriculture resources in the 2001 GDP EIR.

5.2.2.3 Proposed Project

Subsequent to certification of the 2001 GDP EIR, the Landfill had not been subject to a new agricultural use, other than grazing. According to the most recent California Department of Conservation farmland maps, the Landfill is designated as urban and built-up and other land, and is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, or grazing land (DOC n.d.). The Proposed Project would not convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or any other type of farmland to a non-agricultural use, as there are no proposed changes to land use or project features that would otherwise affect agricultural uses. Therefore, no impacts to farmlands would occur, and no mitigation is required.

Similarly, there is no forest or timberland on the Landfill, and it is not zoned or currently used for forest land, timberland, or timberland production. As a result, the Proposed Project would not conflict with existing zoning for forest land, timberland, or timberland production. No comments

received during the scoping process expressed concerns related to agriculture and forestry resources.

Accordingly, no impacts to agriculture and forestry resources would occur with implementation of the Proposed Project. Therefore, no further analysis or additional mitigation is required.

5.2.3 Biological Resources

5.2.3.1 Scoping Comments

Comments received during the scoping process expressed concerns related to encroachment on natural habitat, disruption of wildlife, and impacts to the natural landscape. Additionally, comments specifically expressed concerns related to the presence of migratory bird species, California gnatcatcher, and Stephens' kangaroo rat in the area.

5.2.3.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to biological resources is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR determined that buildout of the GDP would result in permanent losses of native vegetation and wildlife habitat and displacement and/or loss of wildlife from landfilling activities and related support, stockpiling facilities in Zones 1 and 4, and the extension of La Pata Avenue through the project site. Circulation roadway improvements proposed on the project site would also result in interruption of wildlife movement. The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in an unavoidable significant impact to biological resources, even after the implementation of mitigation measures.

The First Supplemental EIR to the 2001 GDP EIR determined that incorporated changes and additional mitigation, in addition to the mitigation in the 2001 GDP EIR, would reduce potential significant adverse impacts related to biological resources to a less than significant level. Therefore, it was concluded that the significant and unavoidable impact for biological resources in the 2001 GDP EIR would be reduced to a less than significant impact.

Addendum No. 2 to the 2001 GDP EIR determined that a minor expansion of the coastal sage scrub mitigation planting area and of the Mitigation Site A riparian corridor planting area required for the landslide remediation project by the Clean Water Act Section 404 Permit would not cause a major new impact. The proposed mitigation sites were an existing manufactured slope and within an existing newly planned riparian corridor. By amending the Section 404 Permit, the proposed mitigation would be consistent with the previously implemented coastal sage scrub and riparian mitigation plan for the landslide remediation project. Therefore, it was determined that there would be no change to the significant and unavoidable impact conclusion for biological resources in the 2001 GDP EIR.

The Orange County Southern Sub-Region Habitat Conservation Plan (SSHCP), approved in 2007, established a permanent habitat reserve and perpetual land management program and has created

preservation area totaling 32,818 acres (USFWS 2007). In 2007, the Landfill was included in the Orange County SSHCP. As a result, OCWR installed over 122 acres of coastal sage scrub and 19 acres of native grassland as pre-mitigation for future biological impacts within a permanently protected 530-acre area of the Landfill property designated as Supplemental Open Space in the SSHCP. This provides full compensatory mitigation for all of the upland biological impacts identified in the 2001 GDP EIR that would occur with the full development of the Landfill.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR discussed the Landfill's inclusion on the SSHCP and determined that the continuation of operations at the Landfill would not result in any changes to the significant and unavoidable impact to biological resources even after the incorporation of mitigation. Therefore, it was determined that there would be no change to the significant and unavoidable impact conclusion included for biological resources in the 2001 GDP EIR.

Addendum No. 7 to the 2001 GDP EIR discussed OCWR's inclusion in the SSHCP and implementation of several habitat mitigation projects. It was determined that OCWR would continue implementing habitat mitigation projects both on and off site to fully compensate for significant impacts to biological resources resulting from buildout of the 2001 GDP. Therefore, it was determined that there would be no change to the significant and unavoidable impact conclusion for biological resources in the 2001 GDP EIR.

Under a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB), Region 9, Section 1600 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) and a Section 404 Permit with the United States Army Corps of Engineers (USACE), a Habitat Mitigation and Monitoring Plan (HMMP) was developed to implement and maintain the mitigation required to compensate for impacts to resources under the jurisdiction of CDFW, USACE, and RWQCB. Addendum Nos. 8 and 9 to the 2001 GDP EIR analyzed the full compensatory mitigation for development of the Zone 4 Landfill area at build out of the Landfill regarding impacts to these resources. Mitigation Measure 4.5-3d was updated, and it was determined that the proposed mitigation would not result in any new significant impacts.

Therefore, it was determined that there would be no change to the significant and unavoidable impact conclusion for biological resources in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR determined that a reconstruction project would mostly take place on previously impacted areas that have been completely disturbed. One undisturbed area would be impacted and result in 0.22 acre of impacts to coyote brush and mixed scrub vegetation. Mitigation outlined in the 2011 GDP EIR and SSCHP would ensure that the reconstruction of the fee booth and entrance area would not result in changes to the significance conclusion for biological resources. Therefore, it was determined that there would be no change to the significant and unavoidable impact conclusion for biological resources in the 2001 GDP EIR.

The LPPE addendum determined that the LPPE would result in potentially significant impacts to coastal sage scrub, grassland vegetation communities, suitable habitat for special-status plant species, riparian habitat, and jurisdictional resources. However, these impacts would only be considered significant absent consistency with and implementation of the SSHCP and associated

measures. With implementation of the SSCHP and associated measures, the LPPE would not result in any new or increased significant impacts. Additionally, the LPPE would not result in any new impacts or substantially increase the severity of impacts to wildlife movement or fish passage as previously analyzed in the 2001 GDP EIR. Therefore, it was determined that there would be no change to the less than significant impact conclusion for biological resources in the First Supplemental EIR to the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that the proposed project would have potential indirect impacts from construction activities (e.g., increased noise, dust, and air emissions) in habitat adjacent to access roads, staging areas, and the site. However, all project activities would fall within the Landfill development areas previously analyzed and mitigated for in the 2001 GDP EIR. Therefore, it was determined that there would be no change to the less than significant impact conclusion included for biological resources in the First Supplemental EIR to the 2001 GDP EIR.

5.2.3.3 Proposed Project

As described above, OCWR installed pre-mitigation for future biological impacts, and an HMMP was developed for compensatory mitigation for biological impacts resulting from build out of the Landfill. Because proposed operational changes are administrative in nature and the Proposed Project does not involve any construction, ground-disturbing activity, or expansion of the approved Landfill footprint, no new disturbance of native soils would occur. The project does not require excavation, grading, vegetation removal, or any physical site modifications that could affect previously undisturbed areas. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents. No new impact mechanisms would be introduced that were not already analyzed in prior environmental documents.

Therefore, the Proposed Project would not have the potential to result in indirect or direct impacts to biological resources, no new or additional mitigation is required. Accordingly, no impacts to biological resources would occur with implementation of the Proposed Project, and the Proposed Project would not affect implementation of any mitigation measures outlined in the prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.4 Cultural Resources

5.2.4.1 Scoping Comments

This section addresses archaeological and historical resources. Some cultural resources may also fall within the category of tribal cultural resources (TCRs), although TCRs can also include resources that do not fall within the narrower definition of archaeological and historical resources. TCRs are evaluated as a separate resource topic under CEQA; refer to Section 5.2.16. Comments received during the scoping process requested clarification as to the location of potential TCRs in relation to the Landfill site and additional information regarding the preliminary determination that the Proposed Project would be unlikely to have any impact to TCRs. A summary of tribal consultation

and the basis for the conclusion that the Proposed Project would have no impact to TCRs is provided in Section 5.2.16.

5.2.4.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to cultural resources is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would not result in impacts to historical resources and would not cause a substantial adverse change in the significance of a historical resource pursuant to *State CEQA Guidelines* Section 15064.5. The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a potentially significant impact to archaeological resources. In particular, grading, earthmoving, and excavation for the landfilling activities would result in removal or destruction of the archaeological resources. These impacts were found to be potentially significant based on the moderate to high sensitivity rating for archaeological resources assigned to the site, and mitigation was required. The analysis concluded that with implementation of mitigation, impacts would be reduced to a less than significant level.

The First Supplemental EIR to the 2001 GDP EIR determined that, due to the static nature of cultural resources in the landscape, the archaeological and paleontological conditions of the project would be consistent with those identified in the 2001 GDP EIR. It was determined that impacts from grading would be reduced to less than significant through mitigation. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for cultural resources in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum Nos. 7 and 11 to the 2001 GDP EIR determined that the respective projects would not result in any significant impacts to archaeological or paleontological resources after the incorporation of mitigation. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for cultural resources in the 2001 GDP EIR.

The LPPE addendum determined that the LPPE would not impact any historical resources since the 2001 GDP EIR did not identify any historic resources on the Landfill. Additionally, the LPPE would include grading activities that may result in impacts to sensitive archaeological resources, and mitigation would ensure impacts would be reduced to less than significant, consistent with the findings of the 2001 GDP EIR. Further, the 2001 GDP EIR did not identify an impact associated with disturbance of human remains. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for cultural resources in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR included additional archaeological research in support of the expansion of the Landfill into Zone 4. Only one cultural resource site was determined to be significant, and it was recommended as eligible for listing on the California Register of Historical Resources (California Register). The conclusions of this additional archaeological research were consistent with the findings of the 2001 GDP EIR, which concluded the GDP would result in

potentially significant impacts to archaeological resources and that mitigation was required. All areas of the project fall within the Landfill development areas previously analyzed. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for cultural resources in the 2001 GDP EIR, as the mitigation identified in the 2001 GDP EIR remains in effect.

5.2.4.3 Proposed Project

Because proposed operational changes are administrative in nature and the Proposed Project does not involve any construction, ground-disturbing activity, or expansion of the approved Landfill footprint, no new disturbance of native soils would occur. The project does not require excavation, grading, vegetation removal, or any physical site modifications that could affect previously undisturbed areas. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents. No new impact mechanisms would be introduced that were not already analyzed in prior environmental documents. Additionally, the mitigation identified in prior environmental documents remains in place. Therefore, the Proposed Project would not result in any new significant impacts or increased impacts to archaeological resources beyond what was previously analyzed in the prior CEQA documentation for the Landfill.

Accordingly, no impacts related to cultural resources would occur with implementation of the Proposed Project. The Proposed Project would not interfere with the implementation of any existing mitigation measures outlined in the prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.5 Energy

This section presents an analysis of the resource topic of energy, including quantitative analysis of anticipated energy use. Although the Initial Study (see **Appendix A**) stated that impacts due to the wasteful, inefficient, or unnecessary consumption of energy resources during operation are not anticipated to be significant, the Initial Study determined that impacts would be potentially significant because this topic had not been evaluated in prior CEQA documentation for the Landfill. Therefore, although no significant impacts are anticipated, a quantitative analysis is provided within this section for this resource topic to support this determination.

5.2.5.1 Scoping Comments

Comments received during the scoping process expressed concern related to the Proposed Project's general energy consumption and suggested that alternative waste management strategies be explored by OCWR.

5.2.5.2 Prior CEQA Documentation

Since certification of the 2001 GDP EIR in November 2001 and certification of the First Supplemental EIR to the 2001 GDP EIR in June 2007, there have been several revisions to CEQA and the *State CEQA Guidelines*. Most recently, CEQA and the *State CEQA Guidelines* were updated in December 2018, and several new topics were added, one of which was Energy. As discussed in Chapter 4.0 under the

topic "Thresholds," this Subsequent EIR reflects all updates to the *State CEQA Guidelines* that have occurred since the 2001 GDP EIR. This topic was not evaluated in the prior CEQA documentation for the Landfill as the revised guidelines were not applicable. Because the revised guidelines do apply, the following evaluation has been prepared.

5.2.5.3 Proposed Project

According to Section 15126.2(b) of the *State CEQA Guidelines*, "[i]f analysis of the project's energy use reveals that the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption use of energy, or wasteful use of energy resources, the EIR shall mitigate that energy use." The Appendix G checklist in the *State CEQA Guidelines* identifies two factors for evaluating the energy impacts of a project. The first is whether the project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. The second is whether the project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Appendix F of the *State CEQA Guidelines* is an advisory document that assists Lead Agencies in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

Energy demand is typically associated with day-to-day operations, including electricity, natural gas, and fuel consumption, and construction activities. This section discusses energy use resulting from implementation of the Proposed Project and evaluates whether the Proposed Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency.

5.2.5.4 Energy Consumption

This section discusses energy use resulting from implementation of the Proposed Project and evaluates whether the Proposed Project would result in the wasteful, inefficient, or unnecessary consumption of energy resources or conflict with any applicable plans for renewable energy and energy efficiency. The Proposed Project would not require any construction activities; therefore, this analysis focuses on operational emissions only.

The operation of the Proposed Project, which includes an increase in operational capacity from the current permitted operational capacity, would require the ongoing consumption of energy as a result of on-site facilities, equipment use, and vehicles (waste hauling and employee trips).

Electricity. Electricity is a humanmade resource. The production of electricity requires the consumption or conversion of energy resources (including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources) into energy. Electricity is used for a variety of purposes (e.g., lighting, heating, cooling, and refrigeration, and for operating appliances, computers, electronics, machinery, and public transportation systems).

According to the most recent data available, in 2022, California's electricity was generated primarily by natural gas (47.5 percent), renewable sources (52.2 percent), large hydroelectric (7.2 percent), nuclear (8.7 percent), coal (less than 1.0 percent), and other unspecified sources. Total

electric generation in California in 2022 was 287,220 gigawatt-hours (GWh), up 3.4 percent from the 2021 total generation of 277,764 GWh (CEC 2021a).

The Landfill is within the service territory of Southern California Edison (SCE). SCE provides electricity to more than 15 million people in a 50,000-square-mile area of Central, Coastal, and Southern California (SCE 2020). According to the California Energy Commission (CEC), total electricity consumption in the SCE service area in 2022 was 85,870 GWh (31,604 GWh for the residential sector and 54,266 GWh for the nonresidential sector). Total electricity consumption in the County in 2022 was 20,244 GWh (20,243,721,856 kilowatt-hours [kWh]), including 7,830 GWh for the residential sector and 12,414 GWh for the nonresidential sector (CEC 2023a). The Proposed Project does not include any new connections to the electrical grid or an increase in use of electricity. Although up to 35 additional employees are anticipated to be on site, they would use existing buildings with existing connections to the electrical grid and are not anticipated to have a substantial impact on electricity use. Therefore, the Proposed Project would not result in the wasteful, inefficient, or unnecessary consumption use of electricity or wasteful use of energy resources related to electricity, and no mitigation is required.

Natural Gas. Natural gas is a nonrenewable fossil fuel. Fossil fuels are formed when layers of decomposing plant and animal matter are exposed to intense heat and pressure under the surface of the Earth over millions of years. Natural gas is a combustible mixture of hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas is found in naturally occurring reservoirs in deep underground rock formations. Natural gas is used for a variety of uses (e.g., heating buildings, generating electricity, and powering appliances such as stoves, washing machines and dryers, gas fireplaces, and gas grills).

Natural gas consumed in California is used for electricity generation (45 percent), residential uses (21 percent), industrial uses (25 percent), and commercial uses (9 percent). California continues to depend on out-of-state imports for nearly 90 percent of its natural gas supply (CEC 2021b).

The Southern California Gas Company (SoCalGas) is the natural gas service provider for the area that includes the Landfill. SoCalGas provides natural gas to approximately 21.8 million people in a 24,000-square-mile service area throughout Central and Southern California, from Visalia to the Mexican border (SoCalGas 2020). According to the CEC, total natural gas consumption in the SoCalGas service area in 2022 was 5,026 million therms (2,230 million therms for the residential sector). Total natural gas consumption in the County in 2021 was 573 million therms (572,454,744 therms), including 352 million therms for the residential sector and 221 million therms for the nonresidential sector (CEC 2023b).

The Proposed Project does not include any new connections to the natural gas distribution system or an increase in use of natural gas. As stated above, although approximately 35 additional employees would be on site, they would use existing buildings and facilities and would not require an increase in the use of natural gas. Therefore, the Proposed Project would not result in the wasteful, inefficient, or unnecessary consumption use of natural gas, or wasteful use of energy resources related to natural gas, and no mitigation is required.

Fuel Usage. Petroleum is also a nonrenewable fossil fuel. Petroleum is a thick, flammable, yellow-to-black mixture of gaseous, liquid, and solid hydrocarbons that occurs naturally beneath the Earth's surface. Petroleum is primarily recovered by oil drilling. It is refined into a large number of consumer products, primarily fuel oil, gasoline, and diesel.

The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles [SUVs]) in the United States has steadily increased from about 14.9 miles per gallon (mpg) in 1980 to 22.9 mpg in 2021 (USDOT n.d.). Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. This act, which originally mandated a national fuel economy standard of 35 mpg by year 2020 (DOE 2007), applies to cars and light trucks of Model Years 2011 through 2020. In March 2020, the United States Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) finalized the Corporate Average Fuel Economy (CAFE) standards for Model Years 2024–2026 Passenger Cars and Light Trucks. The amended CAFE standards would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024–2025, and 10 percent annually for model year 2026. The final standards are estimated to save about 234 billion gallons of gas between model years 2030 to 2050.

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. According to the most recent data available, in 2021, total gasoline consumption in California was 289,918 thousand barrels (12.2 billion gallons) or 1,464.7 trillion British thermal units (Btu) (EIA 2022). Of the total gasoline consumption, 273,289 thousand barrels (11.5 billion gallons) or 1,380.7 trillion Btu were consumed for transportation (EIA 2022). Based on fuel consumption obtained from the California Air Resources Board's (CARB) California Emissions Factor Model, Version 2021 (EMFAC2021), approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel will be consumed from vehicle trips in the County in 2024.

Operation of the Proposed Project would require consumption of nonrenewable energy resources, primarily in the form of fossil fuels (including diesel and gasoline) for automobiles, trucks, and heavy-duty equipment.

As discussed in Section 5.2.15, Transportation, once operational, the Proposed Project would generate 3,041 average daily traffic (ADT), including 2,971 truck trips and 70 passenger vehicle trips.[1] The amount of operational fuel use was estimated using CARB's EMFAC2021 model, which provided projections for typical daily fuel usage in the County.

[1] The trip generation calculation for the Proposed Project converts truck trips to passenger car equivalents (PCE) since a significant number of the trips generated by the Proposed Project are truck trips. Trucks are assigned a PCE factor that represents the number of passenger vehicles that could travel through an intersection or roadway at the same time that a truck could. The Energy analysis uses the actual vehicle types to provide a more accurate representation of fuel usage.

In addition, the Proposed Project would result in the use of additional off-road equipment on site, listed in **Table 5.B** below, which would consume diesel. Based on information provided by OCWR, all equipment would be used during the Landfill's operational hours of 7:00 a.m. to 5:00 p.m., Monday through Saturday, approximately 307 days per year,[2] except for the backhoe loader, integrated tool carrier, skidsteer loader, telehandler, and automatic tarping machine, which would operate for 5 hours per day.

Table 5.B: Summary of Fuel Consumption (gallons per year)

Equipment	Quantity	Horsepower	Load Factor	Diesel Consumption (gallons/year)	Gasoline Consumption (gallons/year)
Off-Road Equipment					
Track-Type Tractor	4	460	0.37	141,917.4	0
Track-Type Tractor	1	251	0.37	19,359.4	0
Track-Type Tractor	1	110	0.37	8,484.2	0
Wheel Dozer w/BG	2	354	0.40	59,035.0	0
Compactor	2	582	0.43	104,336.8	0
Scraper Front	3	500	0.48	150,088.9	0
Scraper Rear	3	283	0.48	84,950.3	0
Motor Grader	1	253	0.41	21,623.2	0
Backhoe Loader	1	115.3	0.37	4,446.5	0
Integrated Tool Carrier	1	180	0.42	7,879.7	0
Skidsteer Loader	1	69	0.37	2,661.0	0
Wheel Loader	1	182.2	0.36	13,673.1	0
Wheel Loader	1	300	0.36	22,513.3	0
Water Truck	3	370	0.38	87,927.1	0
Telehandler	1	73.7	0.42	3,226.3	0
Automatic Tarping Machine	2	50	0.40	4,169.1	0
Total Off-Road Equipment			**736,291.6**	**0**	
Passenger Vehicle Trips			0	11,666.8	
Truck Trucks			6,197,908.5	0	
Total Fuel			**6,934,200.1**	**0**	

Sources: Compiled by LSA (March 2024).

Such equipment typically uses fossil-based fuels to operate, resulting in off-road source emissions. Fuel consumption of off-road equipment was calculated based on the following equation:

Fuel Consumption = Horsepower * Load Factor * Specific Fuel Consumption

where the specific fuel consumption was assumed as 0.22 kilogram (7.75 ounces) per kWh for a diesel engine (Klanfar et al. 2016). **Table 5.B** shows the annual fuel consumption of each type of off-road equipment and the total annual fuel consumption. Detailed energy calculations are included in **Appendix B-3** of this Subsequent EIR.

[2] The number of annual operational days varies from year to year based on the number of Sundays and holidays.

In total, the off-road equipment and truck trips would consume approximately 6,934,200.1 gallons of diesel per year and passenger vehicle trips would consume approximately 11,666.8 gallons of gasoline per year. As discussed above, based on fuel consumption obtained from EMFAC2021, approximately 1.2 billion gallons of gasoline and approximately 157.1 million gallons of diesel are estimated to be consumed from vehicle trips in the County in 2024. As vehicle, truck, and off-road equipment trips are an existing occurrence in the County, these figures are conservative in estimating new gasoline and diesel usage that could occur due to the Proposed Project implementation. Therefore, diesel and gasoline demand generated by passenger vehicle and truck trips and off-road equipment associated with the Proposed Project would increase the annual fuel use in the County by less than 0.1 percent for gasoline fuel usage and approximately 4.4 percent for diesel fuel usage. It is expected that nonrenewable energy resources would be used efficiently during Landfill operational activities given the financial implications of inefficient use of such resources. The increase in maximum daily operations at the Prima Deshecha Landfill is anticipated to reduce or eliminate the need to haul waste elsewhere, which would otherwise result in longer trips and associated increase in fuel consumption, when the Olinda Alpha Landfill closes.

Determination. Based on the analysis in this section, it is concluded that the Proposed Project would not result in the wasteful, inefficient, and unnecessary consumption of energy. No significant impacts would occur, and no mitigation is required.

5.2.5.5 Conflict with Renewable Energy or Energy Efficiency Plans

In 2002, the Legislature passed Senate Bill (SB) 1389, which required the CEC to develop an integrated energy plan every 2 years for electricity, natural gas, and transportation fuels for the Integrated Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero emission vehicles and their infrastructure needs, and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

The CEC's *2024 Integrated Energy Policy Report Update* provide the results of the CEC's assessments of a variety of energy issues facing California. As indicated above, energy usage associated with operation of the Proposed Project would be relatively small in comparison to the overall use in the County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy conservation planning actions are conducted at a regional level, and because the Proposed Project's total impact on regional energy supplies would be minor, the Proposed Project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, as demonstrated above, the Proposed Project would not result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the Proposed Project is also required to comply with Appendix F, Energy Conservation, of the *State CEQA Guidelines*.[3] Specifically, Appendix F requires that EIRs include a discussion of potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. **Table 5.C** includes a project-specific consistency analysis with *State CEQA Guidelines* Appendix F. As demonstrated in **Table 5.C**, the Proposed Project would comply with Appendix F considerations.

Table 5.C: *State CEQA Guidelines* Appendix F Energy Conservation Consistency Analysis

Appendix F Items for Consideration	Proposed Project
1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.	**Consistent.** The Proposed Project would increase the maximum amount of waste that the Landfill is able to accept on a daily basis from 4,000 TPD to 8,000 TPD. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. The Proposed Project would not require any construction activities. Operation of the Proposed Project does not include any new connections to the electrical grid or an increase in use of electricity or natural gas. Energy use associated with the Proposed Project operation would only be associated with diesel and gasoline fuel usage for automobiles, trucks, and heavy-duty equipment. Gasoline and diesel demand associated with the Proposed Project would be a minimal fraction of diesel fuel consumption in the County, as the Proposed Project would redirect the waste stream from Olinda Landfill to Prima Deshecha, so vehicle, truck, and off-road equipment trips are an existing occurrence. It is expected that nonrenewable energy resources would be used efficiently during Landfill operational activities given the financial implications of inefficient use of such resources.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.	**Consistent.** Operation of the Proposed Project does not include any new connections to the electrical grid or an increase in use of electricity or natural gas. Gasoline and diesel demand associated with the Proposed Project would be a minimal fraction of diesel fuel consumption in the County, as the Proposed Project would redirect waste stream from Olinda Landfill to Prima Deshecha, so vehicle, truck, and off-road equipment trips are an existing occurrence.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.	**Consistent.** Operation of the Proposed Project does not include any new connections to the electrical grid or an increase in use of electricity or natural gas. No change in energy use at the Landfill during peak periods is anticipated.
4. The degree to which the project complies with existing energy standards.	**Consistent.** The California Energy Commission (CEC) *2024 Integrated Energy Policy Report Update* provides the results of the CEC's assessments of a variety of energy issues facing California. Energy usage associated with operation of the Proposed Project would be relatively small in comparison to the overall use in the County, and the State's available energy resources. Therefore, energy impacts at the regional level would be negligible. Because California's energy

[3] Note that *State CEQA Guidelines* Appendix F, Energy Conservation, differs substantially from Appendix G, Environmental Checklist Form. While Appendix G identifies specific resource areas and identifies thresholds of significance to consider for each, Appendix F provides more general guidance on the contents required for an energy analysis in an EIR. These are summarized in Table 5.C.

Table 5.C: *State CEQA Guidelines* Appendix F Energy Conservation Consistency Analysis

Appendix F Items for Consideration	Proposed Project
	conservation planning actions are conducted at a regional level, and because the Proposed Project's total impact on regional energy supplies would be minor, the Proposed Project would not conflict with or obstruct California's energy conservation plans as described in the CEC's Integrated Energy Policy Report. Additionally, the Proposed Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.
5. The effects of the project on energy resources.	**Consistent.** Operation of the Proposed Project does not include any new connections to the electrical grid or an increase in use of electricity or natural gas. Gasoline and diesel demand associated with the Proposed Project would be a minimal fraction of diesel fuel consumption in the County. It is expected that nonrenewable energy resources would be used efficiently during Landfill operational activities given the financial implications of inefficient use of such resources. Therefore, the Proposed Project would not result in the unnecessary, inefficient, or wasteful use of energy resources.
6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.	**Consistent.** Energy use associated with the Proposed Project would only be associated with diesel and gasoline fuel usage for automobiles, trucks, and heavy-duty equipment. As demonstrated, gasoline and diesel demand associated with the Proposed Project would be a minimal fraction of diesel fuel consumption in the County. It is expected that nonrenewable energy resources would be used efficiently during Landfill operational activities given the financial implications of inefficient use of such resources.

Source: Compiled by LSA (August 2025).
LFG = landfill gas
TPD = tons per day

Accordingly, there would be no new impact related to conflicts with an existing renewable energy or energy efficiency plan with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.6 Geology and Soils

5.2.6.1 Scoping Comments

Comments received during the scoping process expressed concerns related to the potential for landslides and earthquakes.

5.2.6.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to geology and soils is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a less than significant impact to geology and soils after the implementation of mitigation measures. The Landfill is in Southern California, which is a seismically active region. The Landfill is not within a mapped Alquist-Priolo Earthquake Fault Zone but is in an area with known earthquake faults. The 2001 GDP EIR anticipated that landslides would be located throughout the Zone 4 Landfill development area and that landslide remediation will be performed whenever necessary. Mitigation Measure 4.2-1a, in the 2001 GDP EIR, requires preparation of a geotechnical report of the phased site area to determine the extent of landslide material and the soil foundation characteristics. The 2001 GDP EIR found that the Landfill site is not subject to seismic-related ground failure, including liquefaction.

The First Supplemental EIR to the 2001 GDP EIR determined that the project would implement seismic design standards and remediation measures to provide earthquake stability. The project would not result in substantial erosion or loss of topsoil. Additionally, cut-and-fill slopes would remain generally the same as analyzed in the 2001 GDP EIR. Mitigation contained within the 2001 GDP EIR would apply to the project. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for geology and soils in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum No. 7 to the 2001 GDP EIR indicated that Public Agencies such as the RWQCB will continue to enforce permit conditions during Landfill operations and that grading limits would not increase as a part of the project. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for geology and soils in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR indicated that the majority of the fee booth and entrance area reconstruction would take place on previously disturbed areas, and the results of a 2019 geotechnical study would be incorporated into the design of the project to ensure slope stability. Additionally, all mitigation contained in the 2001 GDP EIR would be incorporated. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for geology and soils in the 2001 GDP EIR.

The LPPE addendum indicated that the project would include preparation of a geotechnical report and implementation of the report's recommendations, compliance with the Construction General Permit, implementation of general engineering solutions such as remedial grading, implementation of mitigation, and implementation of a paleontological monitoring program. Implementation of these measures would ensure the project is consistent with the findings of the 2001 GDP EIR. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for geology and soils in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that the removal of San Onofre Breccia material from Zone 4 may result in temporarily increased soil erosion and areas of exposed soil; however, erosion during operations would be minimal because temporary impact areas would be stabilized through revegetation or other means. Blasting for use in the removal of the San Onofre Breccia Formation during the development of Zone 4 Landfill phases was anticipated in the 2001 GDP EIR and, because all areas of the project fall within the Landfill development areas previously

analyzed, the project would result in no new or increased significant impacts. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for geology and soils in the 2001 GDP EIR.

5.2.6.3 Proposed Project

Impacts to geology and soils were analyzed in the 2001 GDP EIR and other prior CEQA documentation for the Landfill. Because proposed operational changes are administrative in nature and the Proposed Project does not involve any construction, ground-disturbing activity, or expansion of the approved Landfill footprint, no new impact mechanisms would be introduced that were not already analyzed in prior environmental documents. Additionally, the mitigation identified in prior environmental documents remains in place. Therefore, the Proposed Project would not result in any changes in impacts to geology and soils compared to what was previously analyzed in prior environmental documents. Therefore, no new or additional mitigation is required.

Accordingly, there would be no new impact to geology and soils with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.7 Hazards and Hazardous Materials

5.2.7.1 Scoping Comments

Comments received during the scoping process expressed concerns related to debris (waste in transit to the Landfill) falling on Avenida La Pata and Ortega Highway and creating safety hazards, especially for students attending San Juan Hills High School, and asked that load covering be enforced. Comments also expressed concerns related to hazardous materials coming into the Landfill. Comments regarding the potential for the increased number of trips to the Landfill to result in a corresponding increase in the risk of wildfire are evaluated in Section 5.2.17, Wildfire.

5.2.7.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to hazards and hazardous materials is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that the Landfill site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (CalEPA n.d.). Therefore, operation of the Landfill does not pose a known potential environmental concern to the surrounding area or result in any environmental violations associated with activities conducted at the Landfill. The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a less than significant impact hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials after the implementation of mitigation measures.

The First Supplemental EIR to the 2001 GDP EIR determined that the project does not involve any changes to the 2001 GDP that would contribute to the creation of a public health hazard, the transport of disease, or an increase in on-site vectors. The project would operate in accordance with

all existing regulation and permitting requirements related to hazards. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hazards and hazardous materials in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum No. 7 to the 2001 GDP EIR indicated that the Landfill would continue to receive a small volume of household hazardous waste materials that could continue to be controlled by a load-checking program and through screening programs at the waste haulers' material recovery facilities. It was determined that with incorporation of mitigation, there would be no significant impacts. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hazards and hazardous materials in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR indicated that the Landfill would continue to receive a small volume of household hazardous waste materials that could continue to be controlled by a load-checking program and through screening programs at the waste haulers' material recovery facilities. Additionally, the fee booth and entrance area reconstruction project would not use any hazardous materials or generate hazardous waste. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hazards and hazardous materials in the 2001 GDP EIR.

The LPPE addendum indicated that the project would involve the use, storage, and handling of hazardous materials as well as generate hazardous waste; however, there would not be any characteristics of the LPPE that would result in a more substantial amount of hazardous materials being transported than any other public roadway. The LPPE would support the design features and operational protocols identified in the 2001 GDP EIR that aim to promote public safety by separating landfill equipment, commercial and public traffic on site, and use of on-site traffic controls. The ultimate construction of the LPPE would not 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. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hazards and hazardous materials in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR indicated that, because the Landfill is not located on a hazardous materials site, neither construction nor operation of the proposed project would pose a potential environmental concern to the surrounding area or result in any environmental violations associated with activities conducted at the project site. Concurrent operations of Zones 1 and 4 would not change the daily maximum refuse or type of refuse being accepted or permitted at the site. Any hazardous materials utilized during construction would be in limited quantities and would be used, stored, and disposed in accordance with local, State, and federal laws. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hazards and hazardous materials in the 2001 GDP EIR.

5.2.7.3 Proposed Project

As analyzed in the 2001 GDP EIR, the Landfill is a solid waste landfill that has the potential to accept household hazardous waste materials that are mixed in with regular commercial and residential solid

waste. However, the amount of household hazardous waste materials disposed in the Landfill is limited by the following: (1) the majority of solid waste materials received at the Landfill is first processed at materials recovery facilities/transfer stations, where household hazardous waste materials are removed from the waste stream; (2) the Landfill fee booth will reject any loads for disposal that may appear to be carrying hazardous waste materials; and (3) the Landfill has a load check program where haulers are randomly selected to dispose of their loads in a segregated area so that their waste loads can be closely inspected for any potentially hazardous waste materials.

Mitigation measures in the 2001 GDP EIR required implementing the policy to not accept hazardous materials at the Landfill, implementing operating procedures for acceptance and disposal of nonhazardous automobile shredder waste, and implementing procedures for safe handling and removal of waste oil and other potentially hazardous waste materials. Hazardous waste materials that are collected are temporarily stored on site and then transported for proper off-site disposal in accordance with all local, State, and federal requirements. With implementation of mitigation measures, impacts associated with the use or presence of hazardous materials were found to be less than significant in the 2001 GDP EIR and other CEQA documentation for the Landfill.

The Proposed Project would increase the volume of waste accepted and processed daily, increasing potential for falling debris from vehicles transporting waste to the Landfill. Under California Vehicle Code Sections 23114 and 23115, it is against the law to operate a vehicle on the highway which is improperly covered, constructed, or loaded. Compliance with existing laws by haulers to the Landfill helps to ensure that any risk of falling debris or materials from trucks remains minimal. Although OCWR does not have the authority to enforce load covering, OCWR partners with the California Highway Patrol (CHP) to help spread the message on how to cover items when transporting them to landfills through informational outreach and signage. Informational posters on load covering are posted on OCWR's website.[4] The CHP is responsible for enforcing load covering on highways and freeways in the state of California; the Orange County Sheriff is responsible for enforcement on local roadways in south Orange County. OCWR's Landfill trucks would continue to follow load covering laws to reduce the potential for falling debris with implementation of the Proposed Project. OCWR partners with the CHP and the Orange County Sheriff as appropriate and would continue to do so regardless of the Proposed Project. Authority to enforce load covering is not within the direct control of OCWR, and implementation thereof cannot be guaranteed by the project proponent. Section 15907(a) of the *State CEQA Guidelines* states that a public agency remains responsible for ensuring implementation of mitigation measures has been completed. Section 15126.4(2) of the *State CEQA Guidelines* states that mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. As OCWR does not have authority to enforce load covering, no further measures have been identified beyond continuing to coordinate and cooperate with the applicable public agencies. Additionally, the Proposed Project assumes that haulers to the site will comply with existing laws pertaining to proper covering of waste being transported to the Landfill while on highways, minimizing the risk of waste material falling from trucks en route to the Landfill.

[4] OCWR posters can be accessed at the following link: https://oclandfills.com/landfills/cover-your-load-its-law (accessed March 2024).

However, the Proposed Project would not introduce issues associated with falling debris into new areas where it does not already occur, as waste is currently hauled along the same designated haul routes to the Landfill, and the Landfill already coordinates with public agencies to address impacts on existing haul routes. The incremental increase of loads associated with the increased tonnage is largely due to trips that would be rerouted from Olinda Alpha Landfill – the Proposed Project would not induce new regional waste trips – and would result in a less than significant impact related to the potential for debris falling onto local roadways, and no mitigation is required.

Implementation of the Proposed Project would maintain the Landfill's current primary use as a landfill and current operating procedures related to hazardous materials would continue. Implementation of the mitigation measures and operating procedures identified in the 2001 GDP EIR is sufficient to ensure to address the increased volume of waste; therefore, the Proposed Project would not result in any new significant impacts related to hazardous materials beyond those previously analyzed in the prior CEQA documentation for the Landfill. Existing measures were found to be sufficient to address the potential for hazardous waste to be mixed in with other waste accepted for disposal at the landfill, and implementing the Proposed Project would not affect how these measures continue to be implemented. Existing state laws regulating the proper covering and transport of waste will also continue to apply to haulers transporting waste along existing designated haul routes to the Landfill, minimizing the risk of falling debris or solid waste. Therefore, no new or additional mitigation is required with respect to hazardous materials.

Accordingly, a less than significant impact related to hazards and hazardous materials would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.8 Hydrology and Water Quality

5.2.8.1 Scoping Comments

Comments received during the scoping process expressed concerns related to water quality, stormwater management, groundwater contamination, and increased water use for dust suppression.

5.2.8.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to hydrology and water quality is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a less than significant impact after mitigation to hydrology and water quality, specifically related to a potential violation of water quality standards or waste discharge requirements, groundwater supplies, erosion and siltation, flooding, alteration of the course of a stream or river, and stormwater drainage system capacity. The 2001 GDP EIR found that operation of the GDP would not result in any impacts related to decreasing groundwater supplies or interfering substantially with groundwater recharge.

The First Supplemental EIR to the 2001 GDP EIR indicated that the project would not create either runoff or discharge that would exceed water quality standards, violate existing waste discharge requirements, or induce flooding either on or off site. The project would reduce impacts associated with the 2001 GDP by providing features that mimic natural hydrologic conditions at the site. Additionally, the project would continue to comply with the National Pollutant Discharge Elimination System (NPDES) requirements and the Orange County Drainage Area Master Plan (DAMP). Therefore, it was determined there would be no change to the less than significant impact with mitigation conclusion for hydrology and water quality in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum No. 7 to the 2001 GDP EIR indicated that Landfill operation would continue to be governed by permits issued by the RWQCB, Local Enforcement Agency (LEA), South Coast Air Quality Management District (SCAQMD), and Orange County Fire Authority (OCFA). Additionally, the Landfill would not expand laterally beyond what was analyzed in the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hydrology and water quality in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR indicated that Landfill operation would continue to be governed by permits issued by the RWQCB, LEA, SCAQMD, and OCFA. It was determined that OCWR and the construction contractor would be required to implement best management practices (BMPs) for compliance with the Construction General Permit (CGP) and that the reconstruction of the fee booth and entrance area would not result in any significant impacts to hydrology and water quality. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hydrology and water quality in the 2001 GDP EIR.

The LPPE addendum determined that compliance with the CGP and DAMP would ensure that construction and operational impacts are less than significant. Although the project site would increase the impervious area due to roadway construction, the project would provide hydromodification basins to ensure the natural flow regime. The LPPE would impact the concept plans for the desilting and detention basins on the southeastern side of Zone 4; however, impacts would not be significant. Additionally, the project would not draw from or impact groundwater. The crossing of San Juan Creek is the only location where the LPPE crosses an area designated as being in the 100-year floodplain. The crossing would be built on a bridge structure meeting County design requirements, which would also ensure that flows would not be constricted, resulting in greater flooding. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hydrology and water quality in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR indicated that the proposed project would not change the daily maximum refuse or type of refuse being accepted at the Landfill and would not change the current use on site. Additionally, while the proposed project includes Breccia removal, the limits of excavation would not exceed the excavation limits previously analyzed. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for hydrology and water quality in the 2001 GDP EIR.

In addition to ongoing compliance with NPDES requirements for industrial discharges, the First Supplemental EIR to the 2001 GDP EIR included mitigation measures that required compliance with Section 7 of the County's DAMP, which requires a Water Quality Management Plan.

5.2.8.3 Proposed Project

Although the Proposed Project would increase the volume of daily waste coming to the Landfill, which could result in a corresponding increase in the potential volume of pollutants introduced into receiving waters, the increase in volume of daily waste would not result in any new physical changes to the Landfill. Because proposed operational changes are administrative in nature and the Proposed Project does not involve any construction, ground-disturbing activity, or expansion of the approved Landfill footprint, no new disturbance of native soils would occur. The project does not require excavation, grading, vegetation removal, or any physical site modifications that could affect previously undisturbed areas. The Proposed Project would not change the nature or location of approved activities within the Landfill, including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents. No new impact mechanisms would be introduced that were not already analyzed in prior CEQA documentation. The Proposed Project would continue to comply with the applicable NPDES permits and implement operational BMPs to minimize pollutants of concern in stormwater runoff. The Landfill's stormwater collection and control system consists of a series of concrete drainage channels, berms, and both earthen and concrete-lined desilting basins that are designed to control stormwater runoff and protect water quality.[5] The proposed increase in the maximum daily operations would be adequately supported by the existing stormwater system and remain subject to applicable regulatory requirements. Because the Landfill is not located above a designated groundwater basin, the Proposed Project would not decrease groundwater supplies, interfere with groundwater recharge, or impede sustainable groundwater management of a groundwater basin. The existing Landfill operates in compliance with Waste Discharge Requirements issued by the California RWQCB, San Diego Region. The Proposed Project would not affect groundwater supplies, erosion and siltation, flooding, alteration of the course of a stream or river, or stormwater drainage system capacity and would not alter the implementation of mitigation measures. No new impact would occur with respect to these issues.

Additionally, as discussed in Section 4.1, Air Quality, of this Subsequent EIR, water is used for on-site dust suppression for activities on unpaved roadways. The existing water reuse program at the Landfill would sufficiently address an increase in dust suppression efforts; increased water use for dust suppression is not anticipated with the Proposed Project because the primary need for dust suppression is on dirt access roads. The increase in maximum daily operations under the Proposed Project would predominantly generate additional trips on paved roads, which would not require an increase in dust suppression efforts. Since on-site water from the existing water reuse program is

[5] The 2001 GDP EIR evaluated potential impacts associated with vectors (e.g., mosquitoes, flies, and rodents) as a separate topic, Transport of Disease Vectors, and identified several mitigation measures to address these, concluding that impacts would be less than significant. The First Supplemental EIR to the 2001 GDP EIR further evaluated the effects of the desilting basins with respect to water-related vector issues (e.g., mosquitoes), also concluding that the impacts would not be significant with the implementation of mitigation identified in the 2001 GDP EIR.

sufficient to support dust suppression on the site, impacts related to water use would be less than significant.

With implementation of the Proposed Project, the Landfill would maintain its current primary use as a landfill. The Proposed Project would not result in any new significant impacts or increased impacts to hydrology and water quality beyond those previously analyzed since the Proposed Project does not include any changes to the types or locations of approved activities within the Landfill development areas. All areas of the Proposed Project fall within the Landfill development areas previously analyzed in the prior CEQA documentation for the Landfill and the existing stormwater system is adequate to address increased vehicle trips associated with the Proposed Projects; therefore, no new or additional mitigation is required.

Accordingly, no impacts related to hydrology and water quality would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.9 Land Use and Planning

5.2.9.1 Scoping Comments

Comments received during the scoping process expressed general concerns related to land use and planning and potential impacts to the surrounding community from the Landfill operations, including development of the previously approved Zone 4 landfilling operations. The Proposed Project does not include any changes to previously approved Zone 4 operations.

5.2.9.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to land use and planning is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that with implementation of mitigation, operation of the Landfill through completion of the GDP would result in a less than significant impact to land use and planning.

The First Supplemental EIR to the 2001 GDP EIR indicated that the project would maintain the current on-site use as a landfill and would not change the daily maximum refuse accepted or permitted at the Landfill. The project would include pre-mitigation and regional enhancement plans that would result in a more passive recreational use of Zone 4 in the post-closure period than what was identified in the 2001 GDP EIR; however, this impact would be less than significant. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for land use and planning in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum No. 7 and No. 11 to the 2001 GDP EIR indicated that the existing land use, an operating solid waste landfill, would remain. Therefore, it was determined that there would be no

change to the less than significant impact with mitigation conclusion for land use and planning in the 2001 GDP EIR.

The LPPE addendum determined that the LPPE alignment would not divide an established community and would be incorporated into the internal circulation network. Additionally, based on the evaluation of the applicable local and regional planning documents, the project would not conflict with any provisions adopted for the purpose of avoiding or mitigating adverse environmental effects. The two mitigation measures in the 2001 GDP EIR that were applicable to the circulation component of the GDP pertaining to at-grade trail crossings of Avenida La Pata would still be applicable. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for land use and planning in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR indicated that, with the exception of vehicular traffic, the proposed project would occur entirely within the confines of the existing Landfill, would not physically divide an established community, and would be in compliance with relevant plans, policies, and regulations including, but not limited to, the Orange County SSHCP. Therefore, it was determined there would be no change to the less than significant impact with mitigation conclusion for land use and planning in the 2001 GDP EIR.

5.2.9.3 Proposed Project

The Landfill is located in the western foothills of the Santa Ana Mountains and is partially within San Juan Capistrano (570 acres), San Clemente (133 acres), and unincorporated Orange County (827 acres). The Landfill has been in operation since 1976, and while residential communities have subsequently been developed around it, the land use on the property, an active landfill operation, has not changed. Additionally, open space and land dedicated to habitat conservation acts as a buffer between Zones 1 and 4 and adjacent residences. As discussed in Section 4.2 Noise, the minimum distance between a residence and Zone 1 or 4 is 550 feet, and most residential areas are at least 1,000 feet from the designated disposal areas. Because the Proposed Project would not expand the Landfill boundaries horizontally or vertically, the Landfill's proximity to adjacent residences would be unchanged. The County General Plan designation for the Landfill site is 4LS, which is a public facility with a landfill site overlay. In August 2016, the La Pata Gap Extension opened, consisting of a road built through the Landfill property that connects San Clemente and San Juan Capistrano, consistent with applicable County and regional planning efforts.

The Proposed Project would not change any of the approved land uses within the Landfill. Use of Zones 1 and 4 for landfilling activities would remain as proposed in the 2001 GDP EIR, as amended, which has been evaluated in prior CEQA documentation. The Landfill would maintain its current primary use as a landfill. With the exception of vehicular traffic, the Proposed Project would occur entirely within the confines of the existing Landfill, would not physically divide an established community, and would be in compliance with relevant plans, policies, and regulations including, but not limited to, the Orange County SSHCP, as set forth in prior CEQA documentation for the Landfill.

Accordingly, no impacts related to land use and planning would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures

outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.10 Mineral Resources

5.2.10.1 Scoping Comments

No comments received during the scoping process expressed concerns related to mineral resources.

5.2.10.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to mineral resources is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the 2001 GDP would not 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.

The First Supplemental EIR to the 2001 GDP EIR, Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR, Addendum No. 7 to the 2001 GDP EIR, and the LPPE addendum determined that there would be no change to the less than significant impact conclusion for mineral resources in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that implementation of the project falls within the same footprint boundary as the landfill development that was analyzed in the 2001 GDP EIR; therefore, no new impacts to mineral resources would occur. Therefore, it was determined that there would be no change to the less than significant impact conclusion for mineral resources in the 2001 GDP EIR.

5.2.10.3 Proposed Project

The Landfill development that was analyzed in the 2001 GDP EIR has been in continuous operation since 1976. The implementation of the Proposed Project falls within the same footprint boundary as the Landfill development that was analyzed in the 2001 GDP EIR; therefore, no new impacts to mineral resources would occur. The primary use of the site is not mineral extraction. According to the County General Plan, the site of the Proposed Project is currently designated for landfill operations, which may include materials recovery, recycling facilities, and accessory uses (e.g., borrow site areas, buffer areas, and access roads). The Proposed Project would not result in the loss of a known locally important mineral resource or a known mineral resource that would be of value to the region and the residents of the State, and impacts from any materials recovery operations would not result in impacts to mineral resources.

Accordingly, no impacts related to mineral resources would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.11 Population and Housing

5.2.11.1 Scoping Comments

Comments received during the scoping process expressed concerns related to population, although the specific concern related to this topic was unclear.

5.2.11.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to population and housing is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the 2001 GDP would result in no impacts to population and housing.

The First Supplemental EIR to the 2001 GDP EIR, Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR, Addendum No. 7 to the 2001 GDP EIR, and the LPPE addendum determined that the projects would not result in the development of new housing. Therefore, it was determined that there would be no change to the no impact conclusion for population and housing in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that the proposed project does not include construction of new homes, does not include extension of roads or other infrastructure to previously undeveloped areas, and would not displace existing housing or people. Therefore, it was determined that there would be no change to the no impact conclusion for population and housing in the 2001 GDP EIR.

5.2.11.3 Proposed Project

The Proposed Project does not include construction of new homes, extension of roads or other infrastructure to previously undeveloped areas and would not displace existing housing or people. The Proposed Project would not substantially affect the number of jobs in the region in a manner that would result in substantial unplanned population growth, as the number of employees on site daily would increase by approximately 35 (refer to Section 6.2 for additional information on growth-inducing impacts). Therefore, the Proposed Project would not create a permanent increase in population or an increased demand for housing in the County or the region.

Accordingly, no impact related to population and housing would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.12 Public Services

5.2.12.1 Scoping Comments

Comments received during the scoping process expressed concerns for the increased potential for fire risk associated with a higher volume of vehicles on site, potential for detonation of materials

during transportation, and potential for explosions on site. Comments also expressed concerns regarding the Proposed Project's impact on emergency response and surveillance and vandalism at the Landfill. Additionally, comments expressed concern for the Landfill's proximity to San Juan Hills High School and the safety of the students.

5.2.12.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to public services discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found operation of the GDP would result in a less than significant impact to fire protection, police protection, schools, parks, or other public facilities.

The First Supplemental EIR to the 2001 GDP EIR, Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR Addendum No. 7 to the 2001 GDP EIR, and the LPPE addendum determined there would be no change to the less than significant impact conclusion for public services in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR determined that the fee booth and entrance area reconstruction project would not result in an increased need for public services such as police, fire, or emergency medical services. Therefore, it was determined there would be no change to the less than significant impact conclusion for public services in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that the project is not anticipated to affect the population within the surrounding area, would not introduce new facilities requiring fire protection, and would not require additional police protection because OCWR provides on-site security and public access is limited. Additionally, no additional schools, parks, or other public facilities would be required because no changes in area population would occur as a result of the project. Therefore, it was determined that there would be no change to the less than significant impact conclusion for public services in the 2001 GDP EIR.

5.2.12.3 Proposed Project

The Proposed Project would result in incrementally higher traffic volumes on- and off-site, resulting in a corresponding incremental increase in the potential for fires to occur (e.g., an increase in the frequency of instances when a fire could be ignited by a vehicle). Mitigation measures included in the 2001 GDP EIR regarding fire risk included maintaining on-site operating procedures for the avoidance and control of surface fires, such as the provision of fire extinguishers and watering vehicles, posting of "No Smoking" signs, ground clearing, and general safe operating practices; placement of signs warning motorists of potential fire hazards, fire conditions, and other relevant information; and approval of future grading and building plans by OCFA. The Proposed Project would continue to implement mitigation measures included in the 2001 GDP EIR to address the incremental increase in fire risk. The Proposed Project would not introduce new facilities requiring fire protection and would not introduce new public access into active areas of the Landfill; all landfilling activity would continue to be conducted by trained OCWR personnel. Additionally, the Landfill has fire suppression resources available including water trucks and water tanks, soil for

smothering fire, and large graded areas that act as fire breaks throughout the site. Although the Proposed Project would increase vehicle trips on the roads in the vicinity of the Landfill, thereby potentially incrementally increasing the risk for off-site fires, the Proposed Project would not introduce new barriers or constraints on emergency response or evacuation and would not introduce a new impact mechanism not previously identified in prior CEQA documentation. Refer to Section 5.2.16, Wildfire, for additional information related to wildfire.

The evacuation maps for San Juan Capistrano indicate that Avenida La Pata, which crosses the middle of the Landfill, is an evacuation route (City of San Juan Capistrano 2021). As discussed in the Initial Study (**Appendix A**), the County General Plan Transportation Element classifies Avenida La Pata as a primary arterial highway, which is defined as a four-lane divided roadway that is designed to accommodate approximately 20,000 to 30,000 vehicle trips per day at level of service (LOS) "C." The increase in maximum daily operations associated with the Proposed Project would add a nominal volume of traffic (an estimated 1,032 to 3,094 daily vehicle trips[6]), which would not impede the use of Avenida La Pata as an evacuation route. As documented in Table C of the Traffic Volume and Vehicle Miles Traveled Study in **Appendix E** of this Subsequent EIR, volumes with the project would remain consistent with the volume of traffic that the road is rated to accommodate. The 2001 GDP EIR identified potential impacts to traffic associated with landfill equipment crossing Avenida La Pata and included mitigation measures requiring the use of flags and other measures to halt through-traffic when landfill equipment is crossing Avenida La Pata at intersections with temporary access roads, as well as limiting the delay on Avenida La Pata to not more than the crossing of five vehicles at one time. With the Avenida La Pata and associated tunnel undercrossings that have been constructed between Zone 1 and Zone 4, there are very limited circumstances during which at-grade crossings of Avenida La Pata by landfill equipment would be necessary. The Proposed Project would not require or result in any long-term or permanent lane closures on roadways adjacent to the site, and the Proposed Project would not substantially impair emergency response.

Security in the County's unincorporated areas as well as in San Clemente and San Juan Capistrano is enforced by the Orange County Sheriff. OCWR operates security cameras on-site at specific infrastructure areas such as the fee booth, flare station, and office building; these cameras show the areas in real time. General inquiries and concerns related to the Landfill can be made to OCWR's Neighbor Support Portal and any security concerns may be reported to the Orange County Sheriff's Department. Additionally, public access to the Landfill is limited. As with the Landfill development that was analyzed in the 2001 GDP EIR, no additional police protection would be required, as the Proposed Project does not alter the existing boundaries of the Landfill, does not add any additional Landfill infrastructure, and does not alter the operating hours of the Landfill. No additional schools, parks, or other public facilities would be required because no changes in area population would occur as a result of the Proposed Project, which is intended primarily to accommodate existing solid waste from other regional landfills to the Landfill upon closure of the Olinda Alpha Landfill.

[6] Daily vehicle trips are in passenger car equivalents (PCE); 1,032 PCE daily trips would be added to the segments between Stallion Ridge and Prima Deshecha Landfill and between Camino Del Rio and Avenida Vista Hermosa; 3,094 PCE daily trips would be added to the segments between Ortega Highway and Stallion Ridge and between Stallion Ridge and Prima Deshecha Landfill.

Accordingly, a less than significant impact related to public services would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.13 Recreation

5.2.13.1 Scoping Comments

No comments received during the scoping process expressed concerns related to recreation.

5.2.13.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to recreation is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a less than significant impact to recreation.

The First Supplemental EIR to the 2001 GDP EIR indicated that the project would not contain elements that would be considered growth inducing and would not impact local or regional recreational resources. The project would not impact the 2001 GDP's commitment to incorporate several trails through and around the Landfill. Identification of the pre-mitigation plan and enhancement opportunities under the project may affect the desired mix of recreational uses for Zone 4 in the post-closure period. However, this impact would be less than significant. Therefore, there would be no change to the less than significant with mitigation impact conclusion for recreation in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR indicated that expansion of the Landfill would not result in the development of any new housing that would result in the need for new parks or other recreational facilities and determined that operations would not directly or indirectly impact recreational facilities. The 2001 GDP EIR included an analysis of a potential golf course on the Zone 1 landfilling area after closure and also analyzed a proposed regional park in the Zone 4 landfilling area upon the closure of the landfilling area. Because landfill gas continues to be generated by solid waste landfills for many years after closure, the California Department of Resources Recycling and Recovery (CalRecycle) requires that all landfill operators perform at least 30 years of post-closure maintenance and monitoring following landfill closure. As a result, OCWR determined to no longer pursue the proposed recreational facilities. Therefore, there would be no change to the less than significant with mitigation impact conclusion for recreation in the 2001 GDP EIR.

Addendum No. 7 to the 2001 GDP EIR determined that there would be no change to the less than significant impact conclusion for recreation in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR indicated that OCWR would continue to maintain the multi-use recreational trail on site that connects the City of San Juan Capistrano trail system to the City of

San Clemente trail system. Additionally, the fee booth and entrance area reconstruction project would not result in significant impacts to recreation. Therefore, it was determined that there would be no change to the less than significant with mitigation impact conclusion for recreation in the 2001 GDP EIR.

The LPPE addendum determined that the project would not result in an increased demand for recreational facilities because it would not increase the population in the area. Additionally, the addendum determined that the LPPE would not have significant impacts on planned recreational facilities including the San Juan Creek Riding and Hiking Trail and San Juan Creek Bikeway, the Prima Deshecha Trail, or Prima Deshecha Regional Park. Therefore, it was determined that there would be no change to the less than significant with mitigation impact conclusion for recreation in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR determined that the project would not increase the population such that there would be an increase in the use of existing parks or other recreational facilities and would not result in any significant impacts to recreational resources since the proposed project would not result in any homes being built. OCWR granted an easement to the Cities of San Juan Capistrano and San Clemente for a multi-use recreational trail on the Landfill site that connects the City of San Juan Capistrano trail system to the City of San Clemente trail system. The easement for the trail on the Landfill property would not be impacted by that project and would remain in place. Therefore, it was determined that there would be no change to the less than significant with mitigation impact conclusion for recreation in the 2001 GDP EIR.

5.2.13.3 Proposed Project

As with the Landfill development that was analyzed in the 2001 GDP EIR, the Proposed Project would not increase the population in the vicinity of the Landfill such that there would be an increase in the use of existing parks or other recreational facilities. The Proposed Project would not result in any significant impacts to recreational resources since the Proposed Project would not result in any new residential uses. In addition, the Proposed Project would not directly or indirectly impact any existing recreational facilities. As stated, OCWR granted an easement to the cities of San Juan Capistrano and San Clemente for a multi-use recreational trail on the Landfill site that connects the City of San Juan Capistrano trail system to the City of San Clemente trail system. The easement for the trail on the Landfill property would not be impacted by the Proposed Project and will remain in place.

Accordingly, no impact to recreation would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.14 Utilities and Service Systems

5.2.14.1 Scoping Comments

No comments received during the scoping process expressed concerns related to utilities and service systems.

5.2.14.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to utilities and service systems is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in less than significant impacts related to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities.

The First Supplemental EIR to the 2001 GDP EIR determined that, with mitigation incorporated, the project would not impact public utilities and service systems, including water, sanitation, natural gas, schools, or telephone services. The project would utilize existing storm drains. Existing transmission lines would potentially be relocated or re-routed; however, a project design feature would be incorporated to provide for the replacement of relocated transmission lines. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for utilities and service systems in in the 2001 GDP EIR.

Addendum No. 6 to the 2001 GDP EIR/Addendum No. 2 to the First Supplemental EIR to the 2001 GDP EIR and Addendum No. 7 to the 2001 GDP EIR determined that there would be no change to the less than significant impact with mitigation conclusion for utilities and service systems in the 2001 GDP EIR.

Addendum No. 11 to the 2001 GDP EIR indicated that the fee booth and entrance area reconstruction project would not require any new connection to any utilities beyond what is already existing. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for utilities and service systems in in the 2001 GDP EIR.

The LPPE addendum indicated that the project would not generate a demand for potable water, wastewater treatment, natural gas, or telecommunications facilities. It was also determined that any relocation of pipelines with implementation of the LPPE would not result in a significant impact. Additionally, the LPPE would not generate substantial amounts of waste for disposal in a landfill and therefore would not impair the ability of the County to meet waste reduction goals. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for utilities and service systems in in the 2001 GDP EIR.

The Second Supplemental EIR to the 2001 GDP EIR indicated that the proposed project would be served by existing utility service providers for water, power, and natural gas. The proposed project does not contemplate any uses that are outside existing water or wastewater treatment demand projections and land uses assumed on the project site. Therefore, it was determined that there would be no change to the less than significant impact with mitigation conclusion for utilities and service systems in in the 2001 GDP EIR.

5.2.14.3 Proposed Project

As with the Landfill development analyzed in the 2001 GDP EIR, the Proposed Project will be served by existing utility service providers for water, power, and natural gas. No significant impacts would occur.

The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a less than significant impact related to the Landfill development's water consumption and would not result in any significant impacts to the availability of water supplies or impact the water purveyor's ability to supply water. As discussed in Section 5.2.7, Hydrology and Water Quality, the existing water reuse program at the Landfill would sufficiently address any potential increase in dust suppression efforts required as a result of the Proposed Project. Increased water use for dust suppression is not anticipated with the Proposed Project because the primary need for dust suppression is on dirt access roads. The increase in maximum daily operations under the Proposed Project would predominantly use paved roads, which would not require dust suppression efforts, as well as existing dirt access roads at the Landfill for which dust suppression efforts are already implemented and would continue to receive a similar level of effort. Similarly, the 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in no impacts to the existing wastewater treatment provider. The Proposed Project will be served by the existing water service provider and wastewater treatment provider. The Proposed Project does not contemplate any uses that are outside existing water or wastewater treatment demand projections and land uses assumed at the Landfill. No significant impacts would occur.

Accordingly, no impact related to utilities/service systems would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.15 Transportation

This section presents an analysis of the resource topic of transportation. It describes how transportation effects of the Proposed Project are evaluated under CEQA. State law now requires transportation impacts to be assessed using VMT, which measures the amount of driving a project would generate, rather than traffic congestion or LOS. To help explain this change, a Transportation Regulatory Framework White Paper has been prepared and included as in **Appendix E** to this Subsequent EIR. The white paper summarizes the shift from LOS to VMT under SB 743 and explains how transportation impacts are evaluated for projects at the Landfill.

Based on this framework, the transportation evaluation for the Proposed Project focuses on VMT and is supported by the Traffic Volume and VMT Study (also included in **Appendix E**) as well as other applicable technical and policy guidance. This approach is consistent with CEQA requirements and County transportation procedures.

5.2.15.1 Scoping Comments

Comments received during the scoping process for the Proposed Project expressed concerns related to increased traffic in proximity to schools including San Juan Hills High School due to concerns with

safety and existing congestion; impacts of increased traffic on local residents; potential increased use of city-maintained roadways in San Clemente and San Juan Capistrano; and the potential physical degradation of roadway surfaces in the surrounding area. Comments expressed concern with impacts to the level of service (LOS) at intersections and roadway segments in proximity to the Landfill. Comments suggested the increase in truck trips be optimally timed to avoid school start and end periods and/or include additional traffic control measures; some requested that alternative routes be considered for accessing the Landfill in order to redirect the increased traffic to other roadways.

Several comments expressed concerns related to traffic in the context of cumulative projects such as the La Pata Transfer Station's Materials Recovery Facility (MRF) recycling center (the Proposed Project does not include any changes associated with the MRF), the Ortega Highway Widening Project, the LPPE, the Rancho Mission Viejo Housing Development Project, and additional future development in the area. Additionally, the City of San Juan Capistrano expressed that a Traffic Impact Analysis would be required pursuant to the City's Administrative Policy 310, including identification of mitigation measures for traffic impacts, and requested that the technical analysis not assume the use of the future LPPE project.

5.2.15.2 Summary of Prior CEQA Documentation

The prior CEQA documentation that included an analysis of impacts related to transportation is discussed below. Refer to Chapter 2.0 for a discussion on the project components evaluated in the prior CEQA documentation. As discussed further below, the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR did not analyze impacts in terms of VMT, as that metric was not used for CEQA impact significance at the time those analyses were prepared. The Second Supplemental EIR to the 2001 GDP EIR was prepared after the implementation of SB 743 and reflects the mandated change from LOS to VMT as the metric for determining transportation impact significance under CEQA; the evaluation found that the Landfill project was screened from the requirement for a detailed VMT analysis and that there was no requirement to prepare an analysis of LOS. Because the Proposed Project would generate additional trips and is being evaluated in a Subsequent EIR, an analysis of the Proposed Project's potential transportation impacts using the VMT metric is required, as discussed below in Section 5.2.15.3.

2001 GDP EIR. The 2001 GDP EIR determined that the construction and operation of the Landfill through completion of the GDP, assuming daily receipt of up to 4,000 TPD of waste, would result in less than significant impacts to transportation. Because the GDP would not include any new roadways or improvements to existing roadways and infrastructure, the 2001 GDP EIR determined there would be a less than significant impact on the existing circulation system and emergency access.

The 2001 GDP EIR evaluated impacts to the transportation network using the LOS metric, which considers the effects of project-related trips on roadway congestion as measured in terms of delay and/or capacity. The transportation study supporting the EIR was the *Prima Deshecha Landfill EIR – Traffic Analysis in the County of Orange* (prepared by Austin Foust Associates, September 2000). The analysis considered impacts to the circulation network in terms of the following:

- Orange County Growth Management Plan (GMP) standards for project impacts on the Master Plan of Arterial Highways roadway network:
    - Significant impacts are defined as an increase of greater than 0.01 in the intersection capacity utilization (ICU) value as a result of the project at an intersection that reaches LOS E or LOS F.
    - Mitigation is required if the project results in an ICU change of 0.02 or greater and the resulting ICU is 0.91 (i.e., LOS E) or greater.
- The City of San Juan Capistrano's traffic study guidelines for project impacts to intersections within the city limits:
    - Significant impacts for signalized intersections in San Juan Capistrano within 2 miles or less of the project site are defined as an increase of 0.01 or more and the intersection reaching LOS E or LOS F.
    - Significant impacts for signalized intersections in San Juan Capistrano located 2 miles or more from the project site are defined as an increase of 0.03 or more and the intersection reaching LOS E or LOS F.
    - Significant impacts for stop-controlled intersections in San Juan Capistrano are defined as an increase of 1 second or more average intersection delay as a result of the project and the intersection reaching LOS E or F.

The analysis identified four intersections that are forecast to operate at LOS F and two that would operate at LOS E. The intersections with the greatest ICU impact resulting from implementation of the project (an ICU increase of 0.01) were the I-5 northbound ramps at Ortega Highway (a.m. peak hour) and at Avenida La Pata/Avenida Pico (p.m. peak hour). The analysis found that because project-related increases would not change the LOS at either intersection, no significant impacts would occur and no mitigation would be required. The transportation analysis in the 2001 GDP EIR forecasted future roadway operating conditions based on information available at the time of preparation. Since adoption of that document, multiple transportation and land use projects not anticipated in 2001 have been implemented, and existing conditions have evolved accordingly.

First Supplemental EIR to the 2001 GDP EIR. The First Supplemental EIR to the 2001 GDP EIR determined that the construction and operation of the Landfill by implementing the Second Amendment to the 2001 GDP at the Landfill would not affect short- or long-term traffic conditions as daily refuse tonnages into the Landfill, overall Landfill capacity, and land uses on the project site would not change compared to the project as analyzed in the 2001 GDP EIR. The construction of the project would occur entirely within the boundaries of the Landfill and would not result in any changes to the traffic patterns in the surrounding intersections. As a result, the First Supplemental EIR to the 2001 GDP EIR determined that transportation was an environmental issue not requiring substantial additional analysis. No new impacts were identified; therefore, no further analysis was conducted, and no additional mitigation measures were required.

Second Supplemental EIR to the 2001 GDP EIR. The Second Supplemental EIR to the 2001 GDP EIR determined that the construction and operation of the Zone 4 Construction Projects would result in less than significant impacts to transportation. Impact conclusions for the project were determined to be the same as those in the 2001 GDP EIR.

As discussed in the Initial Study for the Second Supplemental EIR to the 2001 GDP EIR, because transportation was fully analyzed in the 2001 GDP EIR and the project would not result in any new or more severe impacts, transportation was not analyzed further in the Second Supplemental EIR to the 2001 GDP EIR. No new impacts were identified; therefore, no mitigation measures were required.

In compliance with SB 743 and Section 15064.3 of the *State CEQA Guidelines,* which became effective July 1, 2020, the Second Supplemental EIR to the 2001 GDP EIR evaluated transportation impacts using the VMT metric rather than LOS. Consistent with the County's *Final Draft Guidelines for Evaluating Vehicle Miles Traveled under CEQA* (LSA 2020), which were in effect at the time of preparation, the Zone 4 Construction Projects were screened from the requirement to prepare a quantitative VMT analysis because the Landfill qualifies as a public service that supports community health, safety, or welfare.

In addition, the Governor's Office of Planning and Research (OPR; now the Office of Land Use and Climate Innovation) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018), which provided guidance applicable at the time of preparation for the Second Supplemental EIR to the 2001 GDP EIR, clarifies that VMT is calculated for on-road passenger vehicles, specifically for automobiles such as cars and light trucks. Accordingly, heavy-duty trucks (including refuse, waste disposal, and haul trucks) are not included in the VMT calculations for the Zone 4 Construction Projects. The number of passenger car trips associated with the Zone 4 Construction Projects was below 110 ADT, and therefore qualified as a "small" project, which, as with public service facility projects, is presumed to result in a less than significant transportation impact and is screened from further VMT analysis (OPR 2018).

5.2.15.3 Proposed Project

Regulatory Framework for Transportation Impacts under CEQA. Although the 2001 GDP EIR evaluated impacts associated with Landfill operations using the LOS metric, which measures roadway congestion based on delay and capacity, LOS is no longer an appropriate metric for identifying transportation-related impacts under CEQA. As discussed in the "Thresholds of Significance" section in the introduction to Chapter 4.0 of this Subsequent EIR, SB 743 fundamentally changed the way transportation impacts are evaluated under CEQA.

SB 743 required the OPR to establish a new transportation metric for CEQA purposes. As codified in Public Resources Code (PRC) Section 21099(b), automobile delay, as measured by LOS or similar congestion metrics, does not constitute a significant environmental impact under CEQA. VMT is now the required metric and legally applicable metric for evaluating transportation impacts. Refer to the Transportation Regulatory Framework White Paper in **Appendix E** of this Subsequent EIR for additional information.

State CEQA Guidelines Section 15064.3. Section 15064.3 of the *State CEQA Guidelines* codifies the use of VMT as the appropriate metric for evaluating the project-related transportation impacts. Subdivision (b) of *State CEQA Guidelines* Section 15064.3 provides guidance for various project types and analytical approaches, including:

(1) Land use projects;
(2) Transportation projects;
(3) Qualitative analysis; and
(4) Methodological discretion afforded to Lead Agencies.

These provisions clarify that projects that reduce VMT or are otherwise unable to be meaningfully evaluated using quantitative VMT tools may be presumed to result in less than significant transportation impacts. Subdivision (b)(3) acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. Subdivision (b)(4) stipulates that Lead Agencies have the discretion to formulate a methodology that would appropriately analyze a project's VMT. Section 15064.3 became applicable statewide on July 1, 2020.

County of Orange Transportation Guidance. VMT represents the amount and distance of automobile travel generated by a project and is influenced by multiple interrelated factors. The County's *Transportation Implementation Manual* (TIM), originally adopted in 1994 and amended most recently in September 2021 by Resolution No. 21-138, established the County's procedures for transportation assessment pursuant to CEQA, including consideration of VMT, under the County Growth Management (GM) Element.

Appendix B of the TIM contains the County's Final *Guidelines for Evaluating Vehicle Miles Traveled Under CEQA* (County of Orange 2020), which identify project types that are screened from requiring a VMT analysis and presumed to have a less than significant transportation impact. The *Orange County 2020 Local CEQA Procedures Manual* similarly identifies VMT as the applicable metric under CEQA.

Description of the Proposed Project and Applicability of Transportation Guidance. The Proposed Project is neither a land use project nor a transportation project and does not involve new development or construction. Instead, it consists of an operational change that would increase the maximum daily operations at an existing, publicly owned landfill. While this change would accommodate an increase in waste delivery trips to the Landfill, it would not generate new waste streams and is anticipated to primarily reflect redistribution of existing regional trips to and from other, existing waste disposal sites, including those associated with the closure of the Olinda Alpha Landfill.

The *Traffic Volume and VMT Study for the Increased Tonnage at the Prima Deshecha Landfill Project, Orange County, California* (LSA 2025) is provided in **Appendix E**. The study was prepared in accordance with the Orange County's TIM, which provides guidance on the traffic LOS policies of the GM Element of the Orange County General Plan. Per Chapter 3 of the TIM, government-owned facilities that are not used for revenue-generating or commercial purposes are exempt from GM Element traffic requirements. The Proposed Project involves an operational change to an existing,

publicly owned facility (the Landfill) not intended for commercial use; therefore, it qualifies for this exemption. As a result, the project is exempt from growth management and LOS evaluation, and an LOS-based transportation impact analysis is not included in the Traffic Volume and VMT Study.

The Traffic Volume and VMT Study presents the VMT analysis prepared in accordance with the TIM. In addition, it identifies a study area that encompasses the regional access corridors for the Proposed Project-related traffic, including 18 intersections and 17 roadway segments between these intersections. The Traffic Study characterizes existing conditions in the absence of the Proposed Project, provides the calculations for the trip generation for the Proposed Project with the assumptions for the anticipated distribution of trips within the study area, and identifies forecasted future-with-project traffic volumes within the study area. Trip generation and future traffic volumes provide the basis for determining long-term noise levels and quantifying emissions associated with off-site vehicle trips (see Sections 4.1, 4.2, and 4.3).

VMT Screening for Public Service Facilities. Under the County's Final *Guidelines for Evaluating Vehicles Miles Traveled under CEQA* (County of Orange 2020), public services and facilities that support community health, safety, or welfare—including landfills—are screened from the requirement to prepare a VMT analysis. These facilities are already part of the existing community, and the VMT is accounted for in the regional average. Therefore, the proposed project is screened from a VMT analysis and presumed to have a less than significant transportation impact. Furthermore, the increase in maximum daily operations at the Landfill would not itself generate new waste or trips; rather, the Proposed Project would accommodate redistribution of existing regional trips upon the closure of the Olinda Alpha Landfill. The same screening for a public facility would have applied at the time the 2001 GDP EIR was prepared if the County's *Final Guidelines for Evaluating Vehicle Miles Traveled under CEQA* had been in place. This is because both the project evaluated under the 2001 GDP EIR and the Proposed Project fall in the category of "public services and facilities that support community health, safety, or welfare" as part of the Landfill's operations.

Response to Scoping Comments and Local Traffic Concerns. During public scoping, concerns were raised regarding potential increases in traffic volumes on the local network, including conditions at San Juan Hills High School during school drop-off and pick-up hours. To address these concerns, a queuing analysis was conducted at the intersection of Avenida La Pata and Stallion Ridge; it was determined that the Proposed Project would not affect the backup queues at this intersection (refer to the Traffic Volume and VMT Study in **Appendix E** for additional details).

Traffic counts used in the analysis were collected while school was in session and included school-related traffic during(drop-off hours), which coincide with the a.m. peak-hour conditions. School dismissal occurs outside of the p.m. peak-hour conditions, with the last bell occurring prior to the beginning of the p.m. peak hours for traffic. Traffic associated with the Proposed Project will be spread throughout the Landfill's operating hours and will not be concentrated in either the a.m. or p.m. peak hours. The analysis of existing conditions indicates that there are existing high traffic volumes on certain roadways within the study area in the absence of the Proposed Project, which will remain with or without the Proposed Project.

Additional scoping comments raised concerns regarding LOS and referenced the City of San Juan Capistrano's Administrative Policy 310. As discussed above, LOS is not a CEQA transportation metric;

VMT is the required metric for evaluating transportation impacts and, pursuant to the County's adopted *Final Guidelines for Evaluating Vehicle Miles Traveled under CEQA,* is the appropriate metric for analyzing the Proposed Project's traffic and circulation impacts.

With respect to Administrative Policy 310, the policy applies to development projects requiring discretionary approval by the City of San Juan Capistrano. Because the Proposed Project does not involve new development, does not involve any new construction of any kind, and does not require any discretionary approvals from the City of San Juan Capistrano, the policy does not apply. OCWR notes that the County remains a partner in addressing regional traffic concerns, as demonstrated by the planned LPPE project, which is anticipated to separately and independently improve traffic congestion in the vicinity of the Proposed Project.

Transportation Impact Conclusion. Consistent with SB 743, the *State CEQA Guidelines,* and the County's adopted transportation guidance, this Subsequent EIR evaluates transportation impacts using VMT as the applicable metric. Based on the screening criteria and the supporting Traffic Volume and VMT Study, the Proposed Project would not result in a significant transportation impact under CEQA.

Implementation of the Proposed Project would not affect the applicability of mitigation measures identified in the 2001 GDP EIR or subsequent CEQA documents for the Landfill. Accordingly, no additional transportation mitigation or quantitative analysis is required.

5.2.16 Tribal Cultural Resources

5.2.16.1 Scoping Comments

Comments were received during the scoping process expressing concerns that tribal cultural resources have not been analyzed in previous CEQA documents and noting that consultation pursuant to Assembly Bill (AB) 52 is required.

5.2.16.2 AB 52 Tribal Consultation Process

AB 52 requires Lead Agencies to consult with California Native American tribes that are traditionally and culturally affiliated with the project area and that have requested notification under PRC Sections 21080.3.1 and 21080.3.2. For projects in Orange County, formal consultation is offered to the tribes that have submitted written requests to the County of Orange to be notified of projects subject to CEQA. At the time the NOP was circulated for the Proposed Project, four tribes had active AB 52 notification requests on file with the County.

Notification and Consultation Activities. Upon issuance of the NOP, the County sent formal AB 52 consultation letters to the four tribes traditionally associated with the region, which generally include the following tribal governments:

- Gabrieleño Band of Mission Indians – Kizh Nation
- Juaneño Band of Mission Indians
- San Gabriel Band of Mission Indians
- Soboba Band of Luiseño Indians

Each tribe was provided the statutory 30-day period in which to request formal consultation. As part of the County's outreach, the letters included project information, maps, and an offer to consult in accordance with PRC Section 21080.3.1.

Results of Consultation. No tribes requested formal consultation within the 30-day statutory period. The County did not receive requests for meetings, additional information, or site visits. Because no tribe elected to enter into formal consultation, the County's responsibilities under AB 52 for the Proposed Project are considered complete.

5.2.16.3 Summary of Prior CEQA Documentation

Since certification of the 2001 GDP EIR in November 2001 and certification of the First Supplemental EIR to the 2001 GDP EIR in June 2007, there have been several revisions to CEQA and the *State CEQA Guidelines*. CEQA was amended in 2014 to include tribal cultural resources (TCRs) as a separate impact category. As discussed in Chapter 4.0 under the topic "Thresholds," this Subsequent EIR reflects all updates to the *State CEQA Guidelines* that have occurred since the 2001 GDP EIR. Consistent with the procedures outlined in AB 52, on July 7, 2020, as part of the Second Supplemental EIR to the 2001 GDP EIR, the County sent out letters to the four tribes that are registered/recognized by the California Native American Heritage Commission (NAHC) as potentially having tribal resources within the County. None of the tribes that were contacted requested consultation, and no specific TCRs have been identified.

Although the 2001 GDP EIR did not include an analysis of impacts related to TCRs, the LPPE addendum discussed the LPPE's potential impacts related to this topic. The LPPE addendum indicated that no archaeological sites exist within the proposed LPPE alignment, and no California Register eligible sites are within proximity to the alignment. Therefore, it was determined there would be no change to the less than significant impact with mitigation conclusion included for cultural resources in the 2001 GDP EIR, and the LPPE would have less than significant impacts related to TCRs.

As summarized above, previous environmental analyses for Prima Deshecha Landfill—including the 2001 GDP EIR, the First Supplemental EIR to the GDP EIR, and the Second Supplemental EIR to the GDP EIR—incorporated cultural and tribal coordination consistent with CEQA requirements in place at the time each document was prepared. Prior to the adoption of AB 52 in 2014, CEQA did not mandate formal government-to-government tribal consultation; However, Lead Agencies were required to consult with the NAHC and review available Sacred Lands File information. Those earlier landfill CEQA documents therefore included NAHC Sacred Lands File searches, archaeological records reviews, and outreach to tribes traditionally affiliated with the area. No TCRs, Sacred Lands, archaeological sites, or cultural materials were identified within the Landfill boundary or in previously disturbed areas. No tribes asserted the presence of site-specific TCRs during those outreach efforts, and the prior CEQA analyses concluded—based on field surveys, archival research, and tribal input available at the time—that development and operations within the GDP envelope would not affect TCRs.

While no TCRs have been identified within or adjacent to the Landfill itself, the surrounding region is well known for its significance to the Acjachemen (Juaneño) people. Several publicly documented

TCRs occur within the region but outside the Landfill boundary, including Putuidem, the ancestral Acjachemen village located within the City of San Juan Capistrano's Northwest Open Space, and Panhe, an important village and ceremonial site along lower San Mateo Creek within San Onofre State Beach. Additional traditional use areas are known throughout the San Juan Capistrano Valley, reflecting the long-standing Acjachemen presence in the region. These culturally important locations, however, are situated several miles from the Landfill, are topographically and physically separated from the Proposed Project site, and have no demonstrated cultural or geographical connection to areas affected by the Proposed Project. No tribes have identified the Landfill property as part of a cultural landscape or as containing TCRs during any phase of NAHC referral, AB 52 notification, or previous CEQA analyses. Accordingly, because the Proposed Project would not disturb new ground and because no known TCRs occur within the Landfill footprint, impacts to TCRs would not occur.

5.2.16.4 Proposed Project

Because the proposed changes in operations are administrative in nature and the Proposed Project does not involve any construction, ground-disturbing activity, or expansion of the approved Landfill footprint, no disturbance of native soils would occur. The Proposed Project does not require any new excavation, grading, vegetation removal, or any physical site modifications that could affect previously undisturbed areas beyond what has been evaluated in prior CEQA documentation. All activities would remain fully within the approved operational footprint of the Landfill. As confirmed through project engineering and operations review, the Proposed Project would remain entirely within previously disturbed and engineered portions of the Landfill and would not introduce new soil excavation, grading, or expansion into undisturbed land.

As part of the current evaluation, this Subsequent EIR relies on the evidence and analysis provided by prior environmental documents for the Landfill and for LPPE and updates the analysis to comply with the formal tribal consultation framework established by AB 52 (Public Resources Code Section 21080.3.1 et seq.), which requires Lead Agencies to notify California Native American tribes and, upon request, engage in consultation. Under CEQA, TCRs include sites, features, landscapes, or cultural places either listed/eligible for listing or formally identified by a California Native American tribe. As described in Section 5.2.15.2, consistent with AB 52, OCWR notified the tribes traditionally affiliated with Orange County and made itself available for consultation regardless of the absence of new ground disturbance.

As discussed previously in Section 5.2.4, Cultural Resources, the 2001 GDP EIR found that operation of the Landfill through completion of the GDP would result in a less than significant impact to archaeological resources after the implementation of mitigation measures. None of the tribes that were contacted requested consultation and no TCRs have been identified during consultation conducted with tribes as part of the Proposed Project and prior CEQA documentation. Because no TCRs have been identified for the Landfill site in prior technical studies, NAHC coordination, or tribal consultation opportunities, and given the absence of any soil disturbance or expansion into new areas, there is no potential for the Proposed Project to impact TCRs, including archaeological materials, cultural sites, or areas of traditional or spiritual significance, the Proposed Project would not result in a substantial adverse change to a TCR. Therefore, impacts to TCRs would be less than significant, and no mitigation is required.

Accordingly, no impacts related to TCRs would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

5.2.17 Wildfire

5.2.17.1 Scoping Comments

Comments received during the scoping process expressed concern for the potential increased wildfire risk due to the increased number of trips to the Landfill and requested that a fire control plan and fire prevention measures be implemented.

5.2.17.2 Summary of Prior CEQA Documentation

Since certification of the 2001 GDP EIR in November 2001 and certification of the First Supplemental EIR to the 2001 GDP EIR in June 2007, there have been several revisions to CEQA and the *State CEQA Guidelines*. In December 2018, CEQA and the *State CEQA Guidelines* were updated to include wildfire analysis in the CEQA Appendix G checklist. As discussed in Chapter 4.0 under the topic "Thresholds," this Subsequent EIR reflects all updates to the *State CEQA Guidelines* that have occurred since the 2001 GDP EIR. The 2001 GDP EIR evaluated Fire Safety and Control as a topic under Public Safety and Risk of Upset. Impacts were determined to be less than significant, and the document included mitigation measures to further reduce the risk of fires. These measures addressed reducing the risks of potential surface fires at the Landfill, responding to surface fires, and existing fire hazards. The 2001 GDP EIR evaluated impacts to emergency response as part of the Public Services topic and evaluated impacts associated with adopted emergency response plans as part of the Hazards and Hazardous Materials topic; the 2001 GDP EIR concluded that impacts would be less than significant. The 2001 GDP EIR found that operation of the Landfill through completion of the GDP would not introduce new barriers or constraints on emergency response or evacuation.

Although the 2001 GDP EIR did not include a specific analysis of impacts related to wildfire, the LPPE addendum discussed the LPPE's potential impacts related to this topic. The addendum determined that the LPPE would not represent an obstacle for access by firefighters or firefighting equipment and would provide additional access to the area south of Ortega Highway (SR-74). Additionally, the LPPE would serve as a fire break. The LPPE would comply with applicable local and regional fire protection and management plans to ensure that impacts related to wildfire are less than significant. Therefore, it was determined that the LPPE would have less than significant impacts related to wildfire.

5.2.17.3 Proposed Project

According to the California Department of Forestry and Fire Protection (CAL FIRE) 2023 Orange County State Responsibility Area Fire Hazard Severity Zones Map, the eastern half of the Landfill (east of Avenida La Pata) is located in a Very High Fire Hazard Severity Zone (VHFHSZ) while the western half is located in a Local Responsibility Area (LRA) (CAL FIRE 2023). This is consistent with the County's General Plan Safety Element Fire Hazard Severity Zones Map. According to CAL FIRE's California Fire Hazard Severity Zone Viewer, the Household Hazardous Waste Collection Centers and

parking facilities at the Landfill are within a designated State Responsibility Area (SRA) moderate Fire Hazard Severity Zone (FHSZ) (CAL FIRE n.d.).

The Proposed Project does not include any changes to the types or locations of approved activities or facilities within the Landfill development areas and would not affect slope, prevailing winds, or other factors that would exacerbate fire risk. The Landfill has adequate infrastructure in place, including roads and emergency water sources to accommodate the proposed increase in maximum daily operations. Additionally, the Landfill has fire suppression resources available, including water trucks, water tanks, and soil for smothering fire. Further, large graded areas act as fire breaks throughout the Landfill. The mitigation measures identified and adopted in prior CEQA documentation provide a comprehensive strategy for reducing the risks of potential surface fires at the Landfill, responding to surface fires, and existing fire hazards (refer to Mitigation Measures 4.13.4-1 through 4.13.4-5 and 4.13.5-4 in the MMRP in **Appendix G**). Those measures continue to be implemented and would continue to apply to the Landfill with implementation of the Proposed Project. However, because the Proposed Project is an administrative change to the total daily operational limits and does not include any construction or expansion of the Landfill, the County has determined that the existing mitigation measures appropriately address any wildfire risk and that no additional measures are required to address the increased risk associated with the transportation and processing of a higher volume of waste.

Accordingly, no impacts related to wildfire would occur with implementation of the Proposed Project. The Proposed Project would not affect implementation of any mitigation measures outlined in the 2001 GDP EIR or prior CEQA documentation for the Landfill. Therefore, no further analysis or additional mitigation is required.

6.0 OTHER CEQA CONSIDERATIONS

This chapter includes CEQA mandated discussions on the following topics as required by Section 15126 of the *State CEQA Guidelines*: (a) significant adverse environmental impacts for which either no mitigation or only partial mitigation is feasible; (b) significant irreversible environmental changes that would result from implementation of the Proposed Project; and (c) growth-inducing impacts of the Proposed Project.

6.1 SUMMARY OF SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(c) of the *State CEQA Guidelines* requires that an EIR describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(c) states that an EIR shall:

> Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

The Executive Summary of this document (Chapter 1.0) contains a detailed summary that identifies the potential environmental impacts of the Proposed Project evaluated in the context of the impacts in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR (collectively, prior CEQA documentation for the Landfill). As described in detail in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures, the Proposed Project would result in a new significant and unavoidable greenhouse gas (GHG) emissions impact that was not identified in prior CEQA documentation for the Prima Deshecha Landfill (Landfill). Additionally, the Proposed Project would substantially increase the significant impact related to air quality already identified in prior CEQA documentation. However, the Proposed Project would not substantially increase any of the significant impacts related to aesthetics and biological resources or the less than significant impacts with mitigation incorporated related to cultural resources, geology and soils, hazards and hazardous materials, land use and planning, recreation, tribal cultural resources, and utilities and service systems already identified in prior CEQA documentation.

6.1.1 Air Quality

As described in Section 4.1, Air Quality, increasing the permitted daily maximum tonnage would result in an increase in the number and/or length of vehicle and truck trips and an increase in on-site equipment operations, which would have the potential to adversely affect air quality through the generation of fugitive dust, odors, and/or criteria pollutants and toxic air contaminants (TACs). Indirect emissions of criteria pollutants with regional impacts would occur from vehicle trips associated with solid waste transportation to the Landfill and employee vehicle emissions. As discussed in Section 4.1, Air Quality, even with mitigation, the Proposed Project's nitrogen oxide (NO_X) emissions would exceed the South Coast Air Quality Management District's (SCAQMD) thresholds. Additionally, the combined emissions associated with the Proposed Project and the development and operation of the Landfill set forth in the 2001 GDP would exceed the SCAQMD's

thresholds for volatile organic compounds (VOCs), NO_X, carbon monoxide (CO), sulfur oxides (SO_X), particulate matter less than 10 microns in size (PM_{10}), and particulate matter less than 2.5 microns in size ($PM_{2.5}$). Therefore, the Proposed Project could result in a cumulatively considerable net increase of any criteria pollutant for which the Proposed Project region is nonattainment under applicable federal or State ambient air quality standards (AAQS). Further, as compared to the findings of the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR, the Proposed Project would result in more substantial significant impacts related to a cumulatively considerable net increase of any criteria pollutants.

All mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, including 2001 GDP EIR Mitigation Measures 4.9-1 through 4.9-10 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. While these mitigation measures would reduce criteria air pollutant emissions generated by the Proposed Project, the Proposed Project would still exceed the SCAQMD regional significance thresholds. Therefore, impacts would remain significant and unavoidable.

6.1.2 Greenhouse Gas Emissions

As described in Section 4.2, Greenhouse Gas Emissions, increasing the permitted daily maximum tonnage would result in an increase in the number and/or length of vehicle and truck trips and equipment operations that would generate GHG emissions. Indirect emissions of GHG emissions would occur from vehicle trips associated with solid waste transportation to the Landfill and employee vehicle emissions. The Proposed Project's GHG emissions would exceed the SCAQMD's thresholds. Additionally, it is expected that the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds. As such, the Proposed Project could generate significant GHG emissions that would have a significant effect on the environment.

As discussed in more detail in Section 4.2, the Proposed Project would be consistent with the energy, water conservation and efficiency, and transportation and motor vehicle measures included in the 2022 Scoping Plan, and would not exceed the growth assumptions in the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Although the Proposed Project would be consistent with the 2022 Scoping Plan and the 2024–2050 RTP/SCS, the Proposed Project would result in a significant and unavoidable impact for GHG emissions based on the exceedance of SCAQMD thresholds. The Proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, Executive Order (EO) B-30-15[1], and Assembly Bill (AB) 197[2] and would not be consistent with applicable State plans and programs designed to reduce GHG

[1] EO B-30-15 added an immediate target reduction of GHG emissions to 40 percent below 1990 levels by 2030.

[2] AB 197, a companion bill to SB 32, provides additional direction to the California Air Resources Board (CARB) related to the adoption of strategies to reduce GHG emissions and provide easier public access to air emissions data collected by CARB.

emissions. Therefore, the Proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

Applicable air quality mitigation measures that would also reduce GHG emissions from the 2001 GDP EIR and First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project, including 2001 GDP EIR Mitigation Measures 4.9-3 and 4.9-4 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2. While these mitigation measures would reduce GHG emissions generated by the Proposed Project, the Proposed Project would still exceed the SCAQMD thresholds. Therefore, impacts would be significant and unavoidable.

6.2 GROWTH-INDUCING IMPACTS

Sections 15126(d) and 15126.2(e) of the *State CEQA Guidelines* require that an EIR analyze growth-inducing impacts and discuss the ways in which a Proposed Project could foster economic or population growth or construction of additional housing, either directly or indirectly, in the surrounding environment. This section examines ways in which the Proposed Project could generate economic or population growth, or the construction of additional housing either directly or indirectly in the surrounding environment. *State CEQA Guidelines* Section 15126.2(d) also requires a discussion of the characteristics of projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. To address these issues, potential growth-inducing effects were examined through analysis of the following questions:

- Would the project remove obstacles to, or otherwise foster, population growth (e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development)?

- Would the project foster economic growth?

- Would approval of the project involve some characteristic that may encourage and facilitate other activities that could significantly affect the environment?

Growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment (*State CEQA Guidelines*, Section 15126.2(e)). This issue is presented to provide additional information on ways in which the Proposed Project could contribute to significant changes in the environment beyond the direct consequences of developing the proposed land uses as described in earlier sections of this Subsequent EIR.

6.2.1 Removal of Obstacles to, or Otherwise Foster, Population Growth

The Proposed Project would not be an inducement to growth, because the Proposed Project does not entail the addition of new residences or the extension of major infrastructure facilities that would result in secondary or indirect growth in and around the area. The Proposed Project objectives include maintaining systemwide solid waste disposal capacity to manage solid waste for the County by accommodating a portion of the solid waste stream from the Olinda Alpha Landfill when that facility closes. The Proposed Project is limited to operational changes that are

administrative in nature and would not expand overall disposal capacity within the County beyond what is currently provided. Systemwide solid waste disposal capacity for the County has been considered for the Proposed Project based on the OC Public Works (OCWR) Strategic Plan, which assesses the County's disposal system capabilities and identifies goals and strategies needed to ensure viable long-term disposal options. Because the Proposed Project does not include elements that expand the Landfill's overall capacity, create a significant number of permanent employment opportunities, result in the extension of major infrastructure facilities, or affect regional housing trends, there would be no incremental growth-inducing effects as a result.

The Proposed Project would not include roadway widenings, new access routes, interchange modifications, or other transportation infrastructure improvements that could increase regional accessibility or facilitate new development. As discussed in Section 5.2.15, project-related transportation effects are limited to operational changes at an existing facility and would not improve mobility or reduce travel times in a manner that could stimulate growth.

6.2.2 Foster Economic Growth

The Proposed Project would not introduce new residents or populations to the Landfill site. While the Proposed Project is expected to generate approximately 35 new jobs due to increased daily operations, those jobs are anticipated to be filled by existing contractors working within the County. Any economic growth attributable to landfill-related jobs would be minor in comparison to the overall County employment forecast.

6.2.3 Other Characteristics

The Proposed Project does not involve any changes to the existing land uses that are outlined in the 2001 GDP and analyzed in the 2001 GDP EIR. The Landfill would maintain its current primary use as a landfill. Because the Proposed Project would not modify the existing land use designations or zoning classifications on the Landfill site or on any off-site properties, the Proposed Project would not directly increase the population in the cities of San Juan Capistrano and San Clemente or the County. In addition, the Proposed Project is unlikely to attract developers or businesses to the area. Therefore, the Proposed Project would not encourage or facilitate growth through land use changes or other activities that could significantly affect the environment.

6.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the *State CEQA Guidelines* requires that an EIR consider and discuss significant irreversible changes that would be caused by implementation of a Proposed Project. The *State CEQA Guidelines* specify that the use of nonrenewable resources during the initial and continued phases of a project should be discussed, as a large commitment of such resources makes removal or non-use thereafter unlikely. Primary and secondary impacts should also be discussed because such changes generally commit future generations to similar uses. Irreversible damage can also result from environmental accidents associated with a project and should be discussed.

The types and levels of activities associated with the Proposed Project would consume limited, slowly renewable, and nonrenewable resources. This consumption would occur throughout the operational lifetime of the Proposed Project. The implementation of the Proposed Project would

require a commitment of resources that would include fuel and operational materials/resources and the transportation of goods and people to and from the Landfill. The approved ongoing development of the Landfill is analyzed within the prior environmental documents that evaluated development of the Landfill as set forth in the 2001 GDP, as amended. Implementation of the Proposed Project would not result in changes in quantities of building materials over those assessed within the 2001 GDP and the 2001 GDP EIR because no new structures are proposed and there would be no change to the Landfill development.

Operation of the Proposed Project would require consumption of resources that are not replenishable or that may renew so slowly as to be considered nonrenewable. Fossil fuels (e.g., gasoline and oil) and water would be utilized during the use of equipment and operation of the Proposed Project. Daily use of these resources is expected to incrementally increase as a larger quantity of waste is received and processed; however, because the overall capacity of the Landfill would not change, the use of resources over the lifetime of the facility may not be substantially different.

The existing, finite energy sources of gasoline and oil would be reduced; however, as discussed in Section 5.2.5, Energy, of Chapter 5.0, Environmental Issues Not Requiring Substantial Additional Analysis, the consumption of fuels during operation would not occur in a wasteful or inefficient manner, or at a level significant to overall operations. Many of the added trips to the Landfill would be associated with rerouting the Olinda Alpha Landfill waste stream when that facility closes. The Proposed Project would allow OCWR to maintain more flexibility in rerouting those trips between the remaining two active landfills and allow contracted waste haulers to identify efficient routes. Nevertheless, the use of such resources would continue to represent a long-term commitment of essentially nonrenewable resources.

Water would be utilized for dust control and watering activities that would occur as a result of the Proposed Project. These uses are currently in effect at the Landfill and are required for site mitigation responsibilities and the Proposed Project is not anticipated to incrementally increase these needs. Furthermore, the water used for dust control and watering consists of storm water, groundwater, and leachate. These are not considered to be wasteful, inefficient, or unnecessary uses of water. Because sources of water for the Proposed Project are available and anticipated to be in adequate supply in the foreseeable future, impacts due to this commitment of resources are not considered significant.

In summary, operation of the Proposed Project would commit the use of slowly renewable and nonrenewable resources and would limit the availability of these resources on the Landfill for future generations or for other uses during the life of the Proposed Project. However, the continued use of such resources during operation would be on a relatively small scale and consistent with the 2001 GDP, as amended. As a result, the use of nonrenewable resources in this manner would not result in significant irreversible changes to the environment under the Proposed Project.

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7.0 ALTERNATIVES

7.1 INTRODUCTION

CEQA requires that an EIR include a discussion of reasonable project alternatives that would "feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives" (*State CEQA Guidelines* Section 15126.6). This chapter identifies potential alternatives to the Proposed Project and evaluates them as required by CEQA.

Key provisions of the *State CEQA Guidelines* on alternatives (Sections 15126.6[b] through [f]) are summarized below to explain the foundation and legal requirements for the alternatives analysis in an EIR:

- The discussion of alternatives shall focus on alternatives to the project or its location that would feasibly attain most of the basic project objectives and that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly (Section 15126.6[b]).

- The specific alternative of "no project" shall also be evaluated along with its impact (Section 15126.6[e][1]). The "no project" analysis shall discuss the existing conditions at the time the Notice of Preparation (NOP) is published and at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives (Section 15126.6[e][2]).

- The range of alternatives required in an EIR is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR is required to only examine in detail the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in such a manner as to foster meaningful public participation and informed decision making. 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) (Section 15126.6[f]).

- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR (Section 15126.6[f][2][A]).

- If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project, which must be in close proximity to natural resources at a given location (Section 15126.6[f][2][B]).

- An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (Section 15126.6[f][3]).

7.1.1 Scoping

As described in Section 2.2, Scoping Process, of Chapter 2.0, Introduction, OCWR received 8 comment letters from Public Agencies and 103 comment letters from individuals during the public review period of the Initial Study/Notice of Preparation (IS/NOP). **Appendix A** of this Subsequent EIR includes the NOP and the Initial Study, the NOP distribution list, a summary of comments received during public scoping, and comment letters from Public Agencies. No comments related to alternatives were received from Public Agencies. Several letters from individuals included comments related to alternatives, and they are summarized below.

Public comments related to alternatives were received from individuals expressing concern for the location of the Prima Deshecha Landfill (Landfill) and asked that alternative locations be considered. Many public comments received requested that alternative haul routes be considered, such as routes through San Clemente, and that haul timing be altered to avoid traffic congestion. Hauling waste by rail was also suggested. Several public comments requested that alternative waste management strategies be considered such as recycling programs, composting, and renewable energy facilities. Additionally, a few comments questioned if the additional waste from the closure of the Olinda Alpha Landfill could be diverted to the closed Santiago Canyon Landfill or the Frank R. Bowerman Landfill (FRB Landfill) instead of Prima Deshecha Landfill.

7.2 PROPOSED PROJECT

7.2.1 Project Characteristics

As described earlier in Chapter 3.0, Project Description, the Proposed Project is an increase in the daily permitted capacity of the Prima Deshecha Landfill to allow for diversion of waste once the Olinda Alpha Landfill closes. This increase in the daily permitted capacity of the Landfill is anticipated to take place gradually. The Proposed Project would increase the maximum amount of waste that the Prima Deshecha Landfill is able to accept on a daily basis from 4,000 tons per day (TPD) to 8,000 TPD. Waste would continue to be disposed of in existing areas of the Landfill that are designated for disposal. The Proposed Project would also allow for up to 36 operational emergency days during which the 8,000 TPD limit could be exceeded by up to 2,000 TPD with a maximum of 10,000 TPD. Given the variable daily disposal amounts under the existing conditions, it is anticipated that typical daily operations would remain below the permitted maximum 8,000 TPD under the Proposed Project. The proposed operational changes are administrative in nature, involving only an adjustment to the permitted daily tonnage. No new construction, off-site improvements, or modifications to previously approved Landfill development are proposed as part of this project. The Proposed Project would not change the nature or location of approved activities within the Landfill,

including the limits of refuse, nor would it alter the approved footprint, property limits, or configuration of the Landfill, all of which have been evaluated in prior environmental documents.

7.2.2 Project Objectives

Each alternative is analyzed to determine whether it achieves the basic objectives of the Proposed Project. As discussed in Chapter 3.0, OCWR has established specific solid waste management objectives for the Proposed Project, which would aid decision-makers in their review of the Proposed Project and its associated environmental impacts. The objectives identified below were utilized in the preparation of this Subsequent EIR, particularly with regard to the Landfill's operations:

- Support the following goals established under the OCWR Strategic Plan (Strategic Plan) (formerly the Regional Landfill Options for Orange County Strategic Plan [RELOOC]) to ensure sufficient disposal system capacity for a 40-year period and beyond:
    - Maintain a financially sound, flexible long-term plan for local solid waste disposal and management services.
    - Maintain protection of Orange County's public health, safety, and its environment (air, water and habitat).
    - Sustain the economic viability of the Orange County solid waste disposal system by ensuring consistent and reliable public fees/rates and adequate revenues to maintain efficient, cost effective, and high-quality OCWR operations.
    - Provide a fair, objective, open, planning process that is presented in non-technical, easily understood terms, applicable to an evaluation matrix, responsive to and involves stakeholders and the public, and results in public understanding.
- Support the goal of the California Integrated Waste Management Act (Assembly Bill [AB] 939), which requires the County of Orange to demonstrate 15 years of countywide solid waste disposal/landfill capacity (or sufficient alternative strategies once 15 years of capacity no longer remains in-County).
- Optimize the use of the site as a long-term waste disposal facility.
- Maintain systemwide solid waste disposal capacity to manage solid waste for Orange County by accommodating a portion of the waste stream that will be diverted from the Olinda Alpha Landfill when that facility starts accepting less quantities of waste in preparation of closure as early as the end of 2026.
- Provide a long-term, regional solid waste management facility with appropriate safeguards, for each Landfill phase in order to protect public health and safety, as well as water, air, soil, and other important resources that exist on site and on surrounding property.

7.2.3 Significant Unavoidable Impacts of the Proposed Project

The following is a summary of the impacts that are considered significant, adverse, and unavoidable after all mitigation is applied. These impacts are also described in detail in Chapter 4.0, Existing Environmental Setting, Environmental Analysis, Impacts, and Mitigation Measures. The Proposed Project would result in significant and unavoidable impacts related to air quality and greenhouse gases (GHGs).

Increasing the maximum amount of waste would result in an increase in vehicle and truck trips and equipment operations, which would have the potential to adversely affect air quality through the generation of fugitive dust, odors, and/or criteria pollutants and toxic air contaminants (TACs). Although many of the trips represent redistribution of waste that would have otherwise gone to the Olinda Alpha Landfill, as discussed in Section 4.1, Air Quality, the number and/or length of trips is anticipated to increase, resulting in an increase in emissions compared to baseline conditions. Indirect emissions of criteria pollutants with regional impacts would occur from vehicle trips associated with solid waste transportation to the Landfill and employee vehicle emissions. As discussed in Section 4.1, even with mitigation, the Proposed Project's nitrogen oxides (NO_X) emissions would exceed the SCAQMD thresholds. Additionally, the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP would exceed the SCAQMD's thresholds for volatile organic compounds (VOCs), NO_X, carbon monoxide (CO), particulate matter less than 10 microns in size (PM_{10}), and particulate matter less than 2.5 microns in size ($PM_{2.5}$). As such, the Proposed Project could result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under applicable federal or State ambient air quality standards (AAQS). Although impacts to air quality were identified as significant and unavoidable in the First Supplemental EIR to the 2001 GDP EIR and documents thereafter, the emissions from the Proposed Project (for the increase in emissions associated with operating at the maximum daily permitted capacity of 8,000 TPD compared to existing operations) exceed the levels that were disclosed in prior environmental documents and exceed the SCAQMD thresholds, resulting in an increase in the severity of a previously identified significant impact.

As discussed in Section 4.2, Greenhouse Gas Emissions, increasing the maximum amount of waste would result in an increase in vehicle and truck trips and equipment operations, which would generate GHG emissions. Although many of the trips represent redistribution of waste that would have otherwise gone to the Olinda Alpha Landfill, the number and/or length of trips is anticipated to increase, resulting in an increase in emissions. Indirect emissions of GHG emissions would occur from vehicle trips associated with solid waste transportation to the Landfill and employee vehicle emissions. The Proposed Project's GHG emissions would exceed the SCAQMD's thresholds. Additionally, it is expected that the combined emissions associated with the Proposed Project and the Landfill development and operation set forth in the 2001 GDP, as amended, would exceed the SCAQMD's GHG thresholds. As such, the Proposed Project could generate significant GHG emissions that would have a significant effect on the environment.

As described in Section 4.2, the Proposed Project would be consistent with the energy, water conservation and efficiency, and transportation and motor vehicle measures included in the 2022 Scoping Plan and would not exceed the growth assumptions in the Southern California Association of

Governments (SCAG) 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

However, although the Proposed Project would be consistent with the 2022 Scoping Plan and the 2024–2050 RTP/SCS, the Proposed Project would result in a significant and unavoidable impact for GHG emissions based on SCAQMD thresholds. As a result, the Proposed Project would not comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in the 2022 Scoping Plan, Executive Order (EO) B-30-15,[1] and Assembly Bill (AB) 197,[2] and would not be consistent with applicable State plans and programs designed to reduce GHG emissions. Therefore, the Proposed Project would conflict with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs.

All air quality mitigation measures from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR remain as project commitments that apply to the Proposed Project and would be implemented per the Mitigation Monitoring and Reporting Program (MMRP). These measures include the 2001 GDP EIR Mitigation Measures 4.9-1 through 4.9-10 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2, which are applicable to air pollutant emissions, as well as the 2001 GDP EIR Mitigation Measures 4.9-3 and 4.9-4 and the First Supplemental EIR to the 2001 GDP EIR Mitigation Measures 5.4-1 and 5.4-2, which are applicable to GHG emissions. All measures are included in **Appendix G** of this Subsequent EIR. While these mitigation measures would reduce criteria air pollutant and GHG emissions generated by the Proposed Project, the Proposed Project would still exceed the SCAQMD regional significance thresholds due to the impacts from heavy heavy-duty (HHD) trucks (see **Table 4.1.K** in Section 4.1). No additional mitigation measures have been identified that would further reduce emissions. Therefore, impacts to air quality and GHGs would remain significant and unavoidable, and impacts would be more severe than those identified in prior CEQA documentation for the Landfill due to the increased number and/or length of vehicle trips and increase in on-site equipment use.

In the context of cumulative impacts, evaluation of the Proposed Project must consider prior actions and related projects that have been approved at the Landfill. Implementation of the 2001 GDP, and various amendments thereto, has been the focus of several prior environmental documents (refer to Section 2.1, in Chapter 2.0). The 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR concluded that development of the Landfill would result in significant and unavoidable impacts related to aesthetics, air quality, and noise even with implementation of the mitigation measures. The alternatives identified in prior CEQA documents for the Landfill were directed towards reducing those significant impacts.

As described above and in Section 4.1, Air Quality, and Section 4.2, Greenhouse Gas Emissions, the Proposed Project would result in new or substantially increased significant and unavoidable impacts related to air quality and GHGs compared to the impacts disclosed in prior CEQA documents. As

[1] EO B-30-15 added an immediate target reduction of GHG emissions to 40 percent below 1990 levels by 2030.

[2] AB 197, a companion bill to SB 32, provides additional direction to the California Air Resources Board (CARB) that is related to the adoption of strategies to reduce GHG emissions and provide easier public access to air emissions data collected by CARB.

described in Sections 4.1 and 4.2, air quality and GHG impacts are primarily related to increased vehicle trips and to a lesser extent to the increased on-site operations needed to process the higher daily volume of waste. As noted in those sections, the analysis conservatively assumed all trips associated with the increase in daily tonnage would be new trips, although they are anticipated to mostly consist of rerouted trips to the Olinda Alpha Landfill when that facility closes. Therefore, alternatives to the Proposed Project evaluated in this Subsequent EIR focus on reducing the significant impacts related to air quality and GHGs.

As described in Section 4.3, Noise, the Proposed Project would not result in new or greater significant unavoidable adverse impacts related to noise; these conclusions included consideration of the approved actions at the Landfill evaluated in prior CEQA documents. Therefore, alternatives to the Proposed Project do not need to focus on reducing the significant impacts related to noise that were identified in prior CEQA documentation. In addition, as described in Chapter 5.0, Environmental Issues Not Requiring Substantial Additional Analysis, the Proposed Project would not result in any new significant impacts that would be related to aesthetics. Therefore, the alternatives identified for the Proposed Project do not need to specifically address the significant impacts related to aesthetics identified in prior CEQA documentation.

Furthermore, as described in Chapter 5.0, the Proposed Project would not result in any new significant impacts related to agricultural and forestry resources, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utility and service systems, transportation, tribal cultural resources, or wildfire. Therefore, the alternatives identified for the Proposed Project do not need to specifically address these other environmental topics.

This chapter focuses on alternatives that would reduce or avoid the significant adverse unavoidable impacts of the Proposed Project related to air quality and GHG emissions. Alternatives previously considered in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR considered significant air quality impacts. Although GHGs were not discussed in prior CEQA documents, alternatives that specifically addressed air quality impacts also address emissions-related GHG impacts. Alternatives considered in prior CEQA documents are described in Section 7.3 to provide context regarding the prior analysis of development of the Landfill, including significant unavoidable impacts to air quality. Alternatives considered for the Proposed Project are evaluated in Sections 7.4 and 7.5.

7.3 ALTERNATIVES PREVIOUSLY CONSIDERED FOR AMENDMENTS TO THE 2001 GDP

Several alternatives were considered for detailed analysis in the 2001 GDP EIR, the First Supplemental EIR to the 2001 GDP EIR, and the Second Supplemental EIR to the 2001 GDP EIR but were eliminated due to infeasibility.

7.3.1 Alternatives Previously Analyzed in the 2001 GDP EIR

The 2001 GDP EIR evaluated the following No Project and four Stockpile Landslide Remediation alternatives:

- No Project Alternative
- Stockpile Landslide Remediation Alternatives
    - No Landslide Remediation Alternative
    - Stabilize Stockpile Landslide and Re-route Natural Stream to the South of Current Alignment and Install 96-Inch Reinforced Concrete Pipe (RCP)
    - Stabilize Stockpile Landslide and Realign the Natural Stream over the Existing Stream
    - Stockpile on Top of Existing Fill

The No Project Alternative analyzed in the 2001 GDP EIR was based on the 1979 Development Plan, which served as the basis for the 1995 Solid Waste Facility Permit for the Landfill. This alternative would have allowed for continued development of the Landfill but would have resulted in a greater area to be disturbed for landfilling and therefore greater environmental impacts. Significant impacts related to topography, biological resources, and aesthetics under the No Project Alternative were greater than those under the 2001 GDP and could not be mitigated to a less than significant impact. The landslide remediation alternatives were considered but were ultimately deemed to be technologically or economically infeasible, have greater environmental impacts than the 2001 GDP, or did not accomplish the objectives of the 2001 GDP.

7.3.1.1 Alternatives Considered but Not Evaluated in the 2001 GDP EIR

Unconventional approaches to waste management, including rail haul and waste-to-energy alternatives were also discussed briefly in the 2001 GDP EIR. The rail haul alternative was rejected without further analysis since its implementation is inconsistent with the project's objective of optimizing uses of the Prima Deshecha site as a long-term integrated waste management facility. It was determined the waste-to-energy technology should be monitored to take advantage of the volume reductions that could be achieved should the environmental, land use, and economic feasibility issues be resolved. However, for the near term and for the purposes of the analysis in the 2001 GDP EIR, this alternative was rejected because it failed to meet the project objectives of providing a regional facility with appropriate environmental safeguards.

7.3.1.2 Environmentally Superior Alternative/Least Environmental Damaging Practicable Alternative in the 2001 GDP EIR

Based on the comparative analysis of the alternatives presented in the 2001 GDP EIR, the proposed 2001 GDP was considered to be the Environmentally Superior Alternative pursuant to CEQA in that its implementation would result in the least adverse environmental impacts, require fewer mitigation measures, and achieve the project objectives.

7.3.2 Alternatives Previously Analyzed in the First Supplemental EIR to the 2001 GDP EIR

The First Supplemental EIR to the 2001 GDP EIR evaluated the following No Project Alternative and four project alternatives:

- No Project Alternative
- Alternative 1: Maintain 2001 GDP Zone Footprint and Detention/Desilting Basin Between Zones 1 and 4
- Alternative 2: Maintain 2001 GDP Zone Footprint and Detention/Desilting Basin Between Zones 1 and 4 with Surface Water Augmentation
- Alternative 3: Modify Zone 4 Footprint to Avoid Permanent Impact to Three Least Bell's Vireo Territories
- Alternative 4: Shift Zone 4 Footprint Southwest for Recharge Purposes

The project alternatives considered variations on site layout, including the location of a detention/desilting basin, augmenting water supplies, avoiding sensitive habitat, and shifting the location of Zone 4 to avoid impacts to spring recharge location. None of the alternatives were specifically targeted at reducing air quality or GHG emissions, nor do they address concerns with the Proposed Project raised during scoping; therefore, they are not described in detail.

7.3.2.1 Alternatives Considered but Not Evaluated in the First Supplemental EIR to the 2001 GDP EIR

Three additional alternatives were considered but eliminated due to infeasibility. None of those additional alternatives were targeted at reducing air quality or GHG emissions, nor do they address concerns raised during scoping for the Proposed Project:

- Reduce the Zone 4 Footprint and Deepen to Maintain Capacity
- Shift the Zone 4 Footprint over the Ridge into Segunda Deshecha
- Shift the Zone 4 Footprint North to or Past the Property Boundary

7.3.2.2 Environmentally Superior Alternative/Least Environmental Damaging Practicable Alternative in First Supplemental EIR to the 2001 GDP EIR

Analysis of feasible alternatives indicated that the project evaluated in the First Supplemental EIR to the 2001 GDP EIR was the Environmentally Superior Alternative pursuant to CEQA, and was found to be the Least Environmentally Damaging Practicable Alternative pursuant to Section 404(b)(1) of the Clean Water Act.

7.3.3 Alternatives Previously Analyzed in the Second Supplemental EIR to the 2001 GDP EIR

The Second Supplemental EIR to the 2001 GDP EIR included the following No Project Alternative and three project alternatives:

- Alternative 1A: No Project (All Components)
- Alternative 1B: No Concurrent Operations
- Alternative 1C: No Breccia Removal
- Alternative 1D: No Concurrent Operations or Breccia Removal

The alternatives focused on reducing aesthetics, air quality, and noise impacts by adjusting or eliminating concurrent operations, leaving hard rock material (San Onofre Breccia) in place and importing soil liner for Zone 4 instead, as well as combinations of these approaches. Alternatives 1A, 1C, and 1D would reduce the capacity of the Landfill, which is inconsistent with Strategic Plan objectives. Alternative 1B eliminates the ability to shift work between Zone 1 and Zone 4 depending on seasonal conditions, which would otherwise allow OCWR to minimize localized noise, dust, and odor.

7.3.3.1 Consideration of Alternative Sites in the Second Supplemental EIR to the 2001 GDP EIR

Due to the nature of the project, which includes improvements specific to landfill operations on the Landfill site, the project was determined to be intrinsically tied to the physical location of the Prima Deshecha Landfill, which has been operating since 1976 and is permitted until 2102. In addition, as described in the alternatives from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR, shifts in the configurations and locations of Landfill zones have been previously analyzed and were determined to be infeasible. Therefore, an alternative site was determined not to be feasible for the project.

7.3.3.2 Environmentally Superior Alternative the Second Supplemental EIR to the 2001 GDP EIR

Analysis of feasible alternatives indicated that the project evaluated in the Second Supplemental EIR to 2001 GDP EIR was an Environmentally Superior Alternative pursuant to CEQA.

7.4 ALTERNATIVES CONSIDERED IN THIS SUBSEQUENT EIR BUT REJECTED FROM FURTHER CONSIDERATION

7.4.1 Alternative Sites

As discussed in Section 7.1.1, numerous public comments were received during the scoping period requesting that the Landfill be relocated to a different site or that a new landfill be developed. CEQA requires that the discussion of alternatives focuses on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant impacts of the project. The key question and first step in the analysis is whether any of the significant impacts of the project would be avoided or substantially lessened by relocating the project. Section 15126.6 of the *State CEQA Guidelines* states that only locations that would avoid or substantially lessen any of the significant impacts of the project need be considered for inclusion in the EIR. 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 project applicant can reasonably acquire, control, or otherwise have access to the alternative site. If it is determined that no feasible alternative locations exist, the *State CEQA Guidelines* state that the EIR must disclose the reasons for this conclusion.

The use of an alternative site as a project alternative is a choice that is typically characteristic of public agencies that are considering siting new public facilities such as transportation systems, post offices, fire stations, public parking structures, storage yards, or government buildings. For these types of projects, the need for and development of the facility itself is the primary consideration, and the precise location, within certain parameters, is the secondary consideration.

Due to the nature of the Proposed Project, which is specific to landfill operations on the Landfill site, the Proposed Project is intrinsically tied to the physical location of the Prima Deshecha Landfill, which has been operating since 1976 and is permitted to continue operation until 2102. In addition, as described in the alternatives from the 2001 GDP EIR and the First Supplemental EIR to the 2001 GDP EIR, shifts in the configurations and locations of landfill zones have been previously analyzed and were determined to be infeasible; furthermore, such shifts would not reduce the significant impacts related to the Proposed Project. The significant and unavoidable impacts are related to air quality and GHGs and are primarily associated with the addition and rerouting of vehicle trips onto the existing road network, in combination with an increase in the use of on-site equipment to process a greater volume of waste received daily and an increase in the number of employees. If an alternative site were selected, the waste would need to be hauled to a different location, and the vehicle trips (which are the primary reason for the significant impacts) would still occur, albeit at a different location. Indeed, a new physical location for the Proposed Project would mean an entirely new landfill that would require significant construction activities that are not a part of the Proposed Project, as well as impacts associated with new construction of a landfill. It would be speculative to conclude a location could be found where the additional trips associated with landfill use would not have an adverse effect on air quality, or that would necessarily reduce the impacts compared to the Proposed Project.

According to the Strategic Plan, with rapid development of new communities and continued urbanization, siting and development of new landfills within Orange County is highly unlikely. The Strategic Plan, which ensures sufficient disposal system capacity for a 40-year period and beyond, does not include the development of a new landfill or relocating the Landfill to a different site. Therefore, development of a new landfill or relocation of the Landfill to a different site within the County would not meet the project objective of supporting the goals included in the Strategic Plan. Additionally, construction of an additional landfill in the County would almost certainly result in significant impacts to its surrounding area. Therefore, relocating the existing Landfill to an alternative site or building a new landfill are not considered to be feasible alternatives to the Proposed Project.

7.4.2 Restrict Operational Hours

In response to comments provided during scoping, OCWR considered whether reducing the hours within which waste can be delivered, or specifically limiting when transfer trucks can arrive, would be feasible. This option would endeavor to shift more of the increase in daily trips to non-peak hours. Due to the variety of waste sources and the goal of increasing daily operations, accommodating the increased number of daily trips in a reduced number of hours could require that some haulers find locations to temporarily store waste until it can be delivered, resulting in cascading effects to the waste collection and delivery process. Reducing the efficiency of waste delivery would potentially increase overall miles traveled by waste haulers or increase idling time at other locations, which would increase, as opposed to decrease, emissions from transfer trucks. This alternative would not therefore result in any reduction in the significant air quality or GHG impacts identified for the Proposed Project and would not be consistent with project objectives to maintain systemwide capacity; therefore, it was not evaluated further.

7.4.3 Waste Management Alternatives

Several comments requested that alternative waste management strategies be considered, such as recycling programs, composting, and renewable energy facilities; additionally, hauling waste by rail was also suggested. OCWR programs currently support a variety of recycling efforts and the Capistrano Greenery provides on-site composting at the Landfill. As discussed in Chapter 3.0, Section 3.3.3, Current Landfill Operations, recyclable materials found in the majority of the solid waste delivered to the Landfill, whether from in-County or out-of-County sources, are first processed and then removed for recycling. Those operations would not change with or without the Proposed Project.

As discussed in Section 7.3.1.3, unconventional approaches to waste management, including rail haul and waste-to-energy alternatives were discussed briefly in the 2001 GDP EIR. The 2001 GDP EIR analyzed the Long Haul by Rail Alternative in which waste would be transported out of the County by train. This alternative was rejected without further analysis due to the anticipated cost and substantial environmental impacts, County restrictions associated with out-of-County waste disposal, and the failure to meet the project objective of optimizing the use of Prima Deshecha Landfill as a long-term integrated waste management facility. The same factors apply to the Proposed Project; hauling waste by rail is inconsistent with the project objectives and would result in a substantial increase in vehicle miles traveled and associated transportation, air quality, GHG emissions, and potential noise impacts. Therefore, this alternative is not carried forward for the Proposed Project.

As discussed in Section 7.3.1.3, the 2001 GDP EIR determined that waste-to-energy technology should be monitored to take advantage of the volume reductions that could be achieved should the environmental, land use, and economic feasibility issues be resolved. However, for the near term and for the purposes of the analysis in the 2001 GDP EIR, this alternative was rejected because it failed to meet the project objectives of providing a regional facility with appropriate environmental safeguards. OCWR plans to design and implement a new landfill gas-to-energy project in the near future, which will convert landfill gas (LFG) into renewable clean energy in the form of electricity or renewable natural gas (RNG); this would be the subject of separate CEQA documentation and would not address the primary source of emissions (i.e., new or longer truck trips) associated with the Proposed Project. Therefore, this alternative is not carried forward for the Proposed Project.

7.4.4 Implement Alternative Haul Route

In response to public scoping comments, OCWR considered whether implementing an alternative haul route would be feasible. Under this alternative, OCWR would work with contracted waste haulers to reroute a portion of incoming waste via Avenida Pico (I-5 to Avenida Pico to Avenida La Pata to the Landfill, approximately 5.8 miles). The I-5 exit for Avenida Pico is approximately 6.2 miles south of the junction of I-5 and Ortega Highway. Since the majority of trips to the Landfill originate to the north, implementing an alternate route would result in additional vehicle miles traveled (VMT), ranging from 18.8 to 24 miles per round trip. This alternative would increase emissions associated with vehicle trips, resulting in increasing, rather than decreasing, the significant and unavoidable air quality and GHG impacts of the Proposed Project. Therefore, this alternative was not evaluated further.

7.5 RANGE OF ALTERNATIVES BEING EVALUATED

Section 15126.6 of the *State CEQA Guidelines* requires an EIR to identify and discuss a No Project Alternative and a reasonable range of alternatives to the Proposed Project that would feasibly attain most of the basic objectives of the Proposed Project and would avoid or substantially lessen any of the significant environmental impacts. Closure of the Olinda Alpha Landfill will require rerouting that waste stream to other facilities. No feasible alternatives to the Proposed Project have been identified that would reduce the emissions associated with the rerouted trips; it is expected that waste hauling contractors will reroute trips in an efficient manner to minimize mileage traveled and associated fuel costs. However, based on comments received during scoping (see Section 7.1.1), OCWR identified Alternative 2 that would reroute a greater share of the Olinda Alpha Landfill waste to the FRB Landfill, reducing the localized impacts of the Proposed Project. Based on the criteria listed above, the following two alternatives have been selected:

- **Alternative 1: No Project:** Under this alternative, the increase in maximum daily operations would not be implemented on the project site, and Landfill operations would continue as planned under existing conditions in accordance with the 2001 GDP, as amended. Specifically, the Landfill would continue to accept a maximum amount of 4,000 TPD of waste on a daily basis. The Landfill would continue to have zero permitted operational emergency days for increased tonnage. Development of Zones 1 and 4 and operation of the Capistrano Greenery would continue as approved under the 2001 GDP, as amended through Amendment 4. Waste currently processed at the Olinda Alpha Landfill would need to be diverted elsewhere, rather than the Prima Deshecha Landfill, upon closure of that facility.

- **Alternative 2: Reroute Greater Share of Olinda Alpha Landfill Waste to Frank R. Bowerman Landfill:** Assuming consistent rates of disposal, an average daily waste stream[3] of 6,623 TPD will need to be diverted to OCWR's remaining active landfills (FRB Landfill and Prima Deshecha Landfill). The FRB Landfill is permitted for a daily 11,500 TPD maximum and has an annual average limit of 8,500 TPD as part of a cooperative agreement with the City of Irvine. The 8,500 TPD annual average limit is not enforced by the Local Enforcement Agency (LEA) or California Department of Resources Recycling and Recovery (CalRecycle). Under this alternative, OCWR would seek to remove the 8,500 TPD annual average limit at the FRB Landfill, allowing acceptance of the permitted 11,500 TPD without the annual average constraint. It is anticipated that this would accommodate the diversion of up to 4,336 TPD (annual daily average) of the Olinda Alpha Landfill waste stream upon closure of that facility, leaving approximately 2,287 TPD to be diverted to the Prima Deshecha Landfill. In combination with the daily average of 2,625 TPD at Prima Deshecha Landfill, capacity would need to be increased from 4,000 TPD to at least 4,912 TPD. Because the FRB Landfill does not accept waste from public haulers, and to account for fluctuations in the daily waste, Alternative 2 would increase the daily permitted waste at Prima Deshecha Landfill by 2,000 TPD (compared with 4,000 TPD under the Proposed Project), for a total maximum daily permitted waste of 6,000 TPD.

[3] All FY 2022/2023 data are based on Disposal Reporting System (DRS) data provided by OCWR (2023).

7.5.1 Overview of Alternatives

Table 7.A provides a summary of the consistency of each alternative with the project objectives.

Table 7.A: Consistency of Alternatives with Project Objectives

Alternatives	Optimize Site as a Long-Term Waste Disposal Facility	Maintain Capacity and Accommodate a Portion of the Waste Stream from the Olinda Alpha Landfill	Soil Covered Liner Installation to Protect Public Health, Safety, and other Resources	Support Goals under the Strategic Plan
Proposed Project	Consistent	Consistent	Consistent	Consistent
1. No Project	Consistent	Inconsistent	Consistent	Inconsistent
2. Reroute Greater Share of Olinda Alpha Landfill Waste to FRB Landfill	Consistent	Somewhat Consistent	Consistent	Somewhat Consistent

Source: Compiled by LSA (2024).
FRB Landfill = Frank R. Bowerman Landfill

Table 7.B provides a summary of the relative impacts of each alternative. A complete discussion of each alternative is provided below.

Table 7.B: Impacts of the Alternatives Compared with Impacts of the Proposed Project

Environmental Topic	Proposed Project	Alternative 1: No Project	Alternative 2: Reroute Greater Share of Olinda Alpha Landfill Waste to FRB Landfill
Air Quality	SU	Potentially Greater	Similar
Greenhouse Gas Emissions	SU	Potentially Greater	Similar
Health Risk	LTSM	Potentially Less	Presumed Similar
Odor	LTSM	Potentially Less	Presumed Similar
Noise	LTSM	Presumed Similar	Slightly Less
Hazards (Falling Debris)	LTS	Presumed Similar	Similar
Aesthetics	NI	Presumed Similar	Similar
Biological Resources	NI	Presumed Similar	Similar
Cultural Resources	NI	Presumed Similar	Similar
Energy	LTS	Potentially Greater	Presumed Similar
Geology/Soils	NI	Presumed Similar	Similar
Hazards and Hazardous Materials (aside from Falling Debris)	LTSM	Presumed Similar	Presumed Similar
Hydrology/Water Quality	LTSM	Presumed Similar	Presumed Similar
Land Use/Planning	NI	Presumed Similar	Presumed Similar
Population/Housing	NI	Similar	Similar
Public Services	NI	Similar	Similar
Recreation	NI	Similar	Similar
Transportation	LTS	Presumed Similar	Presumed Similar
Tribal Cultural Resources	NI	Presumed Similar	Presumed Similar
Utilities/Service Systems	NI	Potentially Greater	Similar
Wildfire	LTSM	Presumed Similar	Presumed Similar

Source: Compiled by LSA (2024).
FRB Landfill = Frank R. Bowerman Landfill
NI = No Impact
LTS = Less than Significant Impact
LTSM = Less than Significant Impact with Mitigation
SU = Significant Unavoidable Impact

7.5.2 Alternative 1: No Project Alternative

7.5.2.1 Description

Consistent with Section 15126.6 of the *State CEQA Guidelines*, Alternative 1 assumes the existing land uses and condition of the project site (in this case, the Landfill) at the time the NOP was published (September 25, 2023) would continue to exist, along with what would reasonably be expected to occur in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure and community services. The setting of the Landfill at the time the NOP was published is described throughout Chapter 4.0 of this Subsequent EIR with respect to individual environmental issues and forms the baseline of the impact assessment of the Proposed Project.

Alternative 1 represents the environmental conditions that would exist if only approved development were to occur on the project site, consistent with the 2001 GDP, as amended. Landfill development, with the configurations of Zone 1 and Zone 4 as they were most recently approved in 2022, would be implemented as planned. Project features and adopted mitigation measures to avoid, minimize, and mitigate for impacts would continue to be implemented as set forth most recently in the MMRP for the Second Supplemental EIR to the 2001 GDP EIR. Alternative 1 anticipates that the Landfill would continue to accept a maximum amount of 4,000 TPD of waste on a daily basis. The permitted number of operational emergency days for increased tonnage that the Landfill could experience would remain zero. Under this alternative, most additional waste from the Olinda Alpha Landfill would not be accommodated at the Prima Deshecha Landfill, necessitating disposal elsewhere.

7.5.2.2 Environmental Analysis

Overview of Potential Impact/Comparison to Proposed Project. Alternative 1 would allow only those activities already approved to occur at the Landfill, with no increase in maximum daily operations. As daily operations increase from the current average of 2,625 TPD to the maximum permitted amount of 4,000 TPD, some additional daily vehicular trips would occur, though notably fewer than with the Proposed Project. The waste stream for the Olinda Alpha Landfill would require diversion elsewhere once that facility closes; this may require short- or long-term storage, or diversion (for a time) to the FRB Landfill until that facility reaches capacity. For purposes of this analysis, it is presumed that waste would be diverted to another permitted facility rather than assuming the construction of a new landfill (see Section 7.4.1).

Local air quality impacts would be somewhat less severe under this alternative as there would be fewer vehicular trips and no substantial increase in the amount of machinery operating simultaneously on the landfill site; however, the longer hauling distance if waste is diverted to more distant landfill locations within the County would result in additional emissions of pollutants and GHGs. Furthermore, the processing of the additional waste is anticipated to require similar types of equipment at the location(s) where it is received. This would result in similar impacts related to air quality from emissions of pollutants and GHGs from equipment used to process the waste. It is likely that these impacts would be similar to the Proposed Project, although they would not occur in the vicinity of the Landfill. Alternative 1 would not eliminate the significant and unavoidable impacts to air quality and GHGs that would occur with operation of the Landfill as currently permitted and as

described in prior CEQA documentation, and it is expected that rerouted trips from Olinda Alpha Landfill would result in equal or greater emissions when compared to the Proposed Project.

Impacts associated with noise, odor, and health risk in the vicinity of the Landfill would be reduced under Alternative 1 when compared to the Proposed Project. For waste diverted to the FRB Landfill, the corresponding increase in waste processed there would be unlikely to result in a substantial increase in noise, odor, and health risk impacts to sensitive receptors due to the greater distance from the FRB Landfill to the nearest sensitive receptors (compared to the Prima Deshecha Landfill). The FRB Landfill currently does not accept public waste, only municipal waste from commercial haulers; therefore, the FRB Landfill would only be able to accommodate a portion of the waste stream from the Olinda Alpha Landfill. With the existing 8,500 TPD annual average daily limit at the FRB Landfill, an annual average of up to 1,336 TPD of the Olinda Alpha Landfill waste stream could be accommodated (with the capacity to handle additional waste on high-volume days, provided the annual daily average is not exceeded). For waste diverted to other permitted landfills, it is unknown whether new localized noise, odor, or health risk impacts would occur or if existing impacts would become more severe. Energy use for processing waste is anticipated to be similar to the Proposed Project; however, energy use associated with vehicular trips would potentially be greater due to having fewer available options for rerouting the Olinda Alpha Landfill waste stream.

The potential hazards associated with debris falling from vehicles hauling waste to the Landfill would not be increased to the same level as with the Proposed Project (a nominal increase may occur as operations move toward the existing 4,000 TPD permitted amount); however, falling debris would have the potential to occur on additional roadways as waste is diverted to another location. Since the enforcement agencies (California Highway Patrol, Orange County Sheriff) would still be responsible for ensuring compliance with covered load requirements, and (as with the Proposed Project) there would be no changes to the enforcement procedures under Alternative 1, this alternative is anticipated to result in similar overall impacts as the Proposed Project, with somewhat lesser localized impacts.

As with the Proposed Project, physical changes would occur consistent with development of the site as set forth most recently in the Second Supplemental EIR to the 2001 GDP EIR. Assuming waste would be diverted to an existing permitted location, this alternative is presumed to have similar impacts in terms of aesthetics, biological resources, cultural and tribal resources, population and housing, public services, recreation, transportation, and wildfire. This alternative would not change the overall development of the Landfill but could result in a later closure date than with the Proposed Project due to the slower rate of waste acceptance.

Alternative 1 has the potential to affect future projects by limiting the available capacity of existing landfills to serve new development. Future projects may need to be served by more distant landfills, affecting the provision of solid waste services and resulting in secondary air quality and traffic impacts associated with the additional vehicle miles traveled.

Overall, Alternative 1 would result in less severe localized environmental impacts than the Proposed Project because the increase in daily operations would be limited to the current permitted level of 4,000 TPD; however, impacts associated with air quality would potentially increase, as described in prior CEQA documentation. The significant and unavoidable impact to air quality and GHGs would be

more severe due to the additional vehicle miles traveled that would be required under Alternative 1. Although localized impacts would be less severe, regional impacts would occur at potentially greater levels.

Project Objectives. As indicated in **Table 7.A**, similar to the Proposed Project, Alternative 1 would optimize the use of the Landfill as a long-term waste disposal facility. Alternative 1 would not accommodate enough of the waste stream from Olinda Alpha Landfill to maintain systemwide capacity when the facility closes; if the average waste received at the Prima Deshecha Landfill remains consistent at 2,625 TPD, up to 1,375 TPD, on average, of diverted waste could be accommodated at the Prima Deshecha Landfill. Limitations on the type of waste accepted at the FRB Landfill, which accepts only commercial waste and is not open to the general public, preclude the diversion of all waste to that landfill. The limited availability of locations for public haulers to dispose of waste that would occur under this alternative is inconsistent with the objectives of maintaining systemwide solid waste disposal capacity. Under Alternative 1, Prima Deshecha Landfill would continue to provide a long-term, regional solid waste management facility with appropriate safeguards, meeting the third objective. However, it is inconsistent with the goals established under the Strategic Plan, which specifically identify increasing the permitted daily tonnage accepted at the Landfill if it is determined that waste should be retained in-County for as long as possible.

7.5.2.3 Summary

While Alternative 1 would result in a localized reduction of most environmental impacts, it would not eliminate the significant and unavoidable air quality and GHG impacts. This Alternative would maintain the current permitted daily operations capacity of the Landfill, which would impede OCWR's maintenance of systemwide solid waste disposal capacity when the Olinda Alpha Landfill closes in 2030. It also would not achieve two of the four project objectives.

7.5.3 Alternative 2: Reroute Greater Share of Olinda Alpha Landfill Waste to FRB Landfill

Comments received during scoping suggested that, following the closure of the Olinda Alpha Landfill, waste could be entirely redirected to the FRB Landfill rather than Prima Deshecha Landfill. The FRB Landfill currently does not accept public waste, only municipal waste from commercial haulers to reduce road traffic to the facility (Orange County Grand Jury 2004). It is approximately 725 acres, with 534 acres allocated for waste disposal. It is anticipated to have enough capacity to serve residents and businesses until approximately 2053 with current rates of disposal (OCWR n.d.).

As stated earlier, the Olinda Alpha Landfill is permitted to receive up to 8,000 TPD and received a daily average (OCWR 2022, 2023) of approximately 6,623 TPD in FY 2022/2023. The facility is expected to close as early as the end of 2026. Assuming current rates of disposal, an average daily waste stream of 6,623 TPD will need to be diverted to OCWR's remaining active landfills (FRB Landfill and Prima Deshecha Landfill).

The FRB Landfill is permitted for a daily 11,500 TPD maximum and has an annual average limit of 8,500 TPD as part of a cooperative agreement with the City of Irvine. The FRB Landfill received 2,213,553 tons in FY 2022/2023, for an annual daily average of 7,164 TPD. It is estimated that the

FRB Landfill could accept an average of up to 1,336 TPD[4] of the Olinda Alpha Landfill waste stream, while remaining in compliance with the 8,500 TPD annual average limit. Therefore, Alternative 2 includes removing the 8,500 TPD annual average limit and allowing acceptance of the permitted 11,500 TPD without the annual average constraint to allow a greater share of the Olinda Alpha waste stream to be accommodated at the FRB Landfill. This would necessitate amending the cooperative agreement with the City of Irvine (note that Alternative 2 does not propose to increase daily tonnage above the permitted 11,500 TPD maximum).

With the Proposed Project, up to 8,000 TPD would be permitted to be received at Prima Deshecha Landfill, which would then be able to accommodate an average of approximately 5,375 TPD (based on the daily average of 2,625 TPD) of the Olinda Alpha Landfill waste. At a minimum, the remaining waste from Olinda Alpha (a daily average of approximately 1,625 TPD) would need to be diverted to the FRB Landfill, although it is expected that waste hauling contractors and OCWR will identify the most efficient approach to distributing trips between the remaining landfills. On high-volume days, if waste is anticipated to exceed the daily permitted capacity at Prima Deshecha Landfill, the additional waste is anticipated to be diverted to the FRB Landfill if feasible (which has a higher permitted daily maximum); alternately, it may be accepted at Prima Deshecha Landfill (using a permitted operational emergency day).

As stated above, under Alternative 2, OCWR would seek to remove the 8,500 TPD annual average limit and would accept up to 11,500 TPD without the annual average constraint. It is anticipated that an average daily total of 4,336 TPD of waste from the Olinda Alpha Landfill could be rerouted to the FRB Landfill, leaving a daily average of approximately 2,287 TPD to be diverted to the Prima Deshecha Landfill. In combination with the daily average of 2,625 TPD at Prima Deshecha Landfill, capacity would need to be increased from 4,000 TPD to at least 4,912 TPD to accommodate waste that would exceed what could typically be accommodated at the FRB Landfill. The Olinda Alpha Landfill currently accepts waste from both commercial and public haulers. The FRB Landfill is not configured to accommodate public haulers; therefore, the waste from public haulers would need to be diverted to the Prima Deshecha Landfill or elsewhere. Because the FRB Landfill does not accept waste from public haulers, and to account for fluctuations in the daily volume of waste, Alternative 2 would increase the daily permitted waste at Prima Deshecha Landfill by 2,000 TPD (compared with 4,000 TPD under the Proposed Project), for a total of 6,000 TPD.

Accepting a greater share of the Olinda Alpha waste at the FRB Landfill is expected accelerate the closure date of that facility compared to conditions under the Proposed Project. Although overall waste generation is expected to be reduced as a result of recent and likely future legislation, it is likely that the average daily tonnage accepted at the Prima Deshecha Landfill would still need to be increased at a future date once the FRB Landfill reaches its capacity.

7.5.3.1 Environmental Analysis

Overview of Potential Impact/Comparison to Proposed Project. Under Alternative 2, air quality impacts in the vicinity of the Landfill would be somewhat decreased as there would be fewer

[4] Capacity estimates assume that the average waste received system-wide and at each landfill remains consistent.

vehicular trips and a smaller increase in the amount of machinery operating simultaneously at the Landfill compared to the Proposed Project. However, additional vehicular trips to the FRB Landfill, and additional machinery operating at that site to process the increase in waste would result in similar regional air pollutant and GHG emissions. Impacts to air quality and GHG emissions from operation of the Landfill would remain significant and unavoidable.

The distance from the nearest residential areas to the FRB Landfill is greater than from residential areas to the Prima Deshecha Landfill; therefore, increased on-site operations at the FRB Landfill under Alternative 2 would not likely result in an increase in noise, odor, or health risk impacts to sensitive receptors. Additional analysis would be needed to definitively determine noise, odor, and health risk impacts based on site configuration and topography, local meteorological conditions, and level of service on local roadways under Alternative 2. Generally, these impacts are expected to be somewhat less than the Proposed Project under Alternative 2. Energy use for processing waste and vehicular trips under Alternative 2 is anticipated to be similar to the Proposed Project.

Commercial waste haulers are required by contract to comply with provisions requiring load covering. Non-contracted public haulers are expected to be more likely to be out of compliance with laws requiring covered loads. All of the public trips by County residents from Olinda Alpha Landfill would be diverted to the Prima Deshecha Landfill both under the Proposed Project and Alternative 2, as they cannot be accommodated at the FRB Landfill. This would likely result in similar levels of potential hazards associated with debris falling from vehicles hauling waste along local roads. The enforcement agencies (California Highway Patrol, Orange County Sheriff) would still be responsible for ensuring compliance with covered load requirements and (as with the Proposed Project), there would be no changes to the enforcement procedures under Alternative 2. This alternative is anticipated to result in similar overall impacts as the Proposed Project.

As with the Proposed Project, physical changes would occur consistent with development of the site as set forth most recently in the Second Supplemental EIR to the 2001 GDP EIR. Alternative 2 would not impede the implementation of any adopted mitigation measures and would include implementation of the mitigation measures identified for the Proposed Project in this Subsequent EIR.

Project Objectives. As indicated in **Table 7.A**, similar to the Proposed Project, Alternative 2 would allow optimization of use of the Landfill as a long-term waste disposal facility. Alternative 2 may not accommodate enough of the waste stream from Olinda Alpha Landfill to maintain systemwide capacity when the facility closes and would potentially accelerate the closure date of the FRB Landfill. Limitations on the type of waste accepted at the FRB Landfill, which accepts only commercial waste and excludes public haulers, precludes the diversion of public trips to that facility. Limiting the tonnage increase at the Prima Deshecha Landfill may limit public access to landfill services within the County as it will be the only remaining County facility accepting waste from public haulers. Under Alternative 2, the Prima Deshecha Landfill would continue to provide long-term, regional solid waste management facilities with appropriate safeguards, meeting the third objective. However, it is less supportive of the strategies set forth in the Strategic Plan than the Proposed Project.

7.5.3.2 Summary

Overall, Alternative 2 would result in similar or less severe localized environmental impacts than the Proposed Project because the increase in daily operations would be limited to 6,000 TPD. It would result in similar regional impacts to air quality and GHG emissions; these impacts would remain significant and unavoidable. Alternative 2 would meet all of the project objectives but would be less supportive than the Proposed Project in maintaining systemwide capacity and implementing the goals and strategies in the Strategic Plan.

7.6 IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an Environmentally Superior Alternative among the alternatives evaluated in an EIR. *State CEQA Guidelines* Section 15126.6(e)(2) states that if the No Project/No Build Alternative is the Environmentally Superior Alternative, then the EIR shall also identify an Environmentally Superior Alternative among the other alternatives.

As summarized in **Table 7.B** and presented in the analysis of the various alternatives, none of the alternatives would eliminate the significant unavoidable impacts associated with the Proposed Project. Alternative 1, the No Project Alternative, would reduce local odor, noise, and health risk impacts (all of which would be less than significant with the Proposed Project), but would potentially increase the significant and unavoidable impacts associated with regional air quality and GHG emissions. While Alternative 1 would lessen local air quality, noise, odor, health risk, and falling debris hazards impacts of the Proposed Project near the Prima Deshecha Landfill, the location of impacts would be shifted, rather than avoided, as there would be additional daily trips to the FRB Landfill and/or hauling trips removing waste elsewhere. The benefits of the Proposed Project—including OCWR's ability to maintain systemwide solid waste disposal capacity with the closure of the Olinda Alpha Landfill—would not occur, and only two of the four project objectives would be met.

Alternative 2, which would route a greater share of the Olinda Alpha Landfill waste to the FRB Landfill, with the remainder going to the Prima Deshecha Landfill, is anticipated to have similar or reduced impacts when compared to the Proposed Project. As with Alternative 1, it would reduce local odor, noise, and health risk impacts (all of which would be less than significant with the Proposed Project), but would not reduce or eliminate the significant and unavoidable impacts associated with regional air quality and GHG emissions. Alternative 2 does not adequately support OCWR's ability to maintain systemwide solid waste disposal capacity with the closure of the Olinda Alpha Landfill. The FRB Landfill is also limited to an annual average cap of 8,500 TPD and a permitted maximum of 11,500 TPD. Under Alternative 2, OCWR would require approval from the City of Irvine to remove the annual daily average cap. Finally, it is less supportive of the goals and strategies identified in the Strategic Plan than the Proposed Project.

Therefore, based on the comparative analysis of alternatives presented above, the Proposed Project is considered to be environmentally superior in that its implementation would not result in any significant adverse environmental impacts that would be eliminated under any of the other alternatives, and it would achieve all the project objectives.

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8.0 LIST OF PREPARERS AND PERSONS CONSULTED

8.1 LIST OF PREPARERS

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The following individuals from the County of Orange, specifically OC Waste & Recycling (OCWR), were involved in the preparation of this Subsequent Environmental Impact Report (Subsequent EIR):

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