Puente Hills Landfill Park Master Plan

Draft Program Environmental Impact Report

June 2016

State Clearinghouse Number 2015121051

PUENTE HILLS LANDFILL

PARK MASTER PLAN

DRAFT

PROGRAM ENVIRONMENTAL IMPACT REPORT

JUNE 2016

State Clearinghouse Number 2015121051

Prepared for:

County of Los Angeles
Department of Parks and Recreation
Planning & Development Agency
510 South Vermont Avenue
Los Angeles, California 90020

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

215 North 5th Street
Redlands, California 92374

THIS PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY ES-1

ES.1 INTRODUCTION ES-1
ES.2 PROJECT LOCATION AND SETTING ES-1
ES.3 PROJECT BACKGROUND ES-1
ES.4 DESCRIPTION OF PROPOSED PROJECT ES-2
ES.5 AREAS OF CONTROVERSY ES-10
ES.6 PROJECT ALTERNATIVES ES-11
ES.6.1 Low Build Alternative ES-11
ES.6.2 High Build Alternative ES-12
ES.6.3 No Project Alternative ES-13
ES.6.4 Comparison of Project Alternatives ES-14
ES.7 ISSUES TO BE RESOLVED BY THE LEAD AGENCY ES-14
ES.8 SUMMARY OF IMPACTS AND MITIGATION MEASURES ES-15

SECTION 1.0 - INTRODUCTION 1-1

1.1 PURPOSE AND USE OF THE EIR 1-1
1.2 PROGRAM ENVIRONMENTAL IMPACT REPORT ORGANIZATION 1-3
1.3 AVAILABILITY OF THE PEIR/PUBLIC REVIEW PROCESS 1-3
1.4 DOCUMENTS INCORPORATED BY REFERENCE 1-5

SECTION 2.0 - PROJECT DESCRIPTION 2-1

2.1 PROJECT LOCATION AND SETTING 2-1
2.1.1 Surrounding Land Uses 2-1
2.1.2 Regional Setting 2-9
2.2 ONGOING LANDFILL INSPECTION, MAINTENANCE, AND MONITORING ACTIVITIES 2-9
2.2.1 Regulatory Requirements 2-10
2.2.2 Settling 2-10
2.2.3 Inspection and Maintenance 2-11
2.3 PARK DEVELOPMENT AREAS AT THE LANDFILL 2-12
2.4 PROJECT BACKGROUND, PERMITS, AND AGREEMENTS 2-13
2.5 PARK MASTER PLAN AND PUBLIC ENGAGEMENT PROCESS 2-14

2.5.1 Public Input Summary 2-15
2.5.2 Stakeholder Input Summary 2-16
2.5.3 Park Development Themes: Ecology, Recreate, Upcycle 2-16
2.6 PROJECT GOALS AND OBJECTIVES 2-17
2.6.1 Goals for Regional Park Development 2-17
2.6.2 Project Objectives 2-21
2.7 PROJECT SUMMARY 2-21
2.7.1 Park Areas 2-22
2.7.2 Park Features 2-31
2.8 PHASING 2-41
2.8.1 Phase I Projects (Years 1 to 5) 2-42
2.8.2 Phase II Projects (Years 6 to 20) 2-44
2.8.3 Phase III Projects (Years 21 to 30) 2-46
2.8.4 Phase IV Projects (Years 31 to 40) 2-48
2.8.5 Phase V Projects (Years 41 to 50) 2-49
2.8.6 Phase VI Projects (Years 75+) 2-49

SECTION 3.0 - ENVIRONMENTAL ANALYSIS 3.1-1

3.1 INTRODUCTION 3.1-1
3.2 AESTHETICS 3.2-1
3.2.1 Environmental Setting 3.2-1
3.2.2 Regulatory Setting 3.2-11
3.2.3 Thresholds of Significance 3.2-13
3.2.4 Environmental Impacts 3.2-13
3.2.5 Mitigation Measures 3.2-21
3.2.6 Residual Impacts After Mitigation 3.2-21
3.3 AIR QUALITY 3.3-1
3.3.1 Environmental Setting 3.3-1
3.3.2 Regulatory Setting 3.3-8
3.3.3 Thresholds of Significance 3.3-18
3.3.4 Environmental Impacts 3.3-18
3.3.5 Mitigation Measures 3.3-27
3.3.6 Residual Impacts After Mitigation 3.3-28

3.4 BIOLOGICAL RESOURCES 3.4-1
3.4.1 Environmental Setting 3.4-1
3.4.2 Regulatory Setting 3.4-21
3.4.3 Thresholds of Significance 3.4-25
3.4.4 Environmental Impacts 3.4-26
3.4.5 Mitigation Measures 3.4-39
3.4.6 Residual Impacts After Mitigation 3.4-46
3.5 CULTURAL, TRIBAL, AND PALEONTOLOGICAL RESOURCES 3.5-1
3.5.1 Environmental Setting 3.5-1
3.5.2 Regulatory Setting 3.5-8
3.5.3 Thresholds of Significance 3.5-11
3.5.4 Environmental Impacts 3.5-12
3.5.5 Mitigation Measures 3.5-16
3.5.6 Residual Impacts After Mitigation 3.5-20
3.6 GEOLOGY AND SOILS 3.6-1
3.6.1 Environmental Setting 3.6-1
3.6.2 Regulatory Setting 3.6-9
3.6.3 Thresholds of Significance 3.6-11
3.6.4 Environmental Impacts 3.6-12
3.6.5 Mitigation Measures 3.6-18
3.6.6 Residual Impacts After Mitigation 3.6-18
3.7 GREENHOUSE GAS 3.7-1
3.7.1 Environmental Setting 3.7-1
3.7.2 Regulatory Setting 3.7-4
3.7.3 Thresholds of Significance 3.7-14
3.7.4 Environmental Impacts 3.7-14
3.7.5 Mitigation Measures 3.7-19
3.7.6 Residual Impacts After Mitigation 3.7-19
3.8 HAZARDS AND HAZARDOUS MATERIALS 3.7-1
3.8.1 Environmental Setting 3.8-1
3.8.2 Regulatory Setting 3.8-5
3.8.3 Thresholds of Significance 3.8-8
3.8.4 Environmental Impacts 3.8-9

3.8.5 Mitigation Measures....3.8-15
3.8.6 Residual Impacts After Mitigation....3.8-16
3.9 HYDROLOGY AND WATER QUALITY....3.9-1
3.9.1 Environmental Setting....3.9-1
3.9.2 Regulatory Setting....3.9-4
3.9.3 Thresholds of Significance....3.9-8
3.9.4 Environmental Impacts....3.9-9
3.9.5 Mitigation Measures....3.9-19
3.9.6 Residual Impacts After Mitigation....3.9-19
3.10 LAND USE AND PLANNING....3.10-1
3.10.1 Environmental Setting....3.10-1
3.10.2 Regulatory Setting....3.10-5
3.10.3 Thresholds of Significance....3.10-11
3.10.4 Environmental Impacts....3.10-11
3.10.5 Mitigation Measures....3.10-17
3.10.6 Residual Impacts After Mitigation....3.10-17
3.11 NOISE....3.11-1
3.11.1 Environmental Setting....3.11-1
3.11.2 Regulatory Setting....3.11-9
3.11.3 Thresholds of Significance....3.11-17
3.11.4 Environmental Impacts....3.11-17
3.11.5 Mitigation Measures....3.11-26
3.11.6 Residual Impacts After Mitigation....3.11-26
3.12 PUBLIC SERVICES....3.12-1
3.12.1 Environmental Setting....3.12-1
3.12.2 Regulatory Setting....3.12-2
3.12.3 Thresholds of Significance....3.12-3
3.12.4 Environmental Impacts....3.12-4
3.12.5 Mitigation Measures....3.12-6
3.12.6 Residual Impacts After Mitigation....3.12-7
3.13 RECREATION....3.13-1
3.13.1 Environmental Setting....3.13-1
3.13.2 Regulatory Setting....3.13-6

3.13.3 Thresholds of Significance 3.13-8
3.13.4 Environmental Impacts 3.13-9
3.13.5 Mitigation Measures 3.13-15
3.13.6 Residual Impacts After Mitigation 3.13-15
3.14 TRANSPORTATION AND CIRCULATION 3.14-1
3.14.1 Environmental Setting 3.14-1
3.14.2 Traffic Study Methodology 3.14-12
3.14.3 Regulatory Setting 3.14-23
3.14.4 Thresholds of Significance 3.14-26
3.14.5 Environmental Impacts 3.14-27
3.14.6 Mitigation Measures 3.14-58
3.14.7 Residual Impacts After Mitigation 3.14-60
3.15 UTILITIES AND SERVICE SYSTEMS 3.15-1
3.15.1 Environmental Setting 3.15-1
3.15.2 Regulatory Setting 3.15-4
3.15.3 Thresholds of Significance 3.15-7
3.15.4 Environmental Impacts 3.15-8
3.15.5 Mitigation Measures 3.15-13
3.15.6 Residual Impacts After Mitigation 3.15-13

SECTION 4.0 - ANALYSIS OF ALTERNATIVES TO THE PROPOSED PROJECT 4-1

4.1 INTRODUCTION 4-1
4.2 ALTERNATIVES SELECTION PROCESS 4-1
4.3 ALTERNATIVES CARRIED FORWARD FOR ANALYSIS 4-2
4.3.1 Low Build Alternative 4-2
4.3.2 High Build Alternative 4-14
4.3.3 No Project Alternative 4-28
4.4 ALTERNATIVES IMPACT ANALYSIS 4-31
4.4.1 Low Build Alternative 4-31
4.4.2 High Build Alternative 4-35
4.4.3 No Project Alternative 4-44
4.5 COMPARISON OF ALTERNATIVES 4-47
4.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE 4-50

SECTION 5.0 - OTHER CEQA CONSIDERATIONS 5-1

5.1 CUMULATIVE IMPACTS 5-1
5.1.1 Definition of Approach 5-1
5.1.2 List of Relevant Past, Present, and Probable Future Projects 5-2
5.1.3 San Gabriel Valley Growth Projections 5-2
5.1.4 Cumulative Impacts Analysis 5-3
5.2 GROWTH-INDUCING IMPACTS 5-9
5.3 SIGNIFICANT IRREVERSIBLE EFFECTS 5-10
5.4 UNAVOIDABLE SIGNIFICANT ADVERSE EFFECTS 5-11

SECTION 6.0 - AGENCIES AND PERSONS CONSULTED 6-1

SECTION 7.0 - REFERENCES 7-1

SECTION 8.0 - LIST OF PREPARERS 8-1

SECTION 9.0 - ACRONYMS AND ABBREVIATIONS 9-1

LIST OF APPENDICES

A Initial Study/Notice of Preparation and Scoping Comments

B Air Quality/Greenhouse Gas

C Biological Resources

D Cultural Resources

E Geotechnical Study

F Grading, Drainage, and Utilities

G Noise

H Traffic

LIST OF FIGURES

Figure 2-1. Vicinity Map 2-3
Figure 2-2. Project Location 2-5
Figure 2-3. Existing Site and Adjacent Land Uses 2-7
Figure 2-4. Puente Hills Landfill Park – 25-Mile Service Radius 2-19

Figure 2-5. Final Park Concept....2-23
Figure 2-6. Park Areas....2-25
Figure 2-7. Parking Lot Locations....2-35
Figure 2-8. Rose Hills Memorial Park Access Road Options....2-39
Figure 3.2-1. Puente Hills Landfill (looking northwest, green line delineates Top Decks)....3.2-2
Figure 3.2-2. Terraced Landscape of the Puente Hills Landfill (looking southwest)....3.2-3
Figure 3.2-3. Western Deck (looking northwest)....3.2-4
Figure 3.2-4. Eastern Deck (looking northeast)....3.2-4
Figure 3.2-5. Southern Deck (looking south)....3.2-5
Figure 3.2-6. Maintenance and Operations Yard (looking west)....3.2-5
Figure 3.2-7. Truck Route to Materials Recovery Facility (MRF)....3.2-6
Figure 3.2-8. Gas-to-Energy Facility....3.2-6
Figure 3.2-9. Project Site and Adjacent Land Uses....3.2-7
Figure 3.2-10. Artist Rendering of the Western Deck....3.2-18
Figure 3.2-11. Artist Rendering of the Eastern Deck....3.2-19
Figure 3.2-11. Artist Rendering of the Southern Deck....3.2-19
Figure 3.2-12. Artist rendering of the Puente Hills Landfill Park trail lift at Nike Hill....3.2-19
Figure 3.4-1. Puente Hills Sensitive Resources Map....3.4-3
Figure 3.4-2. Vegetation Communities....3.4-7
Figure 3.6-1. Puente Hills Landfill Fill Areas....3.6-3
Figure 3.6-2. Landfill Settlement Projection....3.6-5
Figure 3.10-1. Puente Hills Landfill Zoning....3.10-3
Figure 3.11-1. Noise Measurement Locations....3.11-7
Figure 3.13-1 Trails Plan....3.13-11
Figure 3.14-1. Existing Conditions....3.14-3
Figure 3.14-2. Study Intersections and Trip Distribution....3.14-7
Figure 3.14-3. Related Project Locations....3.14-17
Figure 3.14-4. Rose Hills Memorial Park Access Road Alternative Alignments....3.14-33
Figure 3.14-5. Proposed Crosswalks and Sidewalk....3.14-41
Figure 3.14-6. Vehicular and Multi-modal Circulation....3.14-45
Figure 3.14-7. Emergency Access and Evacuation....3.14-55
Figure 4-1. Low Build Alternative....4-7
Figure 4-2. High Build Alternative....4-19

LIST OF TABLES

Table ES-1. Park Areas ES-3
Table ES-2. Parking Lots ES-8
Table ES-3. Changes in Major Improvements Under the Low Build Alternative ES-11
Table ES-4. Changes in Major Improvements Under the High Build Alternative ES-12
Table ES-5. Comparison of Impacts for Alternatives with Proposed Project ES-14
Table ES-6. Impact and Mitigation Summary Table ES-17
Table 1-1. Anticipated Agency Approvals and Reviews 1-2
Table 2-1. Overview of Existing Site Setting 2-1
Table 2-2. Park Areas 2-22
Table 2-3. Parking Lots 2-37
Table 2-4. Phase I Projects (Years 1 to 5) 2-43
Table 2-5. Phase II Projects (Years 6 to 20) 2-44
Table 2-6. Phase III Projects (Years 21 to 30) 2-46
Table 2-7. Phase IV Projects (Years 31 to 40) 2-48
Table 2-8. Phase V Projects (Years 41 to 50) 2-49
Table 2-9. Phase VI Projects (Years 75+) 2-50
Table 3.3-1. Montebello Area Monthly Climate Data 3.3-2
Table 3.3-2. Local Area Air Quality Monitoring Summary 3.3-7
Table 3.3-3 State and Federal Criteria Pollutant Standards 3.3-9
Table 3.3-4. South Coast Air Basin Attainment Status 3.3-10
Table 3.3-5. Construction-Related Regional Pollutant Emissions 3.3-20
Table 3.3-6. Unmitigated Regional Operational Pollutant Emissions 3.3-22
Table 3.3-7. Maximum Number of Acres Disturbed Per Day 3.3-23
Table 3.3-8. Local Construction Emissions at the Nearest Receptors 3.3-24
Table 3.4-1. Vegetation Communities within the Project Site 3.4-9
Table 3.4-2. Plant Potential for Occurrence 3.4-11
Table 3.4-3. Wildlife Potential for Occurrence 3.4-19
Table 3.5-1. Previously Recorded Cultural Resources on the Landfill Property 3.5-5
Table 3.7-1. Global Warming Potentials and Atmospheric Lifetimes 3.7-4
Table 3.7-2. Opening Year (2035) Unmitigated Project-Related Greenhouse Gas Emissions 3.7-15
Table 3.7-3. Year 2020 Mitigated Project-Related Greenhouse Gas Emissions 3.7-16

Table 3.7-4. Baseline (2010) Project-Related Greenhouse Gas Emissions 3.7-18

Table 3.9-1. Estimated Monthly Attendance for Proposed Recreation Uses at Puente Hills Landfill Park 3.9-10

Table 3.10-1. Existing Land Uses on Project Site 3.10-2

Table 3.10-2. Surrounding Land Uses 3.10-2

Table 3.11-1. Vibration Source Levels for Construction Equipment 3.11-3

Table 3.11-2. Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration 3.11-3

Table 3.11-3. Short-Term Noise Measurement Summary (dBA) 3.11-5

Table 3.11-4. State of California Land Use Compatibility for Community Noise Exposure (dBA CNEL or Ldn) 3.11-10

Table 3.11-5. Typical Construction Equipment Noise Levels 311-18

Table 3.11-6. Project Average Daily Traffic Volumes and Roadway Parameters 3.11-20

Table 3.11-7. Existing (Without Project) Exterior Noise Levels Along Roadways (dBA CNEL) 3.11-21

Table 3.11-8. Existing Plus Project Exterior Noise Levels Along Roadways (dBA CNEL) . 3.11-21

Table 3.11-9. Change in Existing Noise Levels Along Roadways as a Result of Project (dBA CNEL) 3.11-23

Table 3.13-1. Recreational Facilities within 25 miles of the Project Site 3.13-1

Table 3.13-2. Regional Parks within 25 miles of the Project Site 3.13-2

Table 3.13-3. Population within 25 miles of the Project Site 3.13-5

Table 3.13-4. Race & Origin of Population within 25 miles of the Project Site 3.13-5

Table 3.13-5. Population Age Breakdown within 25 miles of the Project Site 3.13-6

Table 3.14-1. Jurisdiction of Analyzed Intersections 3.14-9

Table 3.14-2. ICU Level of Service Definitions for Signalized Intersections 3.14-10

Table 3.14-3. Existing Conditions Intersection Level of Service Analysis 3.14-11

Table 3.14-4. Cumulative Projects Trip Generation Estimates 3.14-15

Table 3.14-5. Existing Plus Project Intersection Level Of Service Analysis 3.14-28

Table 3.14-6. Cumulative Plus Project Intersection Level of Service Analysis 3.14-30

Table 3.14-7. Cumulative Plus Project Without Ambient Growth ICU Intersection Level Of Service Analysis 3.14-31

Table 3.14-8. HCM Level of Service Definitions for Signalized Intersections 3.14-49

Table 3.14-9. Existing Plus Project HCM Intersection Level of Service Analysis 3.14-50

Table 3.14-10. Cumulative Plus Project HCM Intersection Level of Service Analysis 3.14-51

Table 4-1. Changes in Major Improvements Under the Low Build Alternative 4-3

Table 4-2. Low Build Alternative Project Objectives 4-3
Table 4-3. Changes in Major Improvements Under the High Build Alternative 4-14
Table 4-4. High Build Alternative Project Objectives 4-15
Table 4-5. Estimated Monthly Attendance for Proposed Recreation Uses at Puente Hills Landfill Park 4-27
Table 4-6. No Project Alternative Project Objectives 4-29
Table 4-7. Unmitigated Regional Operational Pollutant Emissions for the High Build Alternative 4-36
Table 4-8. Opening Year (2035) Unmitigated Greenhouse Gas Emissions for the High Build Alternative 4-38
Table 4-9. Baseline (2010) Project-Related Greenhouse Gas Emissions 4-39
Table 4-10. Year (2020) Mitigated Project-Related Greenhouse Gas Emissions 4-39
Table 4-11. Comparison of Impacts for Alternatives with Proposed Project 4-47
Table 4-12. Comparison of Project Objectives by Alternative 4-47
Table 5-1. Cumulative Projects 5-2

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This Executive Summary has been prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123(b), which states that an EIR should contain a brief summary of the Proposed Project and its consequences, and should identify:

1. Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect;

2. Areas of public controversy known to the lead agency, including issues raised by the agencies and the public; and

3. Issues to be resolved, including the choice among alternatives and how to mitigate the significant effects.

The County of Los Angeles Department of Parks and Recreation (DPR) is proposing the Puente Hills Landfill Park Master Plan (PHLPMP) Project (Proposed Project). The PHLPMP is a long range plan that would guide the development of a regional park on a portion of the closed Puente Hills Landfill (landfill). The DPR has prepared a Draft Program Environmental Impact Report (PEIR) that identifies and evaluates the potential environmental impacts associated with the implementation and operation of the Proposed Project.

CEQA requires that the Lead Agency, in this case DPR, to consider the information contained in the EIR prior to taking any discretionary action. This PEIR may also be used by other public agencies that must make discretionary actions related to the Proposed Project.

ES.2 PROJECT LOCATION AND SETTING

The Proposed Project is located within the boundaries of the landfill, which is owned by the Sanitation Districts of Los Angeles County (Sanitation Districts). The landfill is approximately 1,365 acres in size and has been closed since 2013. The landfill is located southeast of the intersection of State Route 60 (SR-60) and Interstate 605 (I-605) in unincorporated Los Angeles County. Although the entire landfill site is not located in the City of Industry, the address of the landfill front entry is 13130 Crossroads Parkway South, City of Industry, California 91746. Full vehicular access to the site is currently available via a single driveway from Crossroads Parkway South.

ES.3 PROJECT BACKGROUND

In the mid-1960s, when the closure of the Palos Verdes Landfill in the South Bay was anticipated, the Sanitation Districts identified the Puente Hills canyons as a location to provide the long-term disposal capacity for the southern and eastern portions of Los Angeles County. The Sanitation Districts acquired the 1,214-acre Puente Hills site in June 1970, where 500 acres had been operated as the San Gabriel Valley Dump since 1957. The Sanitation Districts continued the operation of the site for solid waste disposal

and renamed it the Puente Hills Landfill. In May 1981, the Sanitation Districts acquired land adjacent to the Puente Hills Landfill that enlarged the site to its present 1,365 acres.

In 1983, The Los Angeles County Board of Supervisors approved Conditional Use Permit (CUP) No. 2235-(1), which allowed for the continued operation and expansion of the Puente Hills Landfill. The 1983 CUP required the Sanitation Districts to enter into an irrevocable agreement with the County of Los Angeles (or alternate public agency) to designate the "fill" portions of the site as open space in perpetuity. The two entities entered into a Joint Powers Agreement (JPA) on April 28, 1987. Subsequent land use approvals including CUP 92-250-(4) in 1994 and CUP 02-027-(4) in 2002 for continued landfill operations further clarified provisions related to the park, including that “the specific type of recreational use (i.e., trails, nature center, soccer fields, golf course) would be the subject of a dedicated master planning process.” The 1994 CUP also resulted in an Amended Setback and Easement Agreement between the Sanitation Districts and Rose Hills Memorial Park, which addresses issues such as noise abatement, limits of operations, shared water storage reservoir, and other technical concerns regarding the operations of the landfill. The Amended Setback and Easement Agreement also provides for a future roadway easement for ingress and egress by Rose Hills Memorial Park through the landfill area. The permanent alignment of the roadway easement is subject to the master planning process for the future park.

The JPA required the Sanitation Districts to offer the County portions of fill areas for park and recreation purposes after they were brought to finished or final elevation and grade and were no longer needed for landfill operations. The JPA also acknowledged the Sanitation Districts’ need to operate and maintain the environmental control systems in the designated open space areas and that the park and any subsequent improvements would not impair the Sanitation Districts’ activities or systems that protect public health, safety, and the environment. It is anticipated that the JPA will be amended and restated by the two parties to incorporate developments from the Landfill Park Master Planning process and to include more detailed agreements about specific areas on the site.

ES.4 DESCRIPTION OF PROPOSED PROJECT

The Proposed Project is a long range master plan that over time would develop a portion of what was formerly the largest landfill in the western United States into a regional park, providing recreation and open space for the greater Los Angeles area. The County would create a new regional park uniquely situated at the western end of the Puente Hills on a large industrial closed landfill site that is owned and maintained by the Sanitation Districts. Of the 600 acres of fill within the site boundaries, which includes the landfill slopes and flat landfill caps, approximately 117 acres of top deck fill area would be the focus over time for the majority of formal park development (or approximately 10 percent of the site’s total acreage).

The Proposed Project would include a variety of recreational facilities that can be sustained on the site, including passive and more active facilities. Park development would be integrated with existing landfill facilities, including a shared entrance and joint

use of an existing loop road system, which would be improved to accommodate public access.

ES.4.1 Park Areas

The Proposed Project includes several distinct park areas. These areas are summarized in Table ES-1 below.

Table ES-1. Park Areas

PARK AREA	APPROXIMATE ACRES
Entry Plaza	7.0
Maintenance & Operations Area	5.8
Buttress	10.0
Nike Hill	1.0
Western Deck	40.0
Eastern Deck	49.0
Southern Deck	28.0
Flare Site	1.2
TOTAL	142.0

ES.4.1.1 Entry Plaza

The main arrival plaza of approximately 3.5 acres would be located immediately south of Crossroads Parkway South and would act as both the gateway to the greater park and a destination itself. An approximate 8,600-square foot (sf) building would accommodate shared offices for Landfill Park and Sanitation Districts staff and a visitor welcoming center for the public including restrooms and security lighting. Park entrance improvements would include a modified road system that would include crosswalks, either additional signalization or a roundabout (traffic circle), entry re-configuration, and/or additional road lanes. Security personnel located at the Visitor Center would monitor the park during operating hours. A staffed guard house and island at the entrance of the park road would serve as additional security and informational kiosk. Parking Lot A would provide 60 spaces.

A multi-purpose Americans with Disabilities Act (ADA) compliant ramp and trail into the site from the front access road to the Visitor Center and Entry Plaza would serve regional trail users coming from the north and east using public transit, bicycles, horses, or walking. The Entry Plaza would include a trailhead for the arboretum stair climb and the entry station for the trail lift. The arboretum is located on the north slopes of the landfill. The trail lift would be anchored by an approximate 1,000 sf base structure at the Entry Plaza supported by up to two mid-support towers that would carry up to eight visitors per basket up approximately 760 feet in elevation to the top of the park at Nike Hill. The mid-support towers would be approximately 30 to 60 feet high depending on the location. As a destination, the Entry Plaza would be a place to learn about the park, to picnic, and to experience being in the Puente Hills. Sanitation Districts' trucks related to the materials recovery facility (MRF) would continue to work on one side of the plaza highlighting the unique mix of passive open space, public recreation, and industrial function.

ES.4.1.2 Maintenance and Operations Area

The redesigned Maintenance and Operations (M&O) area would be located approximately 0.5 mile into the park and 300 feet above the Entry Plaza. Parking Lot B (20 spaces) would provide access to the switchback trail up to the Western Deck, and optionally continue further up to Nike Hill. The park loop road would continue for a further 0.5 mile up 400 more feet in elevation to the Western Deck. A new road segment of approximately 2,000 feet in length would be constructed across the Sanitation Districts' new 300,000 cubic yard soil buttress construction, which is designed to stabilize that location's slopes. The M&O area would include an approximately 1,650-square foot building to serve as the shared M&O space for Regional Park and the Sanitation Districts' operations. The 6.4-acre M&O yard would be fenced to secure valuable equipment and to control public access to the Sanitation Districts' Western Deck bench road. The inward side of the building would provide park staff offices, a break room, storage, and a restroom, while the outward park side would provide public restrooms adjacent to Parking Lot B and security lighting. The proposed zip line landing pad would be located in this area. The 0.5-mile realignment of the Schabarum-Skyline Trail in this area would provide a connection from the existing eastern trail segment to the M&O area, continuing up to the Western Deck and Nike Hill.

ES.4.1.3 Nike Hill

The one-acre Nike Hill park area would serve as a key visitor destination in the park's upper elevations. Access to Nike Hill would be available from both the loop road and the trail lift. Park visitors using the trail lift would travel 1.2 miles from the Entry Plaza, gaining 760 feet of elevation before arriving at Nike Hill, the highest point in the park at 1,160 feet above sea level. The trail lift tower and Nike Hill plaza would connect to two scenic overlooks cantilevered out from the hill: one wing pointing north-west overlooking the Western Deck, and one wing pointing north-east surveying the Eastern and Southern Decks. Scenic views of the front range of the San Gabriel Mountains National Monument and a large swath of Los Angeles County would be visible from east to west. A 0.5-mile American with Disabilities Act (ADA) accessible paved or hard surface switchback trail is proposed in this area.

Canopies and terraces would provide some weather protection. The 6,000-square foot Nike Hill plaza and 2,000-square foot trail lift tower would support several structures including a mini-café or food truck space, staff office to organize programming, and public restrooms. Up to two zip lines and slides would also be constructed in this area. Artistic interpretive features at the scenic overlooks would provide information on key topics, from landfill history and environmental stewardship, to local geography and mountain peak identification.

Nike Hill gets its name from the historical guard structure and plaque which were moved to the hill to commemorate the Cold War-era Nike missile sites that ringed Los Angeles County from approximately 1954 to 1974. There was never a Nike missile site at this location, however. The guard structure and plaque would be relocated to an appropriate position within the new Nike Hill layout to continue sharing this unique local history with the public.

ES.4.1.4 Western, Eastern, and Southern Decks

Western Deck. The 40-acre Western Deck would be the first park area developed and would support two picnic grounds, open play areas, part of an inner trail loop (one mile), running loops, access to two stair climbs, a bike skills area, and a key daytime performance space. The eastern "horn" of the Western Deck (approximately 13 acres) looks out to the northeast and sits in a flat bowl with one wall being the slope of the Eastern Deck. This secluded area would be used as a daytime performance space for live events such as concerts and kite festivals. The western "horn" of the Western Deck encompasses the northern portion of a soil stockpile that would continue to be used by the Sanitation Districts for landfill deck maintenance. The stockpile on the Western Deck would remain in use until depleted, after which the park may use the land and the full 40 acres of the Western Deck. Park visitors might observe Sanitation Districts equipment throughout the park on maintenance roads, transporting stockpiled soil to other decks. A five-acre bike skills course would be a compatible interim use for the soil stockpile area. The soil can be graded and sculpted and serve the community for years until it is needed as landfill cover/repair material in the future, in coordination with the RWQCB and Sanitation Districts. A future meadow is also proposed for the soil stockpile area. In addition, a bridge and overlook from the Schabarum-Skyline Trail in the Ecology Canyon to the multi-use trail/loop road would be built to the west of the Western Deck.

Eastern Deck. The 49-acre Eastern Deck offers a broad expanse for nature, recreation, and fitness, and includes views in all directions along a 1.25-mile inner loop trail. Each point along the inner loop trail offers a different view, from downtown Los Angeles, to San Jose Creek, to the rooftops of Hacienda Heights and Mount San Jacinto to the east. The Eastern Deck would support a group picnic area, dog park, running loops, access to two stair climbs, a three acre bike skills area, bike rental, and two overlooks. Parking Lot D would provide 40 spaces. The Eastern Deck would be connected to the Southern Deck by a grassland planted pedestrian overcrossing over the loop road.

Southern Deck. The 28-acre Southern Deck would be more removed from the central hub of the park, offering a close connection with the Schabarum-Skyline Trail on its western border. The southern entrance to the park would be via the Schabarum-Skyline Trail. The Southern Deck would support a picnic area, running loops, a one-mile portion of the inner loop trail, three interpretive elements, and temporary art installations. A one- to two-acre native plant nursery is proposed to give volunteers an active role in propagation and restoration planting.

Parking Lot E (50 spaces) would accommodate a staging area for equestrian parking, and trailhead parking so hikers and cyclists may connect to the Schabarum-Skyline Trail going north into the park or south into the Puente Hills. A 1,300-square foot restroom structure would also be constructed in this area.

ES.4.1.5 Flare Site

The 1.2-acre Flare Site would be available for adaptive reuse in any phase as it is no longer in use. Development of the area is limited, however, by the lack of utilities for public use, namely sewer and water. The site has electricity. With the necessary utilities, the decommissioned industrial site may evolve into a signature park landmark with interpretive, educational, and concessionaire components. An approximate 12,000-

square-foot Flare Tower Café and/or educational and recreational area would be constructed in this area. If restroom and water facilities can be provided in a mobile/portable capacity, the site may be used more immediately in a creative pop-up fashion. An approximate 800-foot stair climb connecting the Eastern Deck to the Flare Site would be built to provide direct access. The hillside surrounding the Flare Site would have trails integrated to provide new views overlooking the native eastern canyons, wildlife habitat, and cities stretching to the eastern horizon.

ES.4.2 PARK FEATURES

ES.4.2.1 Multi-Use Trails and Existing Trail Enhancement

When completed, the park would provide approximately 14 miles of multi-use public trails, paths, and stair climbs. Trail access would also be available from five parking areas (Parking Lots A through E) throughout the park. Several distinct trail systems would be developed including the multi-use loop road trail, inner loop trail, running loops, ADA trails at the Visitor Center and Nike Hill, and top deck paths. Trails would be developed to County standards and would generally consist of a trail tread composed of natural surface materials. Stair climbers would also be of six to ten feet in width and be constructed of movable segments of steel stair components. Wider landings would be installed with benches or rest areas to permit users to enjoy views or interact.

Trails adjacent to the side of the proposed loop road would invite the public to utilize the mountainside for fitness. Trails around the edge of each top deck and through the top decks would provide a scenic trail experience for pedestrians, equestrians, and mountain bikers. The top deck trails would also lead park users to a variety of flexible spaces for park programmed events including art fairs, concerts and other performances, dog training events, food fairs, and kite flying competitions among others. A 0.5-mile portion of the existing Schabarum/Skyline Trail would be relocated off of adjacent property and onto the buttress area which would be filled by the Sanitation Districts to stabilize the Nike Hill. The stabilization of the buttress area is not part of the Master Plan; it is a separate project being implemented as part of the landfill's closure activities. The Schabarum/Skyline Trail, a section of the park loop road, and a switchback trail would be located in this area. The trailhead located at Workman Mill Road would be expanded to include signage and wayfinding plus additional design elements and plantings.

ES.4.2.2 Fitness Amenities

One of the top deck trails would be dedicated to a 3.5-mile fitness running loop with distance markers. This would be a multi-use trail available to runners, hikers, equestrians, and mountain bikers. A two-mile inner loop trail would be constructed to connect all three decks. In addition, three miles of paths would be distributed throughout the decks. Utilizing the steepness of the site for fitness and gravity play, five stair climbs and up to two slides are proposed which would be engineered and constructed over the methane pipe system. Up to two zip lines would also be located at the top elevation which would extend in opposite directions over the park. Because the Western Deck has settled more rapidly, this area would be developed first with an interim five-acre bike skills area utilizing the Sanitation Districts' soil stockpile. Future phases may relocate the bike skills area to the Eastern Deck. Bike rentals would be available for park users at the Eastern Deck just west of Parking Lot D. The Flare Site, a

decommissioned flare from the landfill gas collection system located east of the Eastern Deck, would be developed for climbing and fitness purposes.

ES.4.2.3 Educational and Interpretive Elements

Opportunities for education and interpretation of the landfill, waste stream, gas to energy conversion, history of the site, and the significance of the site in the Puente/Chino Hills are a few of many themes that can be developed for the park. Interpretive signage, cameras into the existing MRF, tours to the MRF, park elements constructed from recycled materials, and park structures that meet Leadership in Energy & Environmental Design (LEED™) criteria are major topics for educational development.

A plant nursery would be part of the educational component. Native and drought tolerant plants would be grown to actively replace and replant park areas requiring patching, repair, or re-construction due to landfill settling and bio-gas production. Ideal locations for bird observation and wildlife observation would be marked along particular trails. The public would be educated on the on-going functions of the landfill and the landfill slopes would be preserved, restored, and/or enhanced for wildlife.

ES.4.2.4 Children's Play and Picnic Areas

Nature play with loose parts (i.e. sticks, rocks, log rounds, fabric, crates, ropes, etc.) for young children is an ideal program in a park that must remain flexible in its use of any top deck area for many decades. The park would encourage child fitness, waste stream awareness, history of the San Gabriel Valley and the Puente Hills, nature play with natural materials, wildlife education, and native plant nursery growing. Four picnic areas throughout the park would be located near parking areas for family use (two at the Western Deck and one each at the Eastern and Southern Decks). The picnic areas would range in size from one to five acres. These areas would be planted to provide buffer and shade wherever possible.

ES.4.2.5 Circulation, Internal Park Transportation, and Parking

Access into the site would be from Crossroads Parkway South, which currently serves MRF-related traffic. Park entrance improvements would include a modified road system that would include crosswalks, either additional signalization or a roundabout, entry re-configuration, and/or additional road lanes. Park circulation would include a paved one-way loop park road that follows existing landfill roads for approximately four miles. The loop road would vary in width from 22 feet to 24 feet depending on the location. From the park loop road, park users would be able to access all the top deck areas throughout the park. A trail lift is proposed as a transportation alternative for park visitors with a station and parking at the Entry Plaza. The trail lift would provide park visitors access to the highest elevation of the park (Nike Hill) including a scenic overlook and would be ADA accessible. The trail lift would also serve as a people mover to reduce the number of cars operating within the park.

The Entry Plaza associated with the Visitor Center would provide a transit operations area for shuttle/bus loading and unloading and park visitors. Shuttles may also drive visitors to the top decks prior to construction of the trail lift and arboretum stair climb. A 60-space parking area (Parking Lot A) at the base would be utilized for the trail lift loading and for park patrons using the arboretum stair climb to the Western Deck and

other fitness activities. Four additional small gravel parking areas (Parking Lots B through E) located near park facilities on the top decks would be constructed to provide for flexible space loading and unloading, family use, and for trail staging. Although the park would encourage alternative modes of transportation, some parking would be necessary. The Proposed Projects would include a total of 200 parking spaces distributed over five parking areas (Parking Lots A through E) as described in Table ES-2.

Table ES-2. Parking Lots

Parking Lot	Park Area	Number of Spaces
A	Entry Plaza	60
B	Maintenance & Operations	20
C	Western Deck	30
D	Eastern Deck	40
E	Southern Deck	50
	TOTAL:	**200**

Shared Park Access Road. The front entry of the park would share a common gated entrance off of Crossroads Parkway South with the Sanitation Districts' MRF. The MRF is designed specifically for the management of municipal solid waste and recovery of recyclable material and would remain in operation at this location into the foreseeable future. Daily truck trips to the MRF were an average of 566 in the first quarter of 2015 and are anticipated to increase. The MRF operates six days a week, Monday through Saturday, from 6 a.m. to 5 p.m. Ongoing inspections, maintenance, and monitoring of the former landfill would require shared park roads and park space.

Rose Hills Memorial Park. Rose Hills Memorial Park has an agreement with the Sanitation Districts for a future roadway easement through the landfill property to access their site. Per CUP 92-250-(4) from November 1994, a permanent 300-foot setback along the common boundary of the eastern canyons of the landfill was established and is landscaped, irrigated, and kept in good repair by the Sanitation Districts. The CUP resulted in an Amended Setback and Easement Agreement in 1999 between the Sanitation Districts and Rose Hills Memorial Park, which addresses issues such as noise abatement, limits of operations, shared water storage reservoir, and other technical concerns regarding the operations of the landfill, including reducing the 300-foot setback to 50 feet. The Amended Setback and Easement Agreement also provides for a future roadway easement for ingress and egress by Rose Hills Memorial Park through the landfill area. The permanent alignment of the roadway easement is subject to the master planning process for the future park. The proposed Rose Hills Memorial Park access road would be used during daylight hours using the Crossroads Parkway South entrance. Three easement options aligned along the eastern portion of the park loop road are included as part of the Proposed Project.

ES.4.2.6 Landscaping

The proposed planting includes grasslands with differing heights creating strata of grass varieties. Over this are shrub layers in patterns that define outdoor rooms for flexible park spaces. The ecology of the park is the "base layer" on top of which are the flexible

programmed spaces, the bird observation areas, the interpretive areas, and the trails throughout the top decks. Hedgerows of various heights and species would be used to:

1) Organize the flexible spaces;
2) Move park users through the park from one event to another;
3) Lead people to an event such as a stair-climb; and
4) Protect and buffer one use from another such as the activity at the soil stock-pile.

The planting would consist mainly of California natives. However, drought-tolerant nonnatives are part of the planting plan because planting is difficult to establish on the mono-soil clay landfill cap that covers the filled areas. The flat 117 acres of top decks are covered with this mono-soil clay cap that is specifically designed to keep rain and irrigation water from seeping into the landfill and percolating down to create leachate. Due to water balance requirements on the top decks, the park cannot be limited to an all-natives plant palette.

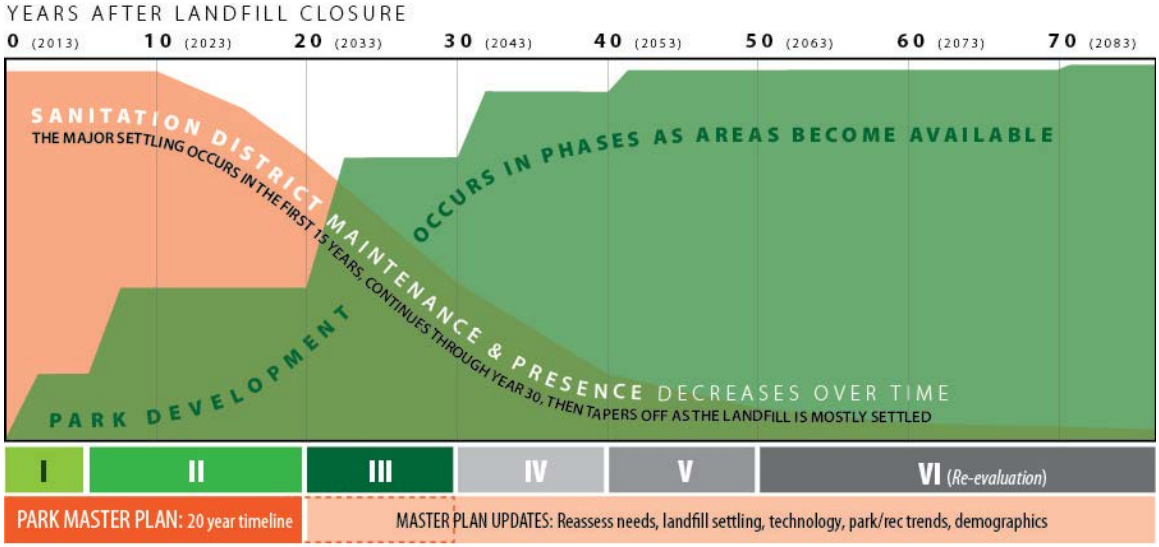
ES.4.3 Phasing

The Master Plan envisions three major phases of development over the next 30 years and two additional phases that would be refined as landfill deck settling is completed, park operations increase, and landfill maintenance operations decline in approximately 2043. Sufficient detail is known about the projects to be implemented at the beginning of the Master Plan timeline so that these projects can be discussed in detail at the Project EIR level. These include the Phase I and Phase II projects (Years 1 through 20) as described in Section 2.8.1 and 2.8.2. No further CEQA documentation is anticipated for these projects. However, details of projects that would be implemented in the later stages of Phases III through VI (Years 21 through 75) become speculative. These projects are discussed at the Program EIR level as described in Section 1 of this PEIR. In the first decade, park development would occur on the Western Deck and non-fill areas including the Entry Plaza, M&O areas, and Nike Hill, providing the basic park infrastructure for park visitors and park maintenance. The neighboring Eastern and Southern Decks would continue to lose elevation, up to 125 feet over a 30-year period. As top deck settlement slows and methane gas production decreases, the parklands on the capped areas would become more stable.

The additional phases include proposed park elements that can be implemented once deck settling slows and when environmental systems are no longer required. The park site transformation would be incremental and selective. Each phase is designed to build upon the last in response to public interest for a variety of programs and specific park elements.

Early investments in jointly used maintenance areas and offices would begin the co-agency (County and Sanitation Districts) transition to manage the site as a public space. Extensive infrastructure such as multi-use trails, roads, utilities, and structures would be laid into the site to accommodate a wide range of future park activities. All phases would include new landscape plantings to establish a complex ecology over time that reflects the soil conditions and continual shifting of the top decks.

Amenities that would be built and opened in Phase I would create the foundation for a distinctive regional park destination where industrial and passive recreation land uses come together. Beyond the infrastructure, distinctive park elements would be strategically located to showcase the assets of the Puente Hills to provide recreation that is unique to the region. The ever-changing parklands must be safe and secure during a lifetime of transition that may take 50 to 75 years as methane production and landfill settlement ceases. Finally, public involvement and stakeholder partnerships throughout all phases would guide and evolve the programming and management of the park. The timeline below illustrates the different park phases over time and the increase in park development as the landfill maintenance activities decrease and the landfill settles.



ES.5 AREAS OF CONTROVERSY

CEQA requires the EIR to identify areas of controversy or public interest. Prior to the preparation of this EIR, an Initial Study and Notice of Preparation (NOP) were prepared for the project (Appendix A). The Initial Study and NOP were distributed for review and comment to Responsible and Trustee Agencies, the State Clearinghouse, and other interested parties for a 30-day scoping period from December 18, 2015 to February 1, 2016.

Based on information and comments received from the general public and other public agencies in response to the NOP, the following issues are considered to be either controversial or require further resolution prior to making an informed decision on the Proposed Project:

- Inclusion of active recreational facilities;
- Include an alternative with predominantly passive recreational facilities;
- Viewshed impacts to surrounding areas;
- Compatibility with landfill closure and maintenance activities;
- Impacts to sensitive biological resources;
- Conflicts with wildlife corridors;
- Compatibility with the Habitat Authority Preservation Area;
- Noise impacts to surrounding areas;

- Traffic impacts;
- Shared access with Sanitation Districts and Rose Hills Memorial Park;
- Conflicts with the proposed Rose Hills Memorial Park access easement; and
- Evacuation routes from the park.

ES.6 PROJECT ALTERNATIVES

CEQA requires an evaluation of the comparative effects of a reasonable range of alternatives to the Proposed Project that would feasibly attain most of the project's basic objectives and that would avoid or substantially lessen any of the significant impacts of the Proposed Project. Two alternatives were evaluated; the Low Build Alternative and the High Build Alternative. Both alternatives were deemed feasible and reasonable alternatives to the Proposed Project. As such, no alternatives were rejected. As required by CEQA the No Project Alternative was also evaluated.

ES.6.1 Low Build Alternative

Under the Low Build Alternative, development of the diverse mix of passive and active recreational facilities under the Proposed Project would be eliminated in favor of a strong emphasis on passive recreation and habitat enhancement. Compared to the Proposed Project, the Low Build Alternative would substantially decrease recreational development and park infrastructure, including reductions in the sizes and functions of buildings, reduced transportation diversity, changes in the park internal road network, and elimination of most active recreational features. This emphasis on lower intensity development and the reduced variety of recreational opportunities in the park would also result in substantial declines in the number of park visitors and the diversity of user groups when compared to the Proposed Project. A comparison of the facilities and uses included in the Proposed Project and the Low Build Alternative is shown in Table ES-3.

Table ES-3. Changes in Major Improvements Under the Low Build Alternative

Recreation Facilities And Uses	Proposed Project	Low Build Alternative
Traffic Circle	Yes	No (traffic signal)
Park Entry Plaza	8,600 sf	5,600 sf
Trail Lift	Yes	No
Maintenance & Operations Area	1,650 sf	1,300 sf
Road Circulation	One-way, 4-mile-long loop road, approx. 20 ft wide	Two-way, 2-mile-long non-loop road, approx. 40 ft wide
Parking	200 parking spaces	220 parking spaces
Nike Hill Scenic Overlook	6,000 sf	1,000 sf
Anticipated Monthly Visitation	32,200 visitors	3,000 visitors
Miles of Trail Development	13.75	5.75
Bike Skills Areas/ Rentals	Yes	No
Performance Space	Yes	No
Public Restrooms	4	1
Picnic Areas	4	2
Interpretive/Overlook Areas	7	4
Dog Park	Yes	No
Slides/ Zip Line/ Stair Climbs	Yes	No
Flare Tower Structure	Yes	No
Temporary Art Installation	Yes	No
Plant Nursery	Yes	No

Recreation Facilities And Uses	Proposed Project	Low Build Alternative
Pedestrian Planted Overcrossing	Yes	No
West Side Pedestrian Bridge	Yes	No

The goal of this Alternative would be to maximize enhancement of native habitats and provision of wildlife linkages within the park while providing passive recreational amenities to enable public enjoyment of this County regional park. This Alternative's nature-focused and passive recreational options would fulfill some of the project objectives, but half of the objectives would not be met. Specifically, low intensity park development options may meet ecological and habitat enhancement and passive recreational goals, but due to the loss of varied recreational opportunities to meet the needs of diverse user groups, the Low Build Alternative would not meet a number of key project objectives.

ES.6.2 High Build Alternative

Under the High Build Alternative, development of the diverse mix of passive and active recreational facilities under the Proposed Project would be enhanced by more active facilities and increases in allowable uses. Compared to the Proposed Project, the High Build Alternative would substantially increase recreational development and park infrastructure, including enlargement in the sizes and functions of buildings, the addition of more active and passive recreational features, and the broadening of allowable programs such as night performances. This emphasis on development to support more active uses and the increased variety of recreational opportunities in the park would also result in substantial increases in the number of park visitors and the diversity of user groups when compared to the Proposed Project. A comparison of the facilities and uses included in the Proposed Project and the High Build Alternative is shown in Table ES-4.

Table ES-4. Changes in Major Improvements Under the High Build Alternative

Recreation Facilities And Uses	Proposed Project	High Build Alternative
Traffic Circle	Yes	Yes
Park Entry Plaza	8,600 sf	8,600 sf
Trail Lift	Yes	Yes
Maintenance & Operations Area	1,650 sf	1,650 sf
Buttress Area Buildings	No	8,000 sf
Road Circulation	One-way 4 mile long loop road, approx. 20 ft wide	Two-way 4 mile long loop road, approx. 20 ft wide
Parking	5 small parking lots, 200 parking spaces	6 parking lots, 600 parking spaces
Nike Hill Scenic Overlook	6,000 sf	12,000 sf
Anticipated Monthly Visitation	32,200 visitors	51,350 visitors
Miles of Trail Development	13.75	13.75
Running Loops	Yes	Yes
Frisbee Golf Area	No	Yes
Bike Skills Area	8 acres	25 acres
Bike Rentals	Yes	Yes
Performance Space	Yes	Yes; larger; night time events
Public Restrooms	4	5
Picnic Areas	4	7
Interpretive/Overlook Areas	7	9
Dog Park	Yes	Yes

Recreation Facilities And Uses	Proposed Project	High Build Alternative
Dog Agility Training Area	No	Yes
Slides	2	5
Zip Lines	Yes	Yes
Stair Climbs	Yes	Yes
Flare Tower Structure	Yes	Yes
Temporary Art Installation	Yes	Yes; larger
Plant Nursery	Yes	Yes
Pedestrian Planted Overcrossing	Yes	Yes
West Side Pedestrian Bridge	Yes	Yes

The goal of this Alternative would be to maximize the amount of passive and active recreational amenities to enable greater public enjoyment of this County regional park. Although this Alternative does not include sports fields and other high-intensity active recreational facilities, it explores a variety of recreation-focused options which may fulfill the project objectives though are not considered within the Proposed Project, along with tradeoffs that accompany these options. Enhanced recreational development options and buildout which may meet both recreational and ecological goals are examined and proposed within this Alternative. The High Build Alternative would partially meet a number of Project objectives.

ES.6.3 No Project Alternative

CEQA requires that the No Project Alternative be analyzed in an EIR. In accordance with Section 15126.6(e)(3)(B), the No Project Alternative consist of an analysis of the circumstance under which the project does not proceed.

With the No Project Alternative, the proposed Master Plan would not be implemented. No project-specific trails or access infrastructure would be constructed and no park development would occur. The Schabarum-Skyline Trail would remain available for hiking and equestrian use in its current location. This Alternative would not meet the ecological and passive recreational goals of the County or provide varied recreational opportunities to meet the needs of diverse user groups in the local and regional area. The terms of the Amended Setback and Easement Agreement between the Sanitation Districts and Rose Hills, including the terms of the Draft Easement attached to that Agreement as Exhibit I, regarding the future Rose Hills Memorial Park access road would continue to be in place.

The Sanitation Districts would continue to monitor, inspect, maintain, and repair the existing environmental control systems including the landfill's final cover, surface water drainage system, landscape and irrigation, groundwater quality protection system, landfill gas recovery system, and fire control measures. In addition, the MRF and the Sanitation Districts Puente Hills Field Office would remain.

Heavy construction equipment, including graders, scrapers, dump trucks, loaders, and water trucks, would continue to operate to repair any cracks in the final cover and maintain the closed landfill. The soil stockpile would continue to be accessed for repair and maintenance activities. Settlement of the landfill surface would continue as the trash beneath decomposes. The rate of settlement would be greater in some areas than

others, causing differential settlement. The majority of the settlement is expected to occur over the next 30 years, however, some settlement would continue into the future.

The side slope and top deck final covers would continue to be vegetated and irrigated for erosion control purposes. Inspection and maintenance of the irrigation system would be routinely performed in addition to the storm drainage system. The landfill gas recovery system would continue to be routinely monitored, inspected, maintained, and repaired. The collected gas would continue to be combusted at the Puente Hills Landfill Gas-to-Energy Facility. The three gated access points along the eastern boundary of the site at Gale, Los Robles, and Orange Grove Avenues would continue to be used by landfill employees for ongoing maintenance and monitoring purposes.

ES.6.4 Comparison of Project Alternatives

Table ES-5 provides a comparison of anticipated impacts of the alternatives with the Proposed Project.

Table ES-5. Comparison of Impacts for Alternatives with Proposed Project

CATEGORY	LOW BUILD	HIGH BUILD	NO PROJECT
Aesthetics	O	✚	–
Air Quality	–	O	–
Biological Resources	–	✚	–
Cultural, Tribal, and Paleontological Resources	O	O	–
Geology and Soils	–	O	–
Greenhouse Gas	O	✚	–
Hazards and Hazardous Materials	O	O	–
Hydrology and Water Quality	O	✚	–
Land Use and Planning	–	✚	–
Noise	–	✚	–
Public Services	–	✚	–
Recreation	✚	O	–
Transportation and Circulation	–	✚	–
Utilities and Service Systems	–	✚	–

Notes:
✚ = Impacts would be greater than the Proposed Project
O = Impacts would be similar to the Proposed Project
– = Impacts would be less than the Proposed Project

ES.7 ISSUES TO BE RESOLVED BY THE LEAD AGENCY

The major issues to be resolved by the DPR as Lead Agency include the following:

- Whether the PEIR adequately describes the environmental impacts of the Proposed Project;
- Whether the recommended mitigation measures should be modified/adopted;

- Whether the benefits of the Proposed Project override the significant impacts to Greenhouse Gas; and
- Which among the Proposed Project and its Alternatives should be selected for approval.

ES.8 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-6 presents a summary of environmental impacts analyzed and identified in this PEIR, the mitigation measures proposed for those impacts (if required), and the level of significance after mitigation.

THIS PAGE INTENTIONALLY LEFT BLANK

Table ES-6. Impact and Mitigation Summary Table

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
AESTHETICS		
Impacts to Scenic Vistas. The Proposed Project would not affect scenic vistas in the region because all of the proposed development would occur within the closed landfill. A scenic overlook would be constructed at Nike Hill allowing the public to enjoy the scenic vistas of the surrounding valley, hills, and mountains. A beneficial impact would occur.	None required.	A beneficial impact would occur.
Impacts to views from a regional riding trail. Views from trails located in the Puente Hills of the project site are distant and are not anticipated to be significantly affected. Impacts would be less than significant.	None required.	Less than significant.
Impacts to scenic resources within a state scenic highway. There are no state scenic highways in the project vicinity. No impact would occur.	None required.	No impact.
Impacts to the existing visual character or quality of the site and its surroundings. Implementation of the Proposed Project would significantly alter the visual character of the site in a beneficial way. The park's landscape plan is designed to be inclusive of the industrial and natural spaces present within the landfill. The Proposed Project would improve the visual character and quality of the site. Impacts would be less than significant.	None required.	Less than significant.
Impacts from the creation of a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. Proposed structures would use materials and surface treatments with low glare characteristics. Structure would be painted with earthen colors to complement	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
surrounding natural areas and minimize glare sources. The Proposed Project would not include park lighting except for security lighting of the M&O Yard. No stadium-type lighting is proposed. New lighting associated with the Proposed Project would be required to comply with existing County ordinances governing light pollution and the County of Los Angeles Park Design Guidelines and Standards, minimizing light and glare impacts. Impacts would be less than significant.		
AIR QUALITY		
Conflict with or obstruct implementation of applicable air quality plans. The Proposed Project would not exceed the Air Quality Management Plan (AQMP) assumptions for the project site and would be consistent with the AQMP. Impacts would be less than significant.	None required.	Less than significant.
Violate any air quality standard or contribute substantially to an existing or projected air quality violation. The Proposed Project's construction and operation emissions would not exceed regional thresholds. Therefore, a less than significant regional air quality impact would occur from construction and operation of the Proposed Project.	None required.	Less than significant.
Result in a cumulatively considerable net increase in a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Air quality would be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. Therefore, with	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
respect to long-term emissions, the Proposed Project would result in a less than significant cumulative impact.		
Expose sensitive receptors to substantial pollutant concentrations. None of the analyzed criteria pollutants would exceed the calculated local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the Proposed Project. The Proposed Project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminants (TAC) emissions and corresponding individual cancer risk. Therefore, no significant short-term TAC impacts are anticipated to occur during construction of the Proposed Project. No CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the ongoing use of the Proposed Project because the intersection with the highest traffic volume would be substantially less than 100,000 vehicles per day CO standard. The Proposed Project does not include stationary sources. Therefore, no long-term localized significance threshold analysis is warranted.	None required.	Less than significant.
Create objectionable odors affecting a substantial number of people. Due to the short-term nature and limited amounts of odor-producing materials being utilized, impacts related to odors during construction of the Proposed Project would be less than significant. The Proposed Project does not include a land use associated with odors. Therefore, operational odor-related impacts are considered to be less than significant.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
BIOLOGICAL RESOURCES		
Special Status Species. *Special Status Plant Species* No listed, candidate, sensitive, or special status species were observed during the biological resources assessment; however, 11 sensitive plant species were identified as having a moderate to high potential to occur and suitable habitat in or adjacent to the project site exists. Direct impacts to native vegetation communities and associated special status plant species would occur as a result of the removal of vegetation during construction activities. Once the park is operational there will be opportunity for native plantings, which would further help to minimize any indirect effects. Mitigation Measures B-1, B-2 B-3, B-6, B-8, and B-13 would reduce this impact to a less than significant level. *Special Status Wildlife Species* A total of 17 sensitive wildlife species are known to occur within the project region. The urban/wildlands interface guidelines, shall be incorporated into the project design to ensure that all direct and indirect project-related impacts to open space areas, including that which may result from lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized to the greatest extent feasible. One federally listed threatened and SSC, coastal California gnatcatcher, was detected within the project area during the	**B-1: Conduct preconstruction surveys for State and federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and avoid any located occurrences of listed plants.** Prior to grading of each development phase, focused surveys shall be conducted during the prior flowering season for the many-stemmed dudleya, slender and intermediate mariposa lilies to determine the presence or absence of those special-status plants. If no specimens are found within the Proposed Project, then no additional mitigation is required. In the event that the many-stemmed dudleya, slender and/or intermediate mariposa lilies are identified within the Proposed Project, the County shall prepare special-status plant restoration plan. Target sites for mitigation shall be sampled for soil type and habitat criteria sufficient for the establishment and growth of the affected special-status species. The plan shall additionally include, but not be limited to, the following components: 1) Performance criteria (i.e., what is an acceptable success level of revegetation to mitigate past impacts); 2) Monitoring effort (who is to check on the success of the revegetation plan, and how frequently); 3) Contingency planning (if the effort fails to reach the performance criteria, identify the remediation steps need to be taken); and	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
biological resources assessment. Five other sensitive species have some potential to occur on the project site; including one state listed endangered species, Swainson's hawk; and four SSC: American badger, western mastiff bat, western red bat, and western yellow bat. **California Gnatcatchers**. This specie was observed during the biological resources assessment and have been recorded nesting in and adjacent to the project site associated with coastal sage scrub primarily along the western portion of the Proposed Project. Additionally, critical habitat for the species occurs within and adjacent to the west and south of the project site. Impacts to this species would be potentially adverse and significant due removal of suitable habitat and a low potential for mortality during construction activities resulting in a "take". Mitigation Measures B-3, B-4, B-5, B-9, B-10, and B-13 will be implemented to reduce this impact to a less than significant level. **Swainson's Hawks**. This species was not observed during the biological resources assessment. Impacts to this species as a result of the Proposed Project are not expected. **American Badgers.** This species was not observed during the biological resources assessment however suitable habitat (e.g., coastal sage scrub and grassland) is present within the project area. Mitigation Measures B-3, B-9, B-10, B-12, and B-13 will be implemented to reduce this impact to a less than significant level. **Western Mastiff Bats.** This specie has been recorded in the vicinity and limited suitable roosting habitat occurs within the buildings on and adjacent to the project site. Impacts to this species as a result of the Proposed Project are not expected.	4) Irrigation method/schedule (how much water is needed, where, and for how long). **B-2: Conduct surveys for State and federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and avoid any located occurrences of listed plants.** Prior to issuance of a grading permit and future phase approval, the County shall conduct surveys for federally and state listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants in all areas subject to ground-disturbing activity. The surveys shall be conducted during the appropriate blooming period(s) by a qualified plant ecologist/biologist according to protocols established by the USFWS, CDFW, and CNPS. If none of the listed plants are found, no further mitigation is required. In the event a listed plant is discovered onsite, the current and anticipated future distribution of the species shall be mapped by a qualified biologist. The CDFW, USFWS and County shall be formally notified and consulted regarding the presence of either the federal and/or state listed species onsite. A preservation and management plan shall be prepared for the species by a qualified biologist and shall include, but not be limited to, the following: 1) The County will provide a buffer between development and any listed plant that may be found onsite as required by CDFW. This buffer zone shall be designated with appropriate fencing to exclude construction vehicles and public access, but	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Western Red Bats. This specie has been recorded adjacent to the project site in Ecology Canyon. The Proposed Project could result in direct impacts to roosting individuals of this species from grading and construction activities only in areas where roosting habitat would be removed (e.g., riparian/woodland tree species), which would constitute a significant impact. Mitigation Measures B-3, B-11, and B-13 will be implemented to reduce this impact to a less than significant level. **Western Yellow Bats**. This specie is an obligate foliage roosting species that prefers dead palm fronds to other types of tree substrates but can also occur within grasslands, scrublands, and wooded areas in riparian zones. The Proposed Project could result in direct impacts to roosting individuals of this species from grading and construction activities only in areas where roosting habitat would be removed (e.g., planted palm trees or other tree species), which would constitute a significant impact. Mitigation Measures B-3, B-11, and B-13 will be implemented to reduce this impact to a less than significant level. **Nesting Birds.** Construction activities could result in the direct loss of active bird nests or the abandonment of active nests by adult birds as they may utilize any of habitats across the project site including disturbed/developed areas (e.g., killdeer). Any vegetation removal, grubbing, or tree trimming conducted during the breeding season for native birds (February 15 through August 30) could have impacts on nesting birds, including raptors, that would be considered significant. Mitigation Measures B-3, B-4, B-5, B-10, and B-13 will be implemented to reduce this impact to a less than significant level.	not wildlife access; 2) The size of the buffer depends upon the use of the immediately adjacent lands, and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist and/or botanist. At minimum, the buffer shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) in order to protect and preserve the root systems of the plant. The buffer for herbaceous species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS and/or CDFW; 3) Stormwater runoff, irrigation runoff, and other drainage from developed areas shall not pass through areas populated by the listed species; 4) Listed species areas shall not be artificially shaded by structures or landscaping within the adjacent development areas; 5) Pesticide use shall not be permitted within listed plants areas; 6) The County will be responsible for monitoring the listed plant areas during construction and after project completion shall be identified and the frequency and extent of monitoring shall be determined.	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Indirect Impacts During construction, temporary noise from construction equipment could disrupt the foraging, nesting, roosting, and denning activities for sensitive wildlife species and nesting birds near the construction activity. These impacts are considered adverse and significant because the Proposed Project would impact a large landscape area, especially during the construction of Phases I and II. Nesting raptors would potentially incur temporary impacts from construction noise if present in the Proposed Project vicinity, and could be temporarily displaced. The effects of increased noise levels have been well documented for many types of animals and can be responsible for reduced bird nesting success. Although no specific noise thresholds have been established for wildlife in the project area, noise-level increases can be expected relative to the amount of construction. Mitigation Measure B-9, B-10, and B-13 will be implemented to reduce this impact to a less than significant level. ***Sensitive Natural Communities.*** *Coastal Sage Scrub* Coastal sage scrub habitat is considered sensitive by the resource agencies because it provides habitat to federally and state listed endangered, threatened, and sensitive species. Direct impacts from the Proposed Project on include the loop park road, stair climb and switch back trails, bike skills, slides, and trail lift tower with café, staff office and restrooms at Nike Hill. The loss or substantial alteration of the existing coastal sage scrub vegetation, if it were to occur, would constitute an adverse and significant impact. Mitigation Measures B-6 and B-8 would be implemented to reduce this impact to a less than significant level.	In the event it is determined that Proposed Project could potentially affect listed plants, the CDFW shall be contacted to determine the need for a “take permit” under the California Endangered Species Act. Appropriate mitigation required to minimize or mitigate impacts to the listed plants shall be implemented and may include the following: the creation of a preserve, establishment of vegetated buffers or other setbacks, drainage modification of the adjacent areas, revegetation, and monitoring to ensure the success of the mitigation. **B-3: Pre-construction surveys and biological monitoring.** Qualified biological monitor(s) shall be assigned to the project. Pre-construction biological clearance surveys shall be performed to minimize impacts on sensitive plants or wildlife species. The monitors will be responsible for ensuring that impacts to sensitive species, native vegetation, wildlife habitat, or unique resources will be avoided to the fullest extent possible. Where appropriate, monitors will flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or sensitive species. These restricted areas shall be monitored to ensure their protection during construction. **B-4: Conduct protocol surveys for California gnatcatcher and avoid occupied habitat.** Prior to issuance of a grading permit, the County shall conduct protocol surveys for California gnatcatcher. A qualified biologist who is permitted by the USFWS to	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Oak Woodlands All oak woodlands found on the site are subject to Senate Bill (SB) 1334 (California Public Resources Code [PRC] Section 21083.4), which "provides funding for the conservation and protection of California's oak woodlands". The Rose Hill road easement is most likely to impact oak woodlands. Mitigation Measures B-3, B-6, B-7, and B-8 would be implemented to reduce this impact to a less than significant level.	conduct surveys for California gnatcatcher shall conduct surveys in areas of suitable habitat prior to construction or site-preparation activities in these areas. The surveys shall be conducted in accordance with the accepted USFWS survey protocol. If California gnatcatchers are identified within proposed work areas, agency coordination may be required. If construction activities occur during the breeding season in known occupied habitat for California gnatcatcher, focused surveys shall be conducted within the project site and adjacent areas within 500 feet. The surveys shall be of adequate duration to verify potential nest sites. These surveys may be modified through the coordination with the agencies based on the condition of habitat, the observation of the species, or avoidance of coastal sage scrub areas during the breeding season. If a territory or nest is confirmed, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly Leq at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the qualified biologist determines that the construction activities are disturbing nesting activities, the qualified biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No construction shall occur within this buffer during the breeding season for these species. **B-5: Conduct nesting bird surveys to ensure that there would be not significant impacts to nesting birds and no violation of the Migratory Bird Treaty Act.** Prior to issuance of a grading permit, the County shall conduct nesting bird surveys. A qualified biologist shall conduct nesting bird surveys prior to construction or site-preparation activities occurring during the nesting and breeding season of native bird species (typically February through August). The survey area shall include all potential bird nesting areas, including grasslands, scrub habitat, woodlands, and isolated trees that are within 500 feet of construction activities. The survey shall be conducted no more than three days prior to commencement of construction activities (i.e., grubbing or grading). If active nests of bird species protected by the Migratory Bird Treaty Act and/or the CFGC (2008) (which, together, apply to all native nesting bird species) are present in the construction zone or within 500 feet of the construction zone, a temporary buffer fence shall be erected a minimum	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	of 300 feet around the nest site. This temporary buffer may be greater or lesser depending on the bird species and construction activity, as determined by the qualified biologist and/or applicable regulatory agency permits. Vegetation clearing and construction within temporarily fenced areas shall be postponed or halted until juveniles have fledged and there is no evidence of a second nesting attempt. The qualified biologist shall serve as a Construction Monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. **B-6: Protection of sensitive vegetation communities.** Prior to issuance of a grading permit, the County shall document the community type and acreage of vegetation that would be subject to project disturbance. Disturbance or removal of native vegetation shall not exceed the minimum necessary to complete operations. Every effort would be made to minimize vegetation removal and permanent loss at construction sites. If necessary, native vegetation would be flagged for protection. A project revegetation plan would be prepared for areas of native habitat temporarily affected during construction. **B-7: Protection of oak trees.** An oak tree permit will be obtained prior to cutting, destroying, removing, relocating, inflicting damage, or encroaching into the protected zone of any oak trees with a	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	diameter at breast height (dbh) of eight inches or more. All protection and replacement measures shall be consistent with the Los Angeles County Oak Tree Ordinance. **B-8: Preparation of a landscaping plan.** Prior to issuance of a grading permit, the County shall prepare a landscaping plan for the Proposed Project as part of the Master Plan. It shall include a plant palette derived from the existing Sanitation Districts approved plant palette for the landfill. The plant palette shall be composed of non-invasive species that are adapted to the conditions found on the project site and do not require high irrigation rates. The landscaping plan will also include a list of invasive plant species (e.g., California Invasive Plant Inventory Database online at http://www.cal-ipc.org/paf/) prohibited from being planted on the project site. In addition, retail sales of these invasive plant species will be prohibited at any businesses (nurseries) located within the project site. Landscape plans shall encourage planting of local natives typical of native vegetation within ten miles of the project site. **B-9: Placement of wildlife proof receptacles.** Prior to issuance of a building permit the County shall provide waste and recycling receptacles and educational signage that discourage foraging by wildlife species adapted to urban environments. The receptacles shall be installed in common areas (i.e., any area where public trash receptacles would be placed, such as picnic areas, parking areas, and walking trails) throughout the project site. Additionally, educational signs shall be placed throughout	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	the project site regarding: the importance of not feeding wildlife and information stating that trash (containing food) shall not be accessible to wildlife. **B-10: Implementation of public awareness program.** Prior to issuance of a building permit, a public awareness program shall be designed and implemented in an effort to restrict public access to the native habitat areas on the project site to designated trails and to prevent unleashed domestic animals from entering these areas by the County. This program shall include: signs that identify the boundaries of ecologically sensitive areas; the use of temporary fencing around sensitive areas that appear to be receiving a high level of disturbance until the disturbance is reversed; and promotion of public education and awareness of such areas. Only passive recreational activities shall be permitted within the designated natural open space areas and shall be restricted to trails. Some areas may allow slightly greater impacts if designated as picnic areas. All dogs shall be required to be leashed while in the native habitats and natural open space areas. A plant nursery will be part of the educational component. Native and drought tolerant plants will be grown to actively replace and replant park areas requiring patching, repair, or re-construction due to landfill settling and bio-gas production. Ideal locations for bird observation and wildlife observation will be marked along particular trails. The public will be educated on the on-going functions of the	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	landfill and the landfill slopes would be preserved, restored, and/or enhanced for wildlife. **B-11: Maternity colony or hibernaculum surveys for roosting bats.** Prior to issuance of a grading permit, the County shall conduct maternity colony or hibernaculum survey for roosting bats. A pre-activity (e.g., vegetation removal, grading) survey for roosting bats within 200 feet of project activities shall be conducted within 15 days prior to any grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities) within 200 feet of project activities. Conduct surveys for roosting bats during the maternity season (March 1 to July 31) within 300 feet of project activities. Trees and rocky outcrops shall be surveyed by a qualified bat biologist. Surveys shall include a minimum of one day and one evening. If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the Proposed Project, if feasible. For active roosts or hibernacula that are present in the construction zone or within 300 feet of the construction zone, a temporary buffer fence shall be erected a minimum of 100 feet around the roost or hibernacula site. This temporary buffer may be greater or lesser depending on the bat species and construction activity, as determined by the qualified biologist and/or applicable regulatory agency permits.	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	If avoidance of the maternity roost is not feasible, the qualified bat biologist shall survey (through the use of radio telemetry or other CDFW approved methods) for nearby alternative maternity colony sites. If the qualified bat biologist determines in consultation with and with the approval of CDFW that there are alternative roost sites used by the maternity colony and young are not present then no further action is required, and it will not be necessary to provide alternate roosting. If impacts to the potential bat roosting habitat are unavoidable, or if the size, configuration, or complexity of a potential roost warrants additional surveys as determined by the qualified biologist, a one-night emergence survey (acoustic survey) will be conducted per roost to assess the species and population size. Note that night emergence surveys to determine absence cannot be performed during the inactive period (between November 1 and February 15). All observations of sensitive species and occupied bat roosts will be reported to the County. Should a maternity roost be identified within the disturbance footprint and impacts cannot be avoided, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony will be provided on, or in close proximity to, the project site no less than 3 months prior to the eviction of the colony. Should a hibernaculum (i.e., non-breeding roost) be identified within the disturbance footprint and impacts cannot be avoided, passive humane eviction will be conducted in coordination with CDFW.	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	B-12: Conduct pre-construction surveys for American badgers and passively relocate during the nonbreeding season. Prior to issuance of a grading permit, the County shall implement pre-construction surveys for American badgers within suitable habitat. If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den avoided. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. Buffers may be modified with the concurrence of CDFW. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. Any relocation of badgers shall occur only after consultation with the CDFW. A written report documenting the badger removal shall be provided to CDFW within 30 days of relocation. **B-13: Prepare a Worker Environmental Awareness Program (WEAP).** Prior to issuance of a grading permit, the County shall prepare a WEAP. All construction crews and contractors shall be required to participate in WEAP training prior to starting work on the project. The WEAP training will include a review of the sensitive species and other biological resources that could exist in the project area, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained will be maintained.	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Jurisdictional Resources. No wetlands or waters of the United States were found on the project site; therefore, no impacts on wetland resources are associated with implementation of the Proposed Project.	None required.	No impact would occur.
Wildlife Movement. Possible impacts on wildlife corridors from the implementation of the Proposed Project were evaluated with respect to blockages or barriers to movement in a regional context (i.e., the animal's ability to move between existing large, regional open space areas). Construction of the Proposed Project is not expected to interfere with a majority of regional wildlife movement due to the recent landfill use in the project area. The project site currently provides poor conditions for wildlife movement as a majority is disturbed/developed at nearly 128 acres out of the total 144.8 acres project site (88 percent). The project area only offers marginal local corridor value on its own and does not provide any additional connectivity further to the west. The proximity of the natural open space to urban populations does, however, make the project site a potentially valuable biological resource by effectively maintaining larger habitats within the corridor and providing a larger urban buffer for less tolerant species. As a result, construction of the Proposed Project is not expected to have significant impacts to regional movement of wildlife populations.	None required.	Less than significant.
Oak Woodlands. All oak woodlands found on the site are subject to SB 1334 (California PCR Section 21083.4) and would be regulated by mitigation measures that are defined in the bill. Additionally, the loss of individual oak trees would be subject to the Los Angeles County Oak Tree Ordinance and therefore would	Mitigation Measures B-3, B-6, B-7, and B-8.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
require an oak tree permit with associated conditions if any Proposed Project impacts to oak trees were anticipated. Impacts to oak woodlands in the Future Phases of the Proposed Project would be the same as Phase I and II. Mitigation Measures B-3, B-6, B-7, and B-8 would be implemented to reduce this impact to a less than significant level.		
Wildflower Reserve Areas, Los Angeles County Oak Tree Ordinance, Significant Ecological Areas (SEAs), and Sensitive Environmental Resource Areas (SERAs). The Rio Hondo College Wildlife Sanctuary SEA, including Ecology Canyon, a 24-acre area in the western corner of the landfill, is designated as native habitat. The Conceptual SEA for the Hacienda Heights community is located within the native preservation area managed by the Puente Hills Habitat Preservation Authority. The Proposed Project may have indirect impacts on wildlife movement within and adjacent to the project site. The Proposed Project's impacts are not expected to reach the primary regional linkage area, and regional connectivity is expected to be minimally impacted. The Proposed Project would not cause any regional populations of plants or animals in adjacent regions to become isolated. The Proposed Project's impacts on regional wildlife movement are therefore considered to be less than significant.	None required.	Less than significant.
Habitat Conservation Plans. The project site does in is not located within the limits of any Habitat Conservation Plan, Natural Community Conservation Plan, or approved local, regional, or state conservation plan, therefore, the Proposed Project would not conflict with existing conservation plans.	None required.	No impact.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
CULTURAL, TRIBAL, AND PALEONTOLOGIC RESOURCES		
Historical Resources. No known historical resources in the project site. Impacts would be less than significant.	None required.	Less than significant.
Archaeological Resource. There are no known archaeological sites on the project site. In the unlikely event that archaeological material is found during construction on Nike Hill, implementation of Mitigation Measure CR-1 and CR-2 will reduce impacts to less than significant.	**CR-1:** A worker education awareness program will be enacted to train construction workers about cultural resources. The Kizh Nation shall be provided an opportunity to review and contribute to the Worker Education Program. The program shall be designed to inform construction workers about what cultural resources are, state regulations pertaining to cultural resources, the authority of the monitors (when present) to halt construction in the event of a find, and penalties and repercussions from non-compliance with the program. Worker education training shall occur prior to initiation of any construction within the Nike Hill project area, and at regular intervals during the course of construction to train new hires and provide refresher training for existing workers, if needed. If appropriate, the worker education program shall be delivered in both English and Spanish. **CR-2:** If subsurface deposits believed to be cultural in origin are discovered during construction, then all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist shall be retained to evaluate the significance of the find. Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	on the NRHP or CRHR. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility for the CRHR and, if eligible, data recovery as mitigation.	
Human Remains. There are no known human remains or cemeteries within the project site. Prehistoric human remains may occur within residential archaeological sites. However, all archaeological sites were destroyed by landfill activities. In the unlikely event that human remains are found during construction in the Nike Hill area, implementation of Mitigation Measure CR-3 will reduce impacts to less than significant.	**CR-3:** If human remains of any kind are found during construction activities, all activities must cease immediately and the Los Angeles County Coroner must be notified, as required by state law (Section 7050.5 of Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the most likely descendant(s) (MLDs) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). Work may resume once the MLD's recommendations have been implemented or the remains have been reburied by the landowner if no agreement can be reached with the MLD (Section 5097.98 of the Public Resources Code).	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Tribal Cultural Resources. The majority of the Tribal Cultural Resource (TCR) located within the project area does not contain enough integrity to be considered significant. However, the Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site portions of the TCR would impact native soil in a portion of the TCR that is significant. Construction in these areas would involve disturbing native soil and altering the hilltop elevation and viewshed setting of the resource. Therefore, the proposed park construction would have a significant impact to a TCR under CEQA. Implementation of Mitigation Measures TCR-1 and TCR-2 will reduce the impacts to less than significant.	**TCR-1:** Ground-disturbing activities within the non-fill portions of the project area (Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site) shall be monitored by a qualified archaeological monitor. The archaeological monitor shall have the authority to temporarily halt construction operations within 50 feet of an archaeological resource to determine if significant or potentially significant resources will be adversely affected by continuing construction operations. The archaeological monitor shall use flagging tape, rope, or some other means, as necessary, to delineate the area of the find within which construction shall halt and the procedures outlined below shall apply. Construction shall not take place within the delineated find area until the County consults on appropriate treatment. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations. Any work in other areas of the project area, which involves earth-moving activity in previously undisturbed native soils, should be monitored by, at a minimum, workers that have received cultural resource training pursuant to a cultural resources management plan and worker education and awareness program. If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	shall apply, depending on the nature of the find: If the professional archaeologist determines that the find does not represent a cultural resource, then work may resume immediately and no agency notifications are required. If the qualified professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify the County of Los Angeles. If the find is considered eligible for the California Register of Historical Resources (CRHR) and impacts to the resource cannot be avoided, then Project Archaeologist will notify the County and will recommend appropriate mitigation measures in compliance with the California Environmental Quality Act (CEQA) and federal regulations, if applicable (up to and including possible data recovery). The agencies shall consult on a finding of eligibility and implement appropriate treatment measures. No construction can occur within the flagged-off area until the professional archaeologist determines that either the site is not significant or that the treatment measures, as determined through consultation between the professional archaeologist and the County, have been completed to their satisfaction. If the find represents a Native American or potentially Native American or tribal cultural resource that does not include human remains, then the County shall further notify the Kizh Nation. The agencies shall consult with the tribe on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be eligible for	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	inclusion in the CRHR. Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for the CRHR; or 2) that the treatment measures have been completed to the satisfaction of the consulting parties. If the find includes human remains, or remains that are potentially human, then the professional archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (per AB 2641). The archaeologist shall notify the Los Angeles County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code), which may or may not be a representative of the Kizh Nation. The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	conservation zoning designation or easement; or recording a reinternment document with the County (AB 2641). Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction. **TCR-2:** Ground-disturbing activities within the non-fill portions of the project area (Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site) shall be monitored by one tribal monitor representing the Kizh Nation. The tribal monitor shall have the authority to temporarily halt construction operations within 50 feet of a TCR or a potential TCR to determine if significant or potentially significant resources will be adversely affected by continuing construction operations. The tribal monitor shall use flagging tape, rope, or some other means, as necessary, to delineate the area of the find within which construction shall halt and the procedures in TCR-1 shall apply. Construction shall not take place within the delineated find area until the County consults on appropriate treatment. Tribal monitors may suggest options for treatment of finds for consideration. Tribal monitors must obtain permission from the County to harvest native plants in a sustainable manner within the project area that are deemed important to the Kizh Nation. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations.	
Paleontological Resources. Excavation in the Nike Hill area could encounter and damage or destroy unique paleontological resources in Pleistocene alluvium, the Puente Formation, or the	**CR-4:** In the Nike Hill area, a qualified paleontological monitor under the supervision of a qualified vertebrate paleontologist shall monitor excavations into the Pleistocene	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Fernando Formation. Implementation of Mitigation Measure CR-4 will reduce impacts to less than significant.	alluvium, as well as any deeper excavations into the Puente Formation and the Fernando Formation. Sediment samples shall be collected and processed to determine the small fossil potential in the project area. The monitor will be equipped to recover fossils and sediment samples during excavation and will have the authority to temporarily halt or divert equipment to allow for recovery of large or numerous fossils. Any fossils recovered during monitoring shall be prepared to a point of identification and preservation and be deposited in an accredited and permanent scientific institution. A report detailing the findings with an appended itemized inventory of identified specimens shall be prepared by a qualified vertebrate paleontologist. The report and inventory shall be submitted to the Los Angeles County Department of Parks and Recreation (DPR) and the scientific institution where the fossils are deposited. When DPR receives the report, inventory, and verification of acceptance of the specimens by the scientific institution, mitigation will be complete.	
GEOLOGY AND SOILS		
Rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction and lateral spreading; and/or landslides. If movement occurred along a fault in the project area, the Proposed Project could be subject to strong ground shaking. Design and placement of structures in accordance with current County Building Code standards would reduce the effects of ground shaking. Park amenities that contain structural	**G-1:** A qualified geotechnical firm shall conduct site-specific geotechnical investigations during the design of each project component. Activities related to the geotechnical investigation shall be coordinated with the Sanitation Districts to avoid conflicts with landfill operations and maintenance activities. The geotechnical firm shall review the site and grading plans for each project as the PHLPMP is implemented and to determine the specific	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
components such as buildings and the trail lift would require project-specific evaluations by structural and geotechnical engineers to ensure their feasibility and proper design. Impacts from strong ground shaking would be less than significant with incorporation of Mitigation Measure G-1. Liquefaction is not considered to be a hazard for the Proposed Project. Therefore, no impact from liquefaction is expected. Landfill settling over time may affect the stability of slopes for future projects. Impacts would be less than significant with incorporation of Mitigation Measure G-1.	geotechnical hazards for each project. Geotechnical investigations shall 1) evaluate the subsurface conditions at the site; 2) provide site-specific data regarding potential geologic hazards and geotechnical constraints; and 3) provide information pertaining to the engineering characteristics of earth materials with regard to project improvements and building and tower foundation design 4) provide recommendations for earthwork, foundations, pavements and other pertinent geotechnical design considerations. The detailed geotechnical evaluation may include the following, as applicable: • Large-diameter bucket auger borings to evaluate geologic conditions for slope stability at the Entry Plaza, Trail Lift Tower locations, and Flare Site, and to evaluate geotechnical engineering properties for tower foundation design; • Backhoe test pits to evaluate the presence of landfill waste materials in the area of the new structures where they are near the boundary of the waste limits; • Slope stability analyses to evaluate the stability of the adjacent graded and natural slopes near proposed structural improvements, including the evaluation of possible effects to the western Nike Hill slope buttress; and Geotechnical engineering analyses to develop pile foundation parameters for buildings and trail lift towers.	
Expansive Soil. The landfill final cover was constructed of native soil that was excavated during landfill operations and contains clay that can expand and contract, potentially affecting	Mitigation Measure G-1 is listed above.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
the stability of park structures. Implementation of Mitigation Measure G-1 would ensure that risks to park structures would be less than significant.		
Soil Erosion. Disturbance of surface soils could take place during the construction of the park components or during public use of the park amenities. During construction, Best Management Practices (BMPs), included as part of the Storm Water Pollution and Prevention Plan (SWPPP) that would be prepared for the Proposed Project, would be in place. On completion of Project construction, the majority of the site surfaces accessible to the public would be stabilized by landscaping or hardscaping. The proposed new loop road would contain its own channelized stormwater conveyance that would connect to a proposed debris basin located west of the M&O area. This basin would allow suspended sediment and debris to settle before the water continues through the existing drainage network. Impacts would be less than significant.	None required.	Less than significant.
GREENHOUSE GAS		
Greenhouse Gas Emissions. The Proposed Project would generate unmitigated greenhouse gas (GHG) emissions of 5,123.58 million metric tons of carbon dioxide equivalent ($MTCO_2e$) per year. The majority of emissions are sourced from construction of the Proposed Project and from mobile sources from the patrons visiting the park. Therefore, the Proposed Project would result in significant impacts related to GHG emissions.	**GHG-1:** The Proposed Project will include trails/sidewalks within the project boundary that will connect to roads leading off-site. **GHG-2:** All building structures will be required to meet or exceed 2013 Title 24, Part 6 Building Energy Efficiency Standards and meet Green Building Code Standards. **GHG-3:** All faucets, toilets, and showers to be installed in the proposed structures will be required to utilize low-flow fixtures to reduce indoor water demand by at least 20 percent per CalGreen Standards.	Significant and unavoidable.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	GHG-4: ENERGY STAR-compliant appliances will be installed where appliances are required on-site. **GHG-5:** The Proposed Project will include recycling programs that will reduce waste to landfills by a minimum of 50 percent (up to 75 percent by 2020 per AB 341).	
HAZARDS AND HAZARDOUS MATERIALS		
Use or Disposal of Hazardous Materials. Construction of the Proposed Project would require the use of some hazardous materials, such as diesel fuel. The transport of hazardous materials is regulated by the state and the transport of such materials to project site would be in compliance with all state regulations. These materials would only be present during construction and would be removed upon completion. A less than significant impact would occur. During operation, facility maintenance activities would likely require the use hazardous materials such as paints, fertilizers, and pesticides. These hazardous materials would be stored in the County maintenance yard and would be used in limited quantities during maintenance activities. County park maintenance personnel are trained in use and storage of hazardous materials. Compliance with existing hazardous material regulations would result in less than significant impacts related to the routine transport, use, or disposal of hazardous materials during maintenance activities.	None required.	Less than significant.
Release of Hazardous Materials. Landfill Gas. With the exception of the Entry Plaza and Nike Hill constituents, the majority of the park amenities would be constructed on the	**HAZ-1:** During the design process for any new building or structure, the County shall prepare a report in accordance with the most recent version of the Los Angeles County	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
closed landfill. Of the gases produced in landfills, ammonia, sulfides, methane, and carbon dioxide are of most concern. A landfill gas collection and recovery system is present on the project site, which would minimize the potential for gas infiltration into structures. Impacts would be less than significant with Mitigation Measure HAZ-1. Groundwater beneath the landfill is impacted with VOCs due to historic landfill operations. Water quality protection systems are installed at the landfill, consisting of five cement-bentonite subsurface barriers and associated groundwater extraction systems, as well as two composite liner systems. Groundwater is not expected to be encountered during construction as the expected depth to groundwater ranges from 16 to 82 feet below ground surface. Additionally, a five-foot monolithic final cover is over the fill areas of the project site. However, if groundwater were encountered during construction in the nonfill areas, there is the potential for worker exposure to contaminants in the groundwater. Impacts would be less than significant with Mitigation Measure HAZ-2. Although contaminated soil has not been identified on the site, the Hazardous Materials Assessment identified a potential for workers to be exposed to soil contamination during project construction ground-disturbing activities. Impacts would be less than significant with Mitigation Measure HAZ-3.	Department of Public Works (DPW) Landfill Gas Protection Policy. At a minimum, the report shall detail the measures recommended to minimize possible landfill gas intrusion and prevent explosive concentrations of decomposition gases within or under enclosed portions of the building or structure. This report shall be prepared by a California Registered Civil Engineer. At the time of final inspection the civil engineer shall furnish a signed statement attesting that the building or structure has been constructed in accordance with the civil engineer's recommendation. Methane detectors and monitoring equipment shall be installed in structures as required by the most recent version of DPW Landfill Gas Protection Policy and the site-specific report. Monitoring and reporting shall occur by DPR at the frequency recommended the most recent version of DPW Landfill Gas Protection Policy and the site-specific report. **HAZ-2:** If groundwater is encountered during construction, all construction activities in the vicinity shall immediately cease until a construction dewatering discharge permit can be obtained from the Los Angeles Regional Water Quality Control Board. **HAZ-3:** Prior to construction of each phase, a Soil Management Plan and site-specific health and safety plan, detailing worker safety, vapor monitoring, soil testing, and soil removal shall be prepared for the project.	
Conflicts between landfill maintenance activities or systems and park activities or systems. The amended JPA between the Sanitation Districts and DPR would specify a	Mitigation Measure G-1 is listed in the Geology and Soils section.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
monitoring and maintenance schedule to identify hazards from settling, exclude the public as appropriate, and repair park amenities. Impacts would be less than significant with the implementation of Mitigation Measure G-1. A system of temporary custom railings would be use to block access to unauthorized non-public areas and public areas temporarily closed for Sanitation District access. Design features included in the PHLPMP would minimize the hazards related to unauthorized access to nonpublic areas of the landfill and a less than significant impact would occur. An uncontrolled landfill gas release could expose on-site employees and park users to increased explosion and fire risks. The Sanitation Districts has a comprehensive monitoring and maintenance system to ensure that accidental releases of landfill gas are avoided. In the unlikely event that an emergency release occurs, the Sanitation Districts has developed an Emergency Action/Fire Protection Plan for potential emergencies such as fire, explosion, accidents, and earthquakes. Contingencies for fires or explosions related to the gas collection system are included in this plan. As part of the JPA between the Sanitation Districts and the DPR, a similar emergency action plan would be developed for the park use that would include the roles of park staff, evacuation routes, and communication protocols in the event of an emergency. A less than significant impact would occur. The monolithic clay cover needs to be maintained at certain moisture; too much water can cause cracking and gas escape. The Master Plan includes recommendations for a plant palette, soil amendment, fertilizer, and irrigation schedule to maintain the integrity of the landfill cap. No impact is anticipated.		

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Hazardous Material Database. The Puente Hills Landfill is listed on several databases searched during the Hazardous Materials Assessment, but is not listed on the list of hazardous materials compiled pursuant to Government Code Section 65962.5; thus no impact would occur.	No mitigation required.	No impact would occur.
Emergency Response Plan. The Sanitation Districts has developed and implemented several emergency response plans following regulatory requirements for specific activities related to the Puente Hills Landfill post-closure activities. These include an Emergency Action/Fire Prevention Plan, SPCC Plan, Hazardous Materials Business Plan, and SWPPP, which contains a Liquid Discharge Emergency Response Plan for release of landfill liquids to surface water. Ongoing post-closure maintenance of the landfill, including compliance with these emergency plans, is integral to the PHLPMP, and would be enforced with a JPA between the Sanitation Districts and DPR. The Proposed Project would have its own SWPPP in place. A less than significant impact would occur.	No mitigation required.	Less than significant.
Fire Risk. The project site is located within a Very High Fire Hazard Severity Zone as shown in the County's General Plan. There would be an incremental increase in exposure of people and structures to fire risk due to the development of the site and increased human presence from park users. New construction within Very High Fire Hazard Severity Zones are required to use ignition resistant materials as described in the CBC and to follow the County's Fuel Modification Plan Guidelines. Compliance with these regulations and requirements would improve the site's defensible space, reduce the likelihood of the loss of structures to fire, and would reduce the risk of injury or death from fire. Impacts would be less than significant.	No mitigation required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Creation of a Fire Hazard. The park amenities would include circulation and parking, trails, landscaping, play areas, and a Visitor Center and offices. Park amenities would not constitute a potentially dangerous fire hazard. A less than significant impact would occur.	No mitigation required.	Less than significant.
HYDROLOGY AND WATER QUALITY		
Water Quality. Overall hydrology and water quality impacts associated with project implementation are related to earthmoving (grading) associated with construction. Earthmoving construction activities would increase the potential for erosion and sedimentation downgradient from the project site and could potentially damage existing surface and subsurface drainage systems. The Proposed Project would be subject to NPDES regulations and be required to obtain a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit). The General Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would list BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirement. Construction impacts would be less than significant. Operation of the Proposed Project would result in a lower level of ground disturbances compared to construction. During operation, the increase of pedestrian, mountain bike, and equestrian traffic within trails may incrementally increase erosion. However, the DPR would monitor trails within the park for issue areas and make repairs as needed. Impacts would be less than significant.	No mitigation required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Deplete groundwater supplies or interfere substantially with groundwater recharge. The Proposed Project would mostly use native and drought-tolerant natural plants, which would have minimal watering requirements. It is estimated that the Proposed Project would require approximately 182 million gallons of reclaimed water per year at full buildout. The project site does not provide significant groundwater recharge due to its past use as a landfill. Fill areas contain barrier systems to prevent groundwater recharge to minimize the potential for leachate contamination of groundwater. Surface flows would be directed to the landfill's drainage system. Improvements to the drainage system would include the construction of a gutter drain to convey stormwater runoff from the proposed park loop road, a new debris basin (Basin T), and a new connection to the existing drainage facilities conveying stormwater into Basin A. Impacts to groundwater recharge would be less than significant.	None required.	Less than significant.
Alter the existing drainage pattern resulting in substantial erosion or siltation. The Sanitation Districts is under regulatory requirements to manage the closure of the landfill to protect public health and the environment. The Proposed Project's grading plan and drainage systems would be designed to comply with the landfill's regulatory requirements regarding the protection of water quality. The Proposed Project drainage system would be designed to prevent erosion and siltation on- and off-site. Furthermore, the Proposed Project would implement a SWPPP, including BMPs during and after construction. These BMPs would help minimize or eliminate potential sources of polluted runoff including erosion and/or siltation. Impacts would be less than significant.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Alter the existing drainage pattern resulting in flooding. The Proposed Project is not anticipated to substantially alter the existing drainage pattern of the project site due to the Sanitation Districts' requirement to manage stormwater runoff from the landfill. Capacity and water quality improvements to the landfill's stormwater system would be completed, as needed, to accept additional stormwater capacity demands created by the proposed regional park. As such, flooding impacts due to changes to drainage patterns of the project site caused by the Proposed Project are anticipated to be less than significant.	None required.	Less than significant.
Water Features. The Proposed Project would not include a water feature that could potentially increase habitat for mosquitoes and other vectors. No impact would occur.	None required.	No impact would occur.
Exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The existing stormwater control facilities at the landfill have been designed to handle a 100-year 24-hour storm. The Proposed Project would improve the landfill's drainage system to accommodate additional stormwater runoff generated by the Proposed Project. Impacts would be less than significant. Ongoing operation activities would include the use of hazardous materials such as fertilizer, herbicide, and pesticides. The accidental release of such material could potentially be a source of polluted runoff. However, the use of such products during park operations is not expected to be large enough that an accidental spill would result in a significant source of polluted runoff. Impacts would be less than significant.	None required.	Less than significant.
Conflict with the Los Angeles County Low Impact Development Ordinance. Low impact development (LID) is a decentralized approach to stormwater management that works to	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
mimic the natural hydrology of a project site by retaining precipitation on-site to the maximum extent practicable. The Proposed Project would incorporate LID strategies to the extent practicable. Impacts would be less than significant.		
Result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance. There are no SWRCB designated Areas of Special Biological Significance in the project vicinity. No impact would occur.	None required.	No impact would occur.
Wastewater Treatment Systems. Wastewater would be generated on-site from restrooms and would be conveyed through new sewer line connections to the municipal sewer system. No wastewater treatment systems are included in the Proposed Project. No impact would occur.	None required.	Less than significant.
Subject to inundation. The project site is located within the closed Puente Hills Landfill which varies topographically. The project site is not within the vicinity of a lake and is located over 25 miles from the Pacific Ocean. As such, the project site is not subject to seiches or tsunamis. Due to the environmental controls in place and the landfill's engineered slopes and cap, mudflow is a low concern for the project site. Impacts would be less than significant.	None required.	Less than significant.
LAND USE AND PLANNING		
Consistency with the County zoning ordinance. The western half of the landfill has a land use designation of Public and Semi-Public (P) and is zoned Heavy Agricultural (A-2-5), with a small portion zoned Light Agricultural (A-1-5) (Workman Mill Zoned District). The eastern half of the landfill has a land use	None required.	No impact would occur.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
designation Parks and Recreation (OS-PR) and is zoned Open Space (O-S) (Hacienda Heights Zoned District). Recreational uses are allowed within Public and Semi-Public and Parks and Recreation land use designations. Recreational uses are also a permitted use under Heavy Agricultural and Open Space zones (L.A. County Code Title 22, § 22.24.120 and 22.40.410). The Proposed Project would be consistent with the County's General Plan land use designation and zoning ordinance. The Proposed Project would be consistent with the County of Los Angeles applicable General Plan policies listed in Section 3.10.2.4. No impact would occur.		
Conflict with Hillside Management criteria, Significant Ecological Areas conformance criteria, or other planned beneficial land uses, particularly public facilities criteria. The Proposed Project would be designed and constructed in compliance with the Hillside Management Area Ordinance (L.A. County Code Title 22, § 22.56.217). No impact would occur. Recreational uses such as hiking and wildlife watching are compatible by definition with the long-term sustainability of biological resources within SEAs (County of Los Angeles 2015). One adopted SEA (Rio Hondo Wildlife Sanctuary SEA) and one conceptual SEA (Conceptual SEA for the Hacienda Heights Community) are located within the landfill property. The Proposed Project would include passive and active recreational facilities. Active recreational facilities (i.e., bike skills, zip lines, slides) would not be located immediately adjacent to Ecology Canyon or the Conceptual SEA. Therefore, these facilities are not expected to cause conflicts with the SEAs.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Impacts to adjacent land uses (i.e. Habitat Authority) may occur from the potential increased use of adjacent recreational trails. It is anticipated that some park visitors would leave the regional park via the Schabarum-Skyline Trail and potentially use other trails in the area. However, the Proposed Project was designed to be a destination park with a wide range of amenities, including stair climbs, trail lift, zip lines, and bike skills areas, to meet the diverse needs of park users. The proposed park would itself become the destination for park users. Therefore, it is anticipated that the majority of park users would stay there. Impacts would be less than significant.		
NOISE		
Expose persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance. Cause a substantial permanent, temporary, or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. *Construction* Construction noise is considered a short-term impact and would be considered significant if construction activities are undertaken outside the allowable times as described by the County of Los Angeles Municipal Code Section 12.08.440. Compliance with the County's ordinance, as well as implementation of Mitigation Measure N-1 would reduce potential construction noise impacts to nearby sensitive receptors to a less than significant level.	**N-1:** In addition to adherence to the City of Industry's policies found in the Safety Element and Municipal Code (the City's policies are more stringent than the County's policies) limiting the construction hours of operation, the following measures are recommended to reduce construction noise and vibrations, emanating from the Proposed Project: 1. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards. 2. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site. 3. Equipment shall be shut off and not left to idle when not in use.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Operation *Noise Impacts to Off-Site Receptors Due to Project Generated Traffic.* The worst-case Project-generated (which consists of the High Build Alternative) traffic noise level was modeled utilizing the Federal Highways Administration (FHWA) Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise was found to be less than significant. *Noise Impacts to Off-site Receptors Due to On-site Operational Noise.* Sensitive receptors that may be affected by Proposed Project operational noise include the residences to the east, west, and south and the elementary schools to the east. Noise associated with project operations will not exceed the City's most strict exterior daytime standard of 50 dBA. Therefore, the impact would be considered less than significant. *Noise Impacts to On-site Receptors.* The City of Industry land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. Based upon the ambient measurements performed at or near the project vicinity, the project site would be exposed to levels below 65 dBA CNEL, which would be consistent with the strictest (City's) compatibility matrix and General Plan for park land uses. Noise impacts to on-site sensitive receptors would be less than significant.	4. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction. 5. Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.	
Expose persons to or generation of excessive groundborne vibration or groundborne noise levels. Vibration levels in the project area may be influenced by construction. Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
site. Construction equipment is anticipated to be located at least 300 feet or more from any existing sensitive receptor. Vibration impacts would be short-term and would only occur during site grading and construction activities. Temporary vibration levels associated with Project construction would be less than significant.		
PUBLIC SERVICES		
Fire and Sheriff Protection. Implementation of Phases I and II of the Proposed Project would increase the demand of fire and sheriff protection required at the project site. It is anticipated that during regular park operations the Proposed Project would not require the expansion of fire or sheriff stations in the area. However, the addition of park users to an area previously closed to the public would create an increase in the demand for sheriff protection services, which are provided by both nearby Sheriff stations and the Sheriff's Department Parks Bureau for County parks. The LASD estimates that at full build out of the Proposed Project (32,200 visitors per month) two deputies, two security officers, and one Sergeant per shift (day and night) would be required to provide law enforcement services to the park. The need for two additional patrol vehicles and office space at the park security office was also identified (LASD 2016a). During the construction it would be necessary for Parks Bureau to provide patrol checks because often times when a new park facility is being constructed there are reports/calls regarding burglaries and/or vandalism to the facility. These staffing estimates are preliminary based on the number of anticipated visitors and may be adjusted due to deployment of patrol deputies based on seven days a week with a relief factor. A	**PS-1:** The special event operator will coordinate with the Los Angeles County Fire Department (LACFD) in its preparation and implementation of a Fire Incident Plan describing the fire inspection and protection services to be provided by the LACFD and identifying the number of fire department personnel to be provided, including fire suppression/emergency medical service (EMS), fire prevention (fire inspectors), emergency communications, and supervisory personnel. The special event operator shall reimburse the County of Los Angeles (County) for fire inspection and protection services provided under the Fire Incident Plan, pursuant to the reimbursement agreement with the County to be entered into in connection with the special event permit. The Fire Incident Plan will also identify fire suppression equipment, supplies and other services to be provided by the special event operator during future festivals, including the number of fire suppression mobile carts. The number of fire suppression mobile carts required will be determined by the LACFD based on the site plan for future special events.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
staffing assessment and safety plan will be prepared by the LASD to determine the demand for additional sheriff personnel and support services for each phase of the Proposed Project, whereby DPR would be responsible to fund its proportionate share of financial impacts for the increased costs of public services provided by LASD, per Mitigation Measure PS-5. With the implementation of Mitigation Measure PS-5 impacts would be less than significant. In addition, an estimated 25 special events would be held annually with up to 5,000 visitors in attendance at each event. Special events can potentially result in a substantial increase in fire and sheriff protection demand. This substantial increase would result in a significant impact on fire and sheriff protection services. With implementation of Mitigation Measures PS-1, PS-2, and PS-3 impacts would be less than significant. Rose Hills Memorial Park would generate approximately 50 percent of the Proposed Project's traffic, or about 1,150 average daily trips. In addition, two to three or more daily funeral processions consisting of between 20 to 60 vehicles and a hearse would also utilize the access road. It is undetermined, at this point, if heavy construction or maintenance vehicles working in Rose Hills Memorial Park would be permitted to use the access road. Although under the terms of the proposed easement, Rose Hills Memorial Park is required to maintain the access road, the exact criteria for maintenance, frequency of such maintenance, and responsibility for monitoring and timely completion are not set forth in detail. Therefore, such impacts are also considered potentially significant. Implementation of Mitigation Measure PS-4 would reduce this impact to a less than significant level.	**PS-2:** Prior to the commencement of each special event, the special event operator will prepare and submit a Private Security Plan for review and approval by the Los Angeles County Sheriff's Department (LASD) describing all private security services to be provided and paid for by the special event operator. The Private Security Plan will identify the number of private security personnel to be provided and how these resources will be deployed and supervised. **PS-3:** The special event operator will coordinate with the Los Angeles County Sheriff's Department (LASD) in its preparation and implementation of an Operations Plan establishing the sheriff protection services to be provided by the County of Los Angeles to supplement the private security being provided by the special event operator. The special event operator will reimburse the County for sheriff protection services provided under the Operations Plan, pursuant to the reimbursement agreement with the County to be entered into in connection with the special event permit. **PS-4:** Prior to the construction and use of the park access road by Rose Hills Memorial Park, the County, the Sanitation Districts of Los Angeles County, and Rose Hills Memorial Park will enter into a tri-party agreement (as more fully described under Mitigation Measure T-1) which will include a means for Rose Hills Memorial Park to fund in perpetuity its proportionate share of financial impacts of the increased costs for public services provided by the LASD Park Bureau, and DPR to ensure protection of public safety, ease of public access to the Park, and minimal interference with park uses.	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	PS-5: A staffing assessment and safety plan will be prepared by the LASD to determine the demand for additional sheriff personnel and support services for each phase of the Proposed Project, whereby DPR will be responsible to fund its proportionate share of financial impacts for the increased costs of public services provided by LASD. The staffing assessment and safety plan shall be reevaluated at the commencement of each project phase.	
RECREATION		
Increase the use of existing neighborhood and regional parks or other recreational facilities. The Proposed Project would develop a regional park which may indirectly result in an increase of recreational users on existing recreational facilities adjacent to and near in the project area. The Proposed Project was designed to be a destination park with a wide range of amenities, including stair climbs, trail lift, zip lines, and bike skills areas, to meet the diverse needs of park users. The proposed park would itself become the destination for park users. Therefore, it is anticipated that the majority of park users that visit the park would remain within the park boundaries. Impacts would be less than significant.	None required.	Less than significant.
Include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities. The Proposed Project is the development of a regional park. The physical effect on the environment from the Proposed Project is discussed in the other sections of this Draft Program EIR. With implementation of mitigation measures as described in those sections, adverse physical effects on the environment would be less than significant.	Various mitigation measures listed in this PEIR.	Less than significant except for impacts from GHG emissions which will remain significant and unavoidable.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Interfere with regional open space connectivity. During Phase I, a portion of the Schabarum-Skyline Trail would be relocated off of adjacent property and onto the Nike Hill buttress site. The trail, a section of the park loop road, and an ADA-accessible switchback trail leading to the Nike Hill scenic overlook would all be located in this fill area. From this trail, park users could access Schabarum-Skyline Trail, and from there, other open spaces and trails in the region. The Proposed Project also includes improvements in the existing trailhead at Workman Mill Road, installation of new wayfinding signage, and landscaping. The Proposed Project would improve regional open space connectivity, and would result in a beneficial impact. Connectivity for wildlife movement is discussed under Biological Resources.	None required.	A beneficial impact would occur.
Be inconsistent with the goals of the County Open Space and Conservation Element and/or Parks and Recreation Element. The Proposed Project has been designed to meet the goals of both the Conservation and Natural Resources Element and the Parks and Recreation Element. No impact would occur.	None required.	No impact would occur.
Cause incompatibilities with existing or planned recreational uses. The Proposed Project would include trail connections to the existing Schabarum-Skyline Trail, an existing multi-use trail that is managed by DPR. This trail connects with other multi-use trails in the Habitat Authority Preserve. The trail would be relocated onto the landfill property, and improved with wayfinding and other signage. Internal park trails would connect with the Schabarum-Skyline Trail at Nike Hill. The Proposed Project would be compatible with existing recreational uses, enhance regional open space connectivity, and result in a beneficial impact.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
TRAFFIC AND CIRCULATION		
Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system and adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The Proposed Project would generate traffic during construction and operation. A traffic study prepared for the Proposed Project determined that the Proposed Project would not significantly alter study intersections under Existing (2016) plus Project conditions and Cumulative (2035) plus Project. The study also concluded that partial development of the proposed park in its opening year (2019) would also result in less than significant traffic impacts. ***Shared Access with Sanitation Districts and Rose Hills Memorial Park Resulting in Temporary Delays*** *Rose Hills Memorial Park* Cemetery-related traffic is composed primarily of graveside visits by individuals or small groups, and funeral processions. While the California Vehicle Code does not specifically give the right-of-way to funeral processions, they are commonly escorted by uniformed peace officers who have the authority to control conflicting traffic that would otherwise break up the processions (California Vehicle Code 2817). The Los Angeles County Municipal Code (Section 15.76.070) prohibits drivers and cyclists from traveling between vehicles in a funeral procession when those vehicles are placarded or otherwise clearly distinguishable as part of the procession. For these reasons, funeral processions would result in temporary delays to other road users resulting in a temporary	**T-1:** Prior to the construction and use of the access road by Rose Hills Memorial Park, the County, the Sanitation Districts of Los Angeles County (Sanitation Districts), and Rose Hills Memorial Park (Rose Hills) will enter into a tri-party agreement setting forth each of the parties rights and responsibilities for the construction, maintenance, and use of the access road and any extension or modifications thereto. The tri-party agreement will include funding for public service expenses per Mitigation Measure PS-4, as well as related access road management issues including, but not limited to: • The number of proposed funeral processions that would utilize the Rose Hills Memorial Park access road easement, the size of such processions, and the allowable schedule for all such processions. • Traffic management measures for all such funeral processions designed to ensure compatibility with park uses, including avoidance of peak park use periods. • Roadway maintenance protocols such as inspections, maintenance actions, scheduling, and other factors designed to allocate cost to all parties proportionally based on their share of impact on the road. • Offset the impacts of Rose Hills Memorial Park traffic on shared portions of the access road. • Improvements to the park entrance to minimize traffic and operational conflicts with the Sanitation	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
significant impact. This impact would be mitigated to a less than significant level with the implementation of Mitigation Measures T-1 and T-4. *Internal Congestion Impacts Related to Rose Hills Memorial Park Funeral Processions* Funeral processions would cause congestion impacts within the internal roadway system of the park and conflicts with park users, including pedestrians, bicyclist, and equestrian users. Impacts would be less than significant with the implementation of Mitigation Measures T-1 through T-6. *Impacts to Transit, Bicycle, and Pedestrian Operations* The Proposed Project would be accessible via existing and planned public transit systems and would provide new bicycle and pedestrian trails. These park amenities would be designed according to adopted policies, plans, and programs and would not decrease the performance or safety of the existing circulation network. Impacts would be less than significant. *Performance Events* The Proposed Project includes up to 25 events per year of up to 5,000 people. These events would result in impacts to the internal and external circulation systems and emergency access during such events. Impacts to emergency services would be less than significant with the implementation of Mitigation Measures PS-1 through PS-4. Impacts from potential conflicts with the processions on the proposed Rose Hills Memorial Park access road and performance events would be mitigated to a less than significant level with Mitigation Measure T-2.	Districts and Rose Hills, such as signage, lighting, and roadway improvements. **T-2:** No Rose Hills funeral processions shall occur on the shared access road on days with scheduled performance events (e.g. concerts, festivals) to avoid traffic congestion at the park entry and to improve safety to park users. Performance events are estimated to occur up to 25 times per year. The County shall inform Rose Hills of such events pursuant to the terms of the tri-party agreement. **T-3:** Prior to the construction by Rose Hills of any extension to the shared access road to connect to the Rose Hills property, Rose Hills shall fund the design and construction of a trail overcrossing at the intersection with the Schabarum-Skyline Trail to permit trail users to safely bypass funeral processions and vehicular traffic. The trail overcrossing shall be designed to be wide enough and of a gentle grade to safely accommodate equestrians, other trail users, and wildlife passage as appropriate. Safety fencing, landscape screening, earthen surfaces or other non-slip materials, and other techniques shall be employed to ensure trail user safety. The overpass shall be designed per the County of Los Angeles Trail Manual (adopted May 17, 2011). The Trail Manual includes plans for both at-grade crossings and grade-separated crossings of multi-use trails with roadways. The design shall be approved by the County's Department of Public Works and Department of Parks and Recreation prior to construction of the trail overcrossing. The requirements of this mitigation measure may become part of the tri-party agreement to be entered to among the County, the Sanitation Districts, and Rose Hills.	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
To address impacts to the external and internal circulation systems, including safety, the County will prepare and implement a Traffic Management Plan (TMP) per Mitigation Measure T-6. With implementation Mitigation Measure T-6, impacts would be less than significant. *Construction* The Proposed Project would be constructed in three major phases over the next 30 years with three additional phases that would be refined as the landfill decks stop settling, park operations increase, and landfill maintenance operations decline. Construction traffic would result in less than significant impacts to the external circulation system. However, potential conflicts may occur with existing landfill maintenance vehicles, park users, the future Rose Hills Memorial Park roadway easement, and emergency vehicles. These temporary construction-related impacts would be minimized with implementation of a Construction Traffic Management Plan (TMP), per Mitigation Measure T-6. With implementation Mitigation Measure T-6, impacts would be less than significant.	**T-4:** Rose Hills shall provide at least 24 hours advance notice to DPR staff for funeral processions that will travel through the Park to reach the Rose Hills property, including the estimated time of arrival. Rose Hills shall fund deployment of County traffic enforcement personnel to ensure protection of public safety, ease of public access to the Park, and minimal interference with Park users. These measures shall apply to Alignment Alternatives 1, 2, and 3 for the Rose Hills access road. The requirements of this mitigation measure may become part of the tri-party agreement to be entered to among the County, the Sanitation Districts, and Rose Hills. **T-5:** To maintain emergency access and minimize potential conflicts with park users, the park access road between Crossroads Parkway South and the Visitor Center, and between the Visitor Center and the point at which the park loop road begins, shall be configured to accommodate shoulder space for inbound vehicles to pull over and allow emergency service vehicles to safely pass. The Rose Hills access road shall be designed to appropriate County standards, Fire Department requirements, which shall be subject to review and approval by the Department of Public Works and the Department of Parks and Recreation. These measures shall apply to Alignment Alternatives 1, 2 and 3 for the Rose Hills access road. At the narrow section between the Visitor Center and the point at which the park loop road begins, the presence of methane collection systems adjacent to the road makes it impossible to provide two inbound lanes or to provide a	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	similar pavement width, accordingly, a funeral procession could not pull over sufficiently to allow an inbound emergency vehicle to pass. To address this limitation, when funeral processions are passing at the same time that emergency access is needed, the multi-use trail surface will be designed and constructed to allow for inbound vehicles to temporarily pull over onto the trail to allow emergency vehicles to pass or, alternatively, a traffic control officer shall be stationed uphill from that narrow segment to halt outbound traffic when an emergency vehicle is arriving. These measures apply to Alignment Alternatives 1, 2 and 3 for the Rose Hills access road. **T-6:** The County shall prepare and implement a Traffic Management Plan (TMP) which will identify the primary routes of travel to ensure efficient vehicle traffic movement and control between the I-605, SR-60, and adjacent roadways and the Proposed Project. The plan will designate the routes for entry and exit, signage placement along these routes, temporary street closures and other special traffic management procedures, such as use of traffic control personnel to direct traffic at key intersections. The staffing levels and locations of law enforcement officers, including security, traffic, and parking personnel will also be identified to assist with the control of the roadways. Each TMP shall be tailored to the specific special event(s) and approved prior to the start of the event. The TMP will also identify potential off-site parking locations and ways to bring event-goers from there to the park. A Construction Traffic Management Plan (TMP) shall also be prepared and approved by the County prior to construction	

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
	of any park improvements. The Construction TMP shall require prior notices, adequate sign-posting, detours, phased construction and temporary driveways where necessary to reduce construction-related impacts that may result from the Proposed Project. The Construction TMP shall also identify any haul routes for earth, concrete, or construction materials and equipment. The Construction TMP shall be subject to review and approval by the following County departments: Public Works, Fire, Regional Planning, and Sheriff prior to issuance of grading or building permits	
Conflict with an applicable congestion management program (CMP). *CMP Freeway and Arterial Intersection Analysis* The Proposed Project would add fewer than 150 peak hour vehicles to the nearest CMP freeway monitoring locations and fewer than 50 peak hour vehicles to the nearest arterial monitoring intersection. Therefore, CMP freeway and arterial intersection analyses are not required and impacts to the CMP monitoring system would be considered less than significant. *CMP Transit Impact Analysis* Potential increases in transit person trips generated by the Proposed Project equate to one to two new riders per bus per hour. Therefore, a less than significant impact would occur.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
State Highway System Analysis Per Caltrans' Guide for the Preparation of Traffic Impact Studies (Caltrans 2002), study intersections that included freeway on-ramps or off-ramps were analyzed using Highway Capacity Manual (HCM) (Transportation Research Board 2000) analysis methodology. Based on the HCM analysis, all ramp intersections are projected to operate at LOS D or better. While Caltrans' Guide for the Preparation of Traffic Impact Studies provides screening criteria to determine whether a Traffic Impact Study is needed, their guidance does not provide definitive criteria to determine whether the project's trip generation should be considered "significant." As such, the significance criteria of the lead agency, Los Angeles County, were utilized for the impact analysis; no significant impact would occur.		
Substantially increase hazards due to a design feature. The internal roadway system will follow established routes within the former landfill that were designed for and used primarily by heavy trucks. At locations within the park where vehicular traffic would cross the multi-use trail or the Schabarum-Skyline Trail, best practices will be employed to minimize the potential for conflicts. Relevant standards and design guidance are found in the County of Los Angeles Trail Manual (adopted May 17, 2011), the California Department of Transportation Highway Design Manual (HDM, updated 2015), and the California Manual on Uniform Traffic Control Devices (MUTCD, updated 2014). Impacts would be less than significant.	Mitigation Measure T-3 (previously listed).	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Rose Hills Memorial Park The master plan allows for three alignment alternatives for a Rose Hills Memorial Park roadway easement. Alignment Alternative 1 is slightly longer than the other two Alignment Alternatives under consideration, but would largely avoid the areas planned for active park uses. Alignment Alternatives 2 and 3 would pass through areas planned for active park uses, including a native plant nursery, an equestrian staging area, a trailhead, a parking lot and, under Alignment Alternative 2, a picnic area resulting in potential conflicts between park users and the anticipated cemetery processions on the proposed roadway. To minimize potential conflicts with park users, in particular equestrians, the Rose Hills Memorial Park access road will be designed to appropriate County standards and Los Angeles County Fire Department requirements. Implementation of Mitigation Measure T-3 would further reduce impacts to the Schabarum-Skyline Trail from conflicts with the proposed Rose Hills Memorial Park access road to a less than significant level.		
Result in inadequate emergency access. During the construction and operation of the Proposed Project adequate emergency access will be maintained. As part of the JPA between the Sanitation Districts and DPR, an emergency action plan would be developed for the park use that would include the roles of park staff, evacuation routes, and communication protocols in the event of an emergency. Impacts would be less than significant. *Rose Hills Memorial Park* The proposed use of the internal roadway system in the park by funeral processions would result in a potentially significant	Mitigation Measures T-1, T-2, T-4, T-5, and PS-4 (previously listed).	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
emergency access impact, due to the prolonged blockages they would cause. A potential emergency access impact would also occur on other roadway segments that are planned to have only one lane in each direction. Over the long term, potential exists that such traffic would obstruct narrow segments park roads and emergency vehicle access, delaying emergency responders with resultant impacts to public health, safety and welfare. Implementation of Mitigation Measures T-1, T-2, T-4, T-5, and PS-4 would reduce these impacts to a less than significant level.		
UTILITIES AND SERVICE SYSTEMS		
Exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards. The Proposed Project would generate wastewater from four restrooms provided for visitors and staff. Because the Proposed Project would introduce additional people (park visitors and staff) to the landfill, an increase in the wastewater currently being generated at the landfill is expected. Based on projected visitation levels on an average of 32,200 park users per month (at full buildout), average wastewater flows at completion of Phases I and II are estimated to be 6,000 gpd. While planned restrooms would accommodate part of this increased flow, wastewater demand generated at special events would also likely be met by use of portable toilets. Sewer discharge locations and treatment plants were determined to have sufficient capacity to accommodate the estimated generation of wastewater. As such, the Proposed Project would not exceed wastewater treatment requirements for the Los Angeles RWQCB. Impacts would be less than significant.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Potable water would be required for drinking and restroom facilities. The demand for potable water has been estimated to be approximately 500 gallons per day (PACE 2016). In addition, during an estimated 25 special events annually, up to 5,000 visitors would utilize park facilities, generating an additional demand for potable water. However, due to the infrequent nature of these events, the use of portable toilets, and availability of alternate sources of potable water for drinking (e.g., water bottles), it is anticipated that potable water demand would be met by the San Gabriel Valley Water Company (SGVWC). Impacts would be less than significant.	None required.	Less than significant.
Create drainage system capacity problems, or result in the construction of new storm water drainage facilities or expansion of existing facilities. The proposed development would require compatibility with the landfill's existing drainage system. Drainage controls, structures, and facilities on the top decks would be designed to divert any precipitation or tributary runoff and prevent ponding and percolation of water. New drainage systems would tie into existing systems. The drainage study completed for the Proposed Project found that the existing detention basins within the landfill would see negligible changes in volumes and peak flows due to the minimal impervious area added within the park by the Proposed Project (PACE 2016). Therefore, the only proposed drainage facilities to be constructed or improved by the Proposed Project would be Basin T and associated conveyance facilities, as discussed above. It is anticipated that the existing drainage system, along with modifications to integrate the proposed development, would have	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
sufficient capacity. As such, impacts would be less than significant.		
Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources. The Proposed Project would require water for drinking and restroom facilities and for landscape irrigation. Landscape irrigation would create the greatest demand for water. Potable water would be needed for drinking and restroom facilities while reclaimed water could be used for landscape irrigation. The Proposed Project (at full buildout) would demand approximately 0.841 percent of the reclaimed water produced daily by the San Jose Creek WRP. As such, the Proposed Project would not create water capacity problems due to irrigation. Impacts would be less than significant. It is anticipated that the Proposed Project would require approximately 500 gallons of potable water per day for restroom and water fountains (PACE 2016). Due to the minimal potable water needs of the regional park, it is anticipated that SGVWC would have sufficient water supplies to meet the potable water needs of the Proposed Project. Impacts would be less than significant.	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities. Electricity would be required for proposed buildings, safety and security lighting, and for facilities like the trail lift. Park development would include recreational elements that support sustainable technologies. The park would include solar technology, a partially solar powered scenic trail lift, electric car hook-ups, and a Leadership in Energy and Environmental Design (LEED) certified building (Visitor Center). Structures built would be energy neutral or energy producers. It is anticipated that the Proposed Project would not create energy utility system capacity problems. Impacts would be less than significant.	None required.	Less than significant.
Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. Solid waste would be generated during construction. Construction of Phases I and II would occur over a 20-year period. During this period, trash would be generated gradually as each park facility is built. Trash would also be generated during operation of the park. Trash generated during operation would be typical of trash generated by park visitors (i.e., plastic bottles, food wrappers, food waste). Trash generated by the Proposed Project would be disposed of at the Puente Hills MRF, located within the landfill property. The Puente Hills MRF has a maximum permitted throughput of 4,400 tons per day (County of Los Angeles 2014). The MRF is designed specifically for the salvage of recyclable materials. Trash processed through the MRF is trucked to various regional landfills, which include the Olinda Alpha Sanitary Landfill and the Frank Bowerman Landfill. The Olinda Alpha Sanitary Landfill has a remaining capacity of 36,589,707 cubic yards (cy). The Frank Bowerman Landfill has a remaining capacity of	None required.	Less than significant.

ENVIRONMENTAL IMPACTS	MITIGATION MEASURES	RESIDUAL IMPACT
205,000,000 cy (CalRecycle 2016). The Sanitation Districts is also developing a Waste-by-Rail system to transport waste via train to the Mesquite Regional Landfill. The Mesquite Regional Landfill is a 4,250-acre site that is permitted for 20,000 tons per day, with a total capacity of 600 million tons (Sanitation Districts 2016). As such, implementation of Phases I and II would not affect landfill capacity. Impacts would be less than significant.		

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 1.0 INTRODUCTION

This Draft Program Environmental Impact Report (PEIR) identifies and evaluates the potential environmental impacts associated with the implementation of the Puente Hills Landfill Park Master Plan (Proposed Project), which entails planning for the conversion of approximately 142 acres within the 1,365-acre former Puente Hills Landfill (landfill) to a regional park. The Los Angeles County Department of Parks and Recreation (County) has prepared a Master Plan to cooperatively plan and implement a regional park destination for public recreational activities. Future park activities and operations would be compatible with the ongoing maintenance of the landfill. Los Angeles County Sanitation Districts (Sanitation Districts) will remain present and active on the landfill property to maintain and monitor the landfill for public health and safety.

1.1 PURPOSE AND USE OF THE PEIR

This PEIR was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000-21177) and the Guidelines for the Implementation of CEQA (California Administrative Code §§ 15000 et seq.).

CEQA requires that the potential environmental impacts of a project be identified and that mitigation measures be recommended that may reduce significant impacts. CEQA requires the Lead Agency, in this case the County, to consider the information contained in the PEIR prior to taking any discretionary action. This PEIR may also be used by other public agencies that must take discretionary actions related to the Proposed Project.

This PEIR is intended to provide information to the County, other public agencies, and the general public regarding the potential significant direct, indirect, and cumulative environmental impacts associated with the Proposed Project. The PEIR process also requires investigation and development of feasible mitigation measures to reduce significant adverse environmental effects of the Proposed Project to levels below significance. CEQA requires a Lead Agency neither approve nor implement a project unless significant environmental impacts have been reduced (CEQA Guidelines §15091), or, if a Lead Agency approves the project even though significant impacts identified in the PEIR cannot be fully mitigated, the Lead Agency must state in writing the reasons for its action by adopting Findings and a Statement of Overriding Considerations.

The PEIR for the Puente Hills Landfill Park Master Plan (Master Plan) is a combined Project and Program EIR. A Project EIR examines the environmental effects of a specific development project, while a Program EIR is defined as an EIR "which may be prepared on a series of actions that can be characterized as one large project and are related either geographically, as logical parts in the chain of contemplated actions, in connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program…" (CEQA Guidelines §15168). Full implementation of the Master Plan would take approximately 75 years. Sufficient detail is known about the projects to be implemented at the beginning of the Master Plan timeline (e.g., 20-year horizon) so that these projects can be discussed in detail at the Project EIR level. These include the Phase I and Phase II projects (years 1 through 20) as described in Section

2.8.1 and 2.8.2 of this PEIR. No further CEQA documentation is anticipated for these projects. However, details of projects that would be implemented in the later stages of Phases III through VI (years 21 through 75) become less certain. These projects are discussed at the Program EIR level. Under CEQA, these future projects may rely on the Program EIR as the base environmental document for environmental review. Prior to implementation, when greater detail is known, these subsequent projects (Phases III through VI) must go through another CEQA review process. They will be examined in light of the Program EIR to determine whether an additional environmental document must be prepared. If the Lead Agency finds that the subsequent activity would not result in new effects or require new mitigation measures, the Lead Agency can approve the activity as being within the scope of the project covered by the Program EIR and no new environmental document would be required (CEQA Guidelines §15168). Otherwise, subsequent environmental documentation must be prepared. If subsequent documentation is prepared, the environmental analyses would be tiered from this Program EIR by incorporating by reference its general discussions and the analysis of cumulative impacts. Subsequent environmental documents would be focused on project- and site-specific impacts.

This PEIR may also be used by other public agencies to issue approvals and permits related to the Proposed Project. A list of the anticipated agency approvals required to implement the Proposed Project is provided in Table 1-1. The types of actions that these agencies, as well as other agencies not included on this list, may take in connection with this PEIR include, but may not be limited to the following:

- Approve, adopt, or amend applicable plans, policies, or programs
- Make findings of consistency
- Approve and issue permits
- Approve agreements
- Provide authorization and approval of funding
- Provide service

Table 1-1. Anticipated Agency Approvals and Reviews

AGENCY	PERMIT OR APPROVAL
County of Los Angeles Board of Supervisors	♦ Certification of the PEIR ♦ Adoption of the Master Plan ♦ Approval of the Amended Joint Powers Agreement
Sanitation Districts of Los Angeles County	♦ Approval of the Amended Joint Powers Agreement ♦ Use of non-fill areas ♦ Site improvements (including landfill environmental control systems and final cover) ♦ Will Serve letter for wastewater discharge
CalRecycle and Local Enforcement Agency	♦ Any changes in the landfill post-closure maintenance plan and/or activities

AGENCY	PERMIT OR APPROVAL
Los Angeles County Department of Public Works (DPW)	♦ Sewer service for restrooms/café if wastewater is discharged to a DPW maintained sewer line
Los Angeles County Department of Public Health (DPH), Environmental Health Division, Cross Connection & Water Pollution Control	♦ Plan review approval for recycle water use
Regional Water Quality Control Board (RWQCB), Los Angeles Region	♦ Stormwater Construction General Permit (including the development and implementation of a Stormwater Pollution Prevention Plan) ♦ Any changes to the landfill environmental control systems or final cover
California Department of Fish and Wildlife (CDFW)	♦ PEIR review ♦ Migratory Bird Treaty Act compliance
South Coast Air Quality Management District (SCAQMD)	♦ Permit to Construct and Operate

1.2 PROGRAM ENVIRONMENTAL IMPACT REPORT ORGANIZATION

- **Section 1.0** of the PEIR provides an introduction to the Proposed Project, the purpose of the PEIR, a description of the organization of the PEIR, the intended uses of the PEIR, and a description of the public review process.
- **Section 2.0** provides a description of the Proposed Project.
- **Section 3.0** provides the environmental analysis of the Proposed Project. This includes the description of the regulatory and environmental setting, the analysis of environmental impacts, and a discussion of mitigation measures to reduce or eliminate any significant environmental impacts.
- **Section 4.0** discusses the alternatives and potential environmental impacts of implementing alternatives to the Proposed Project.
- **Section 5.0** addresses long-term effects of the Proposed Project, including cumulative impacts, growth-inducing impacts, and significant irreversible and/or unavoidable impacts.
- **Section 6.0** provides a list of agencies and persons consulted.
- **Section 7.0** includes the references used to prepare the PEIR.
- **Section 8.0** provides a list of the PEIR preparers.
- **Section 9.0** includes a list of acronyms and abbreviations.

The Notice of Preparation (NOP), Initial Study, and responses received during the scoping period are presented in Appendix A. Technical reports for some resource areas are also provided in the appendices.

1.3 AVAILABILITY OF THE PEIR/PUBLIC REVIEW PROCESS

In accordance with the CEQA Guidelines, the County, as Lead Agency, prepared an Initial Study and NOP for a PEIR on the Proposed Project. A copy of the Initial Study and

NOP are provided in Appendix A. The Initial Study and NOP were distributed for review and comment to the State Clearinghouse and interested parties for a 45-day comment period from December 18, 2015 to February 1, 2016. The scoping period was extended from the CEQA-required 30 days to 45 days to accommodate the holidays. Letters received from agencies and the public during the scoping period are provided in Appendix A.

During the scoping period, a scoping meeting was held on January 27, 2016 at Don Julian Elementary School in the City of La Puente. Comments received at that meeting are also provided in Appendix A.

Under CEQA, the analysis in an EIR may be focused on issues determined in the Initial Study to be potentially significant, whereas issues found to have no impact or a less than significant impact do not require further evaluation. Based on the analysis contained in the Initial Study, this PEIR analyzes in detail the environmental impacts of the Proposed Project on the following environmental factors:

Potential Hazards

- Geology/Soils
- Hazards/Hazardous Materials
- Noise

Potential Impacts to Resources

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use/Planning

Potential Impacts to Services

- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Services

The Initial Study determined that the following issues did not warrant further analysis in the PEIR:

- Agriculture/Forest Resources
- Mineral Resources
- Population/Housing

This Draft PEIR is being distributed for comment to the same public agencies and interested groups and individuals as the Initial Study and NOP, in addition to any others

that have requested to be on the project mailing list. The Draft PEIR is also available for review at http://www.puentehillslandfillpark.org/ and at the following locations:

Hacienda Heights Library
16010 La Monde Street
Hacienda Heights, CA 91745
(626) 968-9356

Sunkist Library
840 North Puente Avenue
La Puente, CA 91746
(626) 960-2707

Sorensen Library
6934 Broadway Avenue
Whittier, CA 90606
(562) 695-3979

A period of 45 days has been established for public review of the Draft PEIR. Agencies, organizations, and individuals are invited to comment on the information presented in the Draft PEIR during this period. Specifically, comments are requested on the scope and adequacy of the environmental analysis presented herein. All comments on the Draft PEIR should be sent to the following County contact:

Julie Yom
County of Los Angeles
Department of Parks and Recreation
Planning & Development Agency
510 S. Vermont Avenue
Los Angeles, California 90020
Telephone: (213) 351-5127
Fax: (213) 639-3959
Email: jyom@parks.lacounty.gov

Following the 45-day public review period, the County will prepare responses to all comments and will compile these comments and responses into a Final PEIR. The County's Board of Supervisors will consider the information in the Draft and Final PEIR during project review and when making a decision to approve or deny the Proposed Project. The Final PEIR will need to be certified as complete by the Board of Supervisors prior to making a decision to approve or deny the Proposed Project.

1.4 DOCUMENTS INCORPORATED BY REFERENCE

An EIR may incorporate portions or all of any publicly available document by reference (CEQA Guidelines §15150). The following documents are available for public review at the County of Los Angeles Department of Parks and Recreation, 510 South Vermont Avenue, Los Angeles, California 90020, and are hereby incorporated by reference into this PEIR:

- Puente Hills Landfill Park Master Plan (2016)
- Puente Hills Landfill Park Master Plan – Site Analysis Report (2015)
- Continued Operation of the Puente Hills Landfill EIR (2002)
- Puente Hills Waste Management Facilities EIR (1992)
- Puente Hills Landfill EIR (1983)

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The Proposed Project is located within the boundaries of the Puente Hills Landfill (landfill), which is owned by the Sanitation Districts of Los Angeles County (Sanitation Districts). The landfill is approximately 1,365 acres in size and has been closed since 2013. The landfill is located southeast of the intersection of State Route 60 (SR-60) and Interstate 605 (I-605) in unincorporated Los Angeles County (Figures 2-1 and 2-2). Although the entire landfill site is not located in the City of Industry, the address of the landfill front entry is 13130 Crossroads Parkway South, City of Industry, California 91746. Full vehicular access to the site is currently available via a single driveway from Crossroads Parkway South.

The Puente Hills Landfill site contains a series of ridges, hillsides, and canyons that rise up around surrounding valleys to an elevation of 900 feet. The landfill site currently contains a range of environments, including natural and artificial slopes that support native habitats, restored native habitats, nonnative planted woodlands, actively managed artificial landfill decks, an extensive paved and unpaved road network, and several maintenance buildings (Table 2-1). The landfill decks are still settling as underlying trash decomposes and many of these hillsides are traversed by landfill gas (methane) pipelines ranging in diameter from 12 to 36 inches. The entire landfill site is traversed by more than 10 miles of internal roadways of varying widths, which are not open to the public. Landfill closure and maintenance activities and facilities are currently the dominant uses of the project site, including the operation of heavy equipment throughout the site, and the Puente Hills Materials Recovery Facility (MRF) on the northwestern edge of the site. Landfill closure activities are projected to continue for at least 30 years, decreasing over time as deck settling rates and landfill gas production decline.

Table 2-1. Overview of Existing Site Setting

USE/ AREA	DESCRIPTION (REFER TO FIGURE 2-3)
Natural habitats	Canyons 6 through 10 (except 9), coastal sage and chaparral habitats
Planted nonnative woodland	Mature nonnative woodland with eucalyptus (approximately 35 to 50 feet in height)
Restored native habitat	Canyons 2, 4, and 5
Landfill Decks	117 acres of Top Decks (Western, Eastern, and Southern Decks)
Circulation and infrastructure	Approximately 10 miles of paved and unpaved roads, drainage, and landfill gas collection system (pipelines)
Structures	Buildings associated with landfill closure operations and maintenance, the MRF, gas-to-energy facility, and decommissioned flare facility

2.1.1 Surrounding Land Uses

The project site is largely bordered by developed urban uses. Surrounding land uses include office and light industrial uses to the west and north; residential and open space/ preserve properties to the east and south; and Rose Hills Memorial Park, Rio Hondo College, and a Southern California Edison (SCE) electrical transmission line right-of-way (ROW) to the south and west. SR-60 borders the site to the northeast. Multi-use trails constructed and maintained by the Los Angeles County Department of Parks and Recreation (County) adjoin and cross the site connecting east to west over the former landfill. Surrounding cities and unincorporated communities include the City of South El Monte to the northwest, the cities of Industry and La Puente to the north, the unincorporated community of Hacienda Heights to the east, the City of Whittier to the south, and the City of Pico Rivera to the west (Figure 2-2).

The northern boundary of the project site is bordered by the 350-foot-wide SR-60 corridor, which carries an estimated 200,000 vehicles per day. North of SR-60 is the Wildwood Mobile Home Park as well as major commercial centers (e.g., Fry's Electronics), light industrial uses, and both channelized and relatively natural segments of San Jose Creek.

To the east, the project site is bordered by a 3,400-foot-wide open space corridor that links the site to native habitats in the Hacienda Hills (see discussion below). The eastern boundary of the project site is bordered by the unincorporated community of Hacienda Heights, which includes a single-family residential neighborhood, Orange Grove Middle School, and Orange Grove Park.

To the south and southwest, the project site is bordered by a mix of uses, including a 230-acre preserve area managed by the Puente Hills Habitat Preservation Authority, a cemetery use (Rose Hills Memorial Park), and a SCE ROW that contains two high power overhead electric transmission lines (T/L). The adjacent preserve area provides important aesthetic and ecological resources valuable for resident and migrant wildlife populations and for native plant communities. The preserve area maintains connectivity between the project site and the Chino and Puente Hills, which allows for wildlife movement between these open spaces. Maintaining this wildlife corridor, with links between the project site and the San Gabriel River, has been identified as critical to the biological viability of some animal populations (PHHPA 2007). The manicured lawns of Rose Hills Memorial Park extend for approximately one mile along the southwestern boundary of the project site. This shared boundary includes areas of open undeveloped grassland, which have been approved for cemetery expansion. A SCE ROW is located between Rose Hills Memorial Park and the project site. This SCE ROW contains two high power overhead electric T/L; a 220 kilovolt (kV) T/L and a 500 kV T/L suspended from lattice towers.

To the west, the project site is bordered by Rio Hondo College, a community college with a mix of uses, including extensive surface parking lots, classroom and administration buildings, and the native habitats of Ecology Canyon. Ecology Canyon is a 24-acre area that is used by Rio Hondo College for study purposes and has been

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Location_Vicinity\PHLPMP_vicinity.mxd (AAguirre)-mapping_guest 3/16/2016

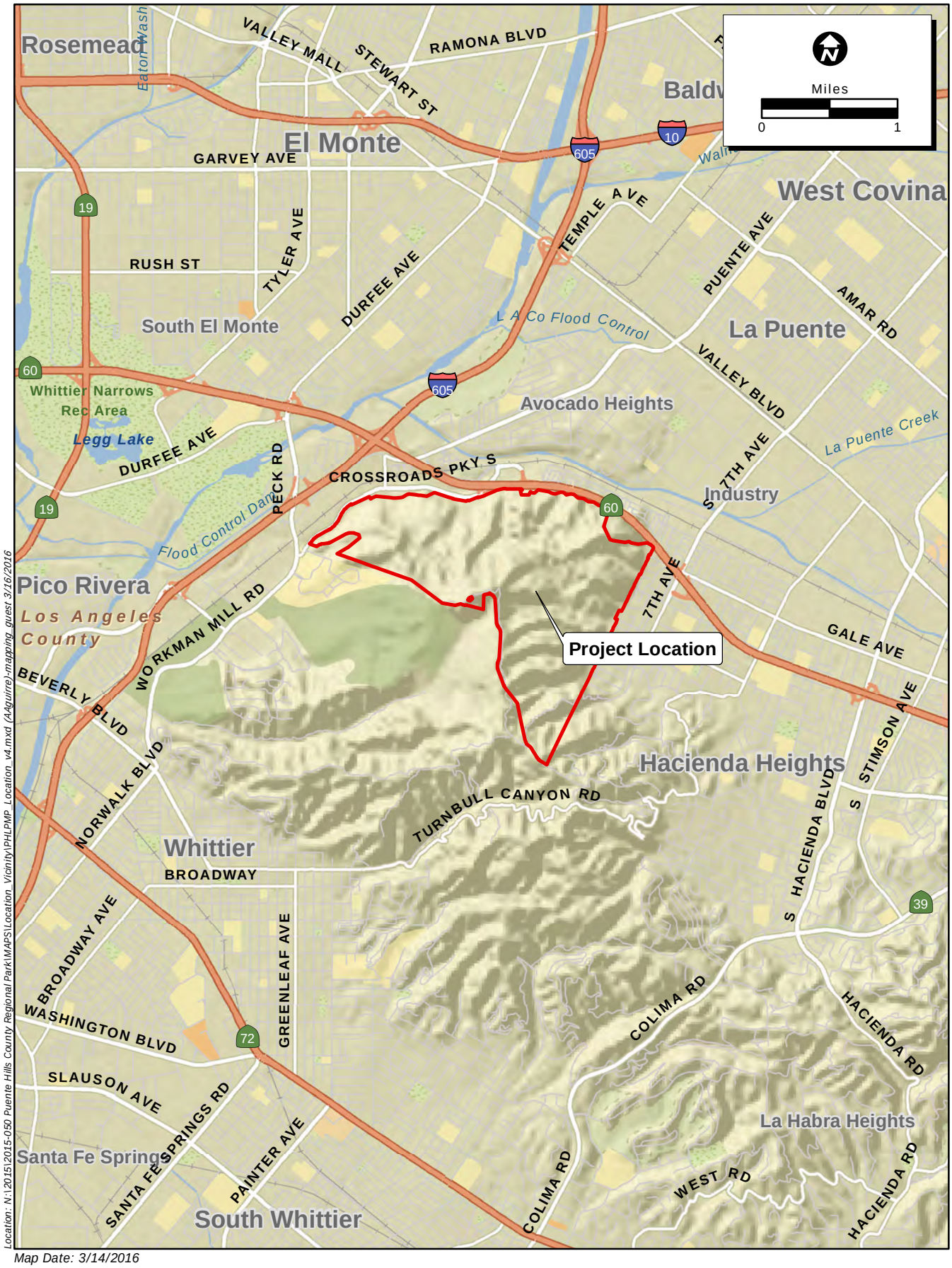
Map Date: 3/14/2016
Service Layer Credits: Sources: Esri, USGS, NOAA

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-1. Vicinity

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Location_Vicinity\PHLPMP_Location_v4.mxd (AAguirre)-mapping_guest 3/16/2016

Map Date: 3/14/2016
Source: ESRI

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-2. Project Location

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Site_and_Adjacent_Land_Uses_border.mxd (AAguirr, 3/15/2016) - mapping_guest

Map Date: 3/15/2016
Source: County of Los Angeles Department of Parks and Recreation 2015

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-3. Existing Site and Adjacent Land Uses

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

designated as a Significant Ecological Area (SEA) in the Los Angeles County General Plan. Beyond Rio Hondo College to the west there are light industrial and commercial uses, I-605, and the San Gabriel River.

2.1.2 Regional Setting

The project site is situated in the San Gabriel Valley in eastern Los Angeles County. The San Gabriel Valley is characterized by a built out/urban valley surrounded by the San Gabriel Mountains to the north, the Chino Hills and San Jose Hills to the east, the Puente Hills to the south, and the San Rafael Hills to the west. The project site is located within the Puente Hills in the southern portion of the San Gabriel Valley. The site is located within the Fourth Supervisorial District of Los Angeles County and is bordered by the First Supervisorial District directly to the north.

The San Gabriel Valley includes the cities of Alhambra, Altadena, Arcadia, Baldwin Park, Covina, Diamond Bar, Duarte, El Monte, Industry, Irwindale, La Cañada Flintridge, La Puente, Monrovia, Montebello, Monterey Park, Pasadena, Pomona, Rosemead, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, Walnut, West Covina and some unincorporated areas of Los Angeles County, including East Los Angeles. The project site is located primarily within unincorporated Los Angeles County; however, a portion of the front entry of the landfill is located within the City of Industry.

Despite the largely built out/urban character of the valley, several prominent open spaces remain, including the Whittier Narrows Recreation Area located in the southern portion of the valley and the Santa Fe Dam Recreation Area located in the northern portion of the valley. The northern portion of the valley is also characterized by the steep topographical transition and urban-wildland interface with the Angeles National Forest (San Gabriel Mountains). Several rivers and creeks are present within the San Gabriel Valley, with the most prominent being the San Gabriel River and the Rio Hondo. Both of these rivers flow in a north-to-south direction. These features, like the majority of hydrological features in the valley, have been highly modified from their natural state to provide flood protection to surrounding communities. This includes construction of dams, levees, and the channelization of these waterways. The San Gabriel River and the Rio Hondo come to their closest point to each other in the Whittier Narrows Recreation Area located northwest of the project site.

Several major transportation infrastructure systems traverse the San Gabriel Valley, including Interstate 10 (I-10), Interstate/State Route 210 (I-210/SR-210), and SR-60, which provide east-west access, and I-605, which provides north-south access. Furthermore, two rail lines owned and operated by Union Pacific Railroad (UPRR) traverse the San Gabriel Valley in an east-west direction.

2.2 ONGOING LANDFILL INSPECTION, MAINTENANCE, AND MONITORING ACTIVITIES

The Sanitation Districts acquired the 1,214-acre Puente Hills Landfill site from the Pellissier Family in June 1970. At the time, the Puente Hills Landfill site was known as

the San Gabriel Valley Dump and was privately operated by the San Jose Development Company. As part of the acquisition agreement, the Sanitation Districts continued the landfill operation of the site and renamed it the Puente Hills Landfill. In 1981, the Sanitation Districts acquired land adjacent to the Puente Hills Landfill bringing the total site area to its present 1,365 acres. After operating for 56 years, the Puente Hills Landfill reached its design capacity in October 31, 2013 in accordance with Conditional Use Permit conditions. Even though the Puente Hills Landfill no longer accepts refuse, other facilities located within the landfill site continue to operate. These facilities include the MRF, the Sanitation Districts Puente Hills Field Office, and the landfill gas management facilities.

2.2.1 Regulatory Requirements

Federal and State regulations require the Sanitation Districts to monitor, inspect, maintain, and repair the closed landfill on a regular basis for a minimum of 30 years from its closure date. The Sanitation Districts is responsible for the extensive environmental control systems that are in place including the landfill's final cover, surface water drainage system, landscape and irrigation, groundwater quality protection system, landfill gas recovery system, and fire control measures. These activities are required to continue irrespective of any park development at the landfill site.

2.2.2 Settling

Decomposing landfill trash loses about 25% of its volume over roughly 30 years, leading to the layers of trash shifting and settling over time. Such settlement can cause foundations to break and sink, utility and irrigation pipes to burst, and roads and paving to crack.

Settlement of the landfill surface occurs as the trash beneath decomposes. The rate of settlement will be greater in some areas than others, causing differential settlement. This is typical for landfills. The majority of the settlement is expected to occur in the first 30 years after closure, but some settlement occurs beyond that. Mission Canyon Landfill and Palos Verdes Landfill, which were closed over 30 years ago by the Sanitation Districts, are still experiencing settlement on parts of the landfill.

Unlike landfills that are built on flat terrain, Puente Hills Landfill is a canyon fill. The canyon areas are filled with refuse, allowing the height of the refuse to be considerable. At closure, the depth of refuse in some locations was as much as 500 to 600 feet below the surface of Puente Hills Landfill, making it one of the largest and deepest landfills in the country. This also means that the landfill surface will experience significant settlement as the hundreds of feet of underlying refuse decomposes and settles.

The three decks (Western, Eastern, and

Southern) are expected to settle at varying rates due to their age. The Western Deck is expected to be the first area available for development because the refuse in this area is older and has undergone most of its settling from decay. Furthermore, the overlying dirt stockpile has acted to further consolidate the fill. The Eastern and Southern Decks are expected to settle the most due to the age of refuse located beneath each deck. Therefore, these decks would be unsuitable for the development of park related structures (e.g., bike rental, equestrian staging area, picnic areas) for a period of 25 to 35 years. Structures built on these decks during this settlement period would be subject to differential settlement potentially resulting in damage or destruction. Projected settlement of the landfill has been modeled. A summary of this study can be found in a report prepared by the Sanitation Districts in June 2015 titled *"Puente Hills Landfill Final Use Feasibility Study to Establish Funding for Park Development"* (Sanitation Districts 2015).

2.2.3 Inspection and Maintenance

Post-closure landfill operations are ongoing to monitor the landfill as it ages and to inspect, maintain, and repair the landfill's environmental control systems. These systems include the landfill's final cover, surface water drainage system, landscape and irrigation system, groundwater quality protection system, and landfill gas recovery systems.

To maintain the integrity and effectiveness of the final cover, routine inspection of the side slopes and top decks are performed. This requires complete access to these areas. Any surface cracks, ponding, erosion, unusual surface conditions, or settlement are repaired. A landfill cover inspection is also performed after any major rainfall event or earthquake. Any cracks in the final cover would be repaired such that the original performance standard is restored. Ongoing repair and maintenance work requires the operation of heavy construction equipment throughout the project site, including graders, scrapers, dump trucks, loaders, and water trucks.

The side slope and top deck final covers are required to be vegetated and irrigated for erosion control purposes. Inspection and maintenance of the irrigation system is routinely performed to ensure an effective water delivery while preventing overwatering.

An effective storm drainage system is necessary to prevent the ponding of water or the erosion of the final cover. The storm drain system is regularly inspected and maintained. All of the conveyance system and debris basins are inspected at least once during the dry season and once following a significant storm during the rainy season. For certain essential components of the system, such as inlet structures and bench drainage, spot inspections are conducted after every heavy rainfall. Drainage system maintenance primarily consists of removing obstructions from drain inlets to assure proper functions and regrading to address any differential settlement that can cause ponding or affect drainage into inlet structures.

The landfill gas recovery system consists of a network of over 750 vertical collection wells and more than 45 miles of horizontal pipes located on the side slopes of the landfill (Sanitation Districts 2001). This piping network must be routinely monitored, inspected, maintained, and repaired. Most of the collected gas is combusted at the Puente Hills Landfill Gas-to-Energy Facility, a 50 megawatt (MW) steam turbine/generator facility.

Landfill gas typically contains water vapor. As landfill gas is extracted from the solid waste fill and introduced into the relatively cooler landfill gas collection, the water vapor condenses. The condensed water vapor, referred to as landfill gas condensate, is collected from the landfill gas collection system and then conveyed to a storage and treatment facility before discharging it into the local sewer system. This system is routinely inspected and maintained.

Specific types of work required to maintain these systems include plumbing and pipe fitting, electrical, instrumentation, and welding. Plumbing and pipe fitting work is required to maintain the integrity of the environmental control systems. Some systems are centrally located and others are located throughout the landfill. Routine inspections determine the extent of the maintenance and associated equipment required for each system. Environmental monitoring includes regular sampling and chemical analysis of the landfill gas, Leachate Collection and Removal System (LCRS), groundwater, and surface water runoff. Three gated access points along the eastern boundary of the site at Gale, Los Robles, and Orange Grove Avenues are actively used by landfill employees for ongoing maintenance and monitoring purposes.

2.3 PARK DEVELOPMENT AREAS AT THE LANDFILL

Due to varying rates of settlement depending on when the fill area was closed and capped, park development is anticipated to occur in phases over several decades as the Sanitation Districts' maintenance activities decline, as described in Section 2.8. Development of primary park facilities would be concentrated on approximately 117 acres of level fill decks and approximately 15 acres of non-fill area (132 acres total) of the 1,365-acre landfill site. Park facilities would be designed, constructed, and managed by the Los Angeles County Department of Parks and Recreation (County) in coordination with the Sanitation Districts. In addition to development of these 132 acres, proposed construction of additional park roads, trail realignment, and new switchback trails would increase developed park acreage by approximately 10 acres. Total acreage developed for proposed park use over the next 20 to 30 years is approximately 142 acres. Additional acreage may become available for park use as the regional park develops over time.

There are three primary areas currently available at the landfill for park development: the Western Deck, Eastern Deck, and the Southern Deck (see figure below). These "decks" comprise the currently available portions of the refuse-filled areas of the landfill that were covered with protective clay earthen caps (5 to 12 feet thick) after the landfill closed in October 2013. The top decks of the landfill would be the location of the most concentrated recreational development activities.

Panorama of the Western, Eastern, and Southern Decks

Major settling of the landfill decks would require phasing of park development over a 20 to 30 year period. A portion of Phase I park development would be concentrated on a 13-acre portion of the **Western Deck** (40 acres), which was one of the first areas to be filled and has settled over the longest period of time. It would be relatively stable and ready for development by approximately 2017 to 2019, but is expected to settle another 10 feet in the coming decades. The **Eastern Deck** (49 acres) and **Southern Deck** (28 acres) are not projected to be ready for major development for 20 to 30 years (approximately 2038 to 2048), when they have settled and become relatively stable. The internal trash from the past decades would decompose and settle, reducing the overall height of these two decks by as much as 120 feet over the next 30 years. Less intensive park development or activities that are adapted to settlement is feasible on the top decks of these areas in the interim.

2.4 PROJECT BACKGROUND, PERMITS, AND AGREEMENTS

In the mid-1960s, when the closure of the Palos Verdes Landfill in the South Bay was anticipated, the Sanitation Districts identified the Puente Hills canyons as a location to provide the long-term disposal capacity for the southern and eastern portions of Los Angeles County. The Sanitation Districts acquired the 1,214-acre Puente Hills site in June 1970, where 500 acres had been operated as the San Gabriel Valley Dump since 1957. The Sanitation Districts continued the operation of the site for solid waste disposal and renamed it the Puente Hills Landfill. In May 1981, the Sanitation Districts acquired land adjacent to the Puente Hills Landfill that enlarged the site to its present 1,365 acres.

Open space and park planning for post landfill closure use of the project site has been under discussion since 1983.

The permanent alignment of the roadway easement would be subject to the master planning process for the future park. (Subject to review and approval by the Park Director)

In 1983, The Los Angeles County Board of Supervisors approved Conditional Use Permit (CUP) No. 2235-(1), which allowed for the continued operation and expansion of the Puente Hills Landfill. The 1983 CUP required the Sanitation Districts to enter into an irrevocable agreement with the County of Los Angeles (or alternate public agency) to designate the "fill" portions of the site as open space in perpetuity. The two entities entered into a Joint Powers Agreement (JPA) on April 28, 1987. Subsequent land use

approvals including CUP 92-250-(4) in 1994 and CUP 02-027-(4) in 2002 for continued landfill operations further clarified provisions related to the park, including that "the specific type of recreational use (i.e., trails, nature center, soccer fields, golf course) would be the subject of a dedicated master planning process." The 1994 CUP also resulted in an Amended Setback and Easement Agreement between the Sanitation Districts and Rose Hills Memorial Park, which addresses issues such as noise abatement, limits of operations, shared water storage reservoir, and other technical concerns regarding the operations of the landfill. The Amended Setback and Easement Agreement also provides for a future roadway easement for ingress and egress by Rose Hills Memorial Park through the landfill area. The permanent alignment of the roadway easement is subject to the master planning process for the future park.

The JPA required the Sanitation Districts to offer the County portions of fill areas for park and recreation purposes after they were brought to finished or final elevation and grade and were no longer needed for landfill operations. The JPA also acknowledged the Sanitation Districts' need to operate and maintain the environmental control systems in the designated open space areas and that the park and any subsequent improvements would not impair the Sanitation Districts' activities or systems that protect public health, safety, and the environment.

Over the years, the landfill has employed numerous innovative environmental approaches, including generating electricity from landfill gas, managing materials recovery and recycling programs, and acquiring and maintaining local native habitat as open space. "Tipping fee" surcharges per ton for dump trucks created funds that established the Puente Hills Habitat Preservation Authority to acquire and preserve land, and to develop the future County regional park on the landfill.

On October 31, 2013, the Puente Hills Landfill ceased operations after 56 years of receiving trash from homes and businesses in over 60 cities and unincorporated areas within Los Angeles County. Refuse has been placed on approximately 602 acres of the 1,365-acre landfill. Final protective clay earthen caps cover the fill areas at varying thicknesses of 5 to 12 feet, and prevent stormwater from infiltrating into the fill. Although the landfill is closed and no longer accepting trash, operations and post-closure maintenance will continue as the buried trash continues to decompose over the next 30 years and as methane gas production decreases over the next approximately 75 years.

It is anticipated that the JPA will be amended and restated by the two parties to incorporate developments from the Landfill Park Master Planning process and to include more detailed agreements about specific areas on the site.

2.5 PARK MASTER PLAN AND PUBLIC ENGAGEMENT PROCESS

The Master Plan process is a planning framework for ongoing discussion regarding the future park at the Puente Hills Landfill. Coordination between multiple agencies, policy makers, experts, communities, and local and regional stakeholders was conducted as part of the process. Creation of the initial vision for the park was reliant on the early outreach efforts to these groups. Alternative plan development sought diverse opinions to form three multi-layered, community driven designs. The preferred design revealed the concept of a park for all users with a mix of active and passive recreational

amenities. The dominant themes from the public outreach process were merged to create a park that would attract visitors from across the region to experience the site's natural, aesthetic, recreational, cultural, and historical resources.

2.5.1 Public Input Summary

Over a six-month period in late 2015 and early 2016, the County sought and documented the public's needs and interests through community meetings and other means in order to shape the initial park vision. Six distinct park components emerged from this process:

Provide connections to nature: Many local residents believe that the future park should complement the neighboring Habitat Authority Nature Preserve and expand areas of native habitat. Many members of the public want the site to be as natural as possible, with native habitat for wildlife emphasized. Given that the landfill closure activities will remain active at some level for up to 75 years, the Master Plan sets forth phased habitat restoration and improvements to build a park for public recreation.

Provide ways for people to be healthy and active: Regionally, the public is seeking fitness and recreation opportunities, including trails for hiking and running, mountain biking, and equestrian use. A strong bicycling constituency also emerged and some user's desire bike trails. Others voiced the need for a public bike skills park in the area and hoped the park would offer activities for which they currently must travel further.

Provide active sports facilities: Both local residents and citizens from surrounding cities who experience the regional shortage of municipal sports fields voiced the need for these facilities. Due to the technical difficulties of the site's land settling, it was determined that sports fields would be unsustainable at this site due to the challenges to keep fields level, safe, irrigated, and properly maintained.

Provide access: The local community emphasized the need for access to the large park from all directions. People wanted the extremely hilly site to offer access and experiences to all users, regardless of mobility. Opinions were not unanimous on this topic as some homeowners have experienced unwanted activity at the neighborhood entries. As park phases are implemented over the decades, access issues would be reviewed and analyzed to find equitable solutions.

Alleviate pressures on the existing Puente Hills trails: Documented trail survey counts indicate that local trail usage is growing exponentially. The increased trail use has put pressures on trailheads, parking, trail maintenance, residential congestion, and wildlife habitat. The future park focuses on outdoor recreation as a central theme and would offer expanded trails to alleviate these pressures.

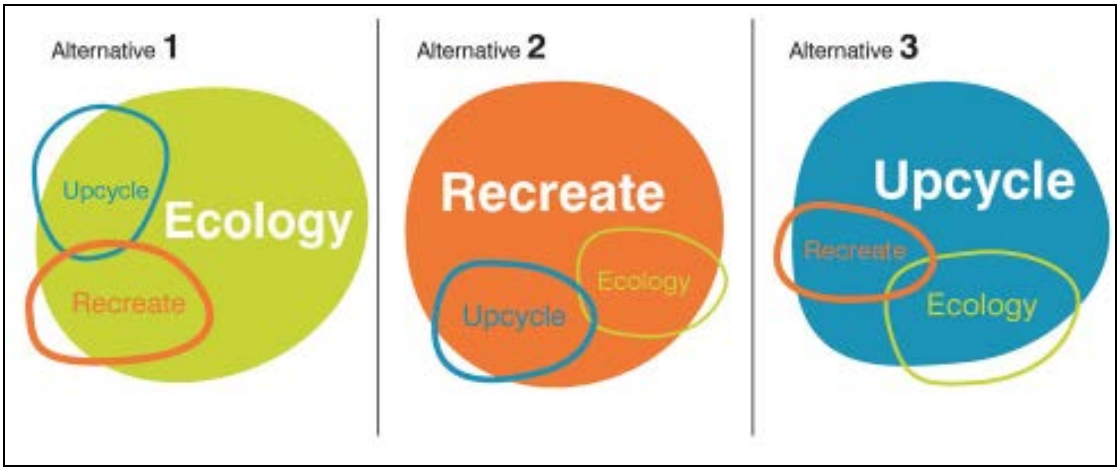
Provide gateways to environmental stewardship: People are interested in the site as a catalyst for learning about critical environmental issues. An emphasis on park sustainability includes new technologies, environmental stewardship, and education. Educational components that draw on the landfill's history and location include gas-to-energy conversion, recycle and reuse, and waste stream reduction in the post-industrial era.

2.5.2 Stakeholder Input Summary

A total of 18 organizations participated in a fact-finding and visioning process. Although all community organizations, local city councils, residents, employees, and visitors are "stakeholders" in the long-term future of the Puente Hills Landfill Park, these initial meetings targeted individuals representing a diversity of interests and organizations to explore a broad range of issues and needs. The individual/small group nature of these discussions enabled participants to be more candid and in-depth than they otherwise might be in a larger community forum. Moreover, discussions could be focused on the topics important to each individual organization. Outcomes reflected public input with one major addition. The majority of stakeholders envisioned a park as a destination that is completely unique to the region. It was hoped that the development of the park would attract users that would contribute to local economic improvement.

2.5.3 Park Development Themes: Ecology, Recreate, Upcycle

The main themes that emerged from the site analysis and the community/stakeholder visioning process were combined into three alternative park development concepts.



Park development themes

Ecology – Emphasize habitat enhancement, native flora and fauna, nature education and programs, trails, scenic overlooks, and interpretation.

Recreate – Provide dynamic, active fitness options; expand fitness, family activities, and programming.

Upcycle – Elevate the opportunity for a hybrid park to cohabitate with a working industrial facility; highlight the unique landfill infrastructure and leverage the site's history to inspire environmental awareness, sustainability, and innovation.

Results of public voting clearly selected Ecology as the main theme. However, family recreation and fitness dominated the selection of recreational elements that were chosen for the new park. The final park concept (Proposed Project) is an adaptation of

the original Ecology concept, but retains aspects of the other themes as each alternative proposes unique solutions that can be transferred over to the Ecology theme.

2.6 PROJECT GOALS AND OBJECTIVES

2.6.1 Goals for Regional Park Development

The purpose of the Proposed Project is to build a regional public park at the former Puente Hills Landfill. Los Angeles County regional parks are typically greater than 100 acres and have a minimum service radius of 25 miles. A 25-mile radius around the landfill site touches both San Bernardino County and Riverside County and extends halfway into Orange County to the east, San Pedro to the south, Venice Beach to the west, and to Sunland and the San Gabriel Mountains to the north (Figure 2-4).

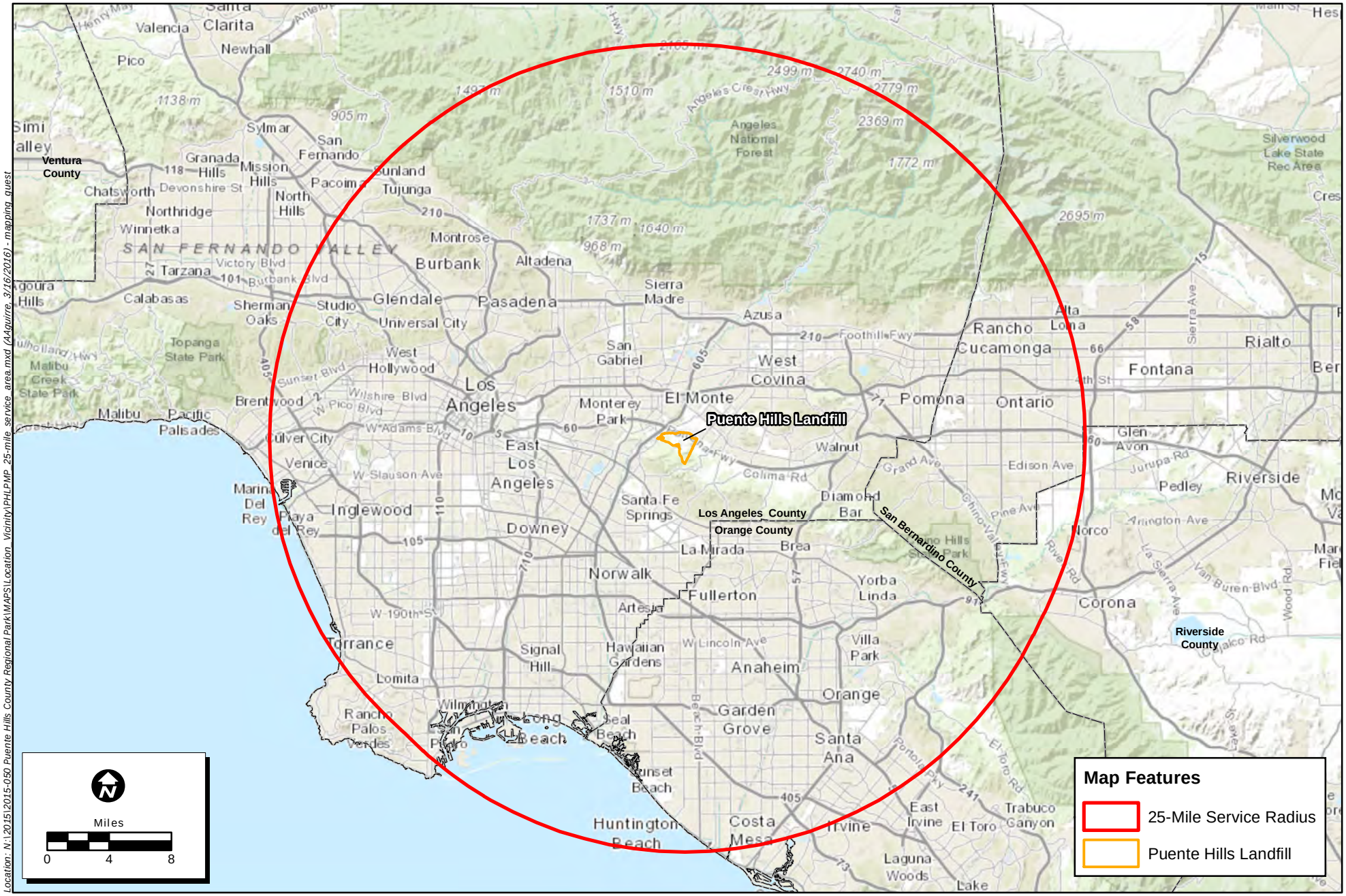
Key to the comprehensive development of landfills to parks is the County's ability to program various recreational elements on site, such as restroom facilities, office buildings, open play areas, picnic areas, and flexible spaces. County park programming opportunities and park elements envisioned for a regional park include:

- Multi-use trailheads;
- Staging areas and equestrian use areas;
- Pedestrian walking paths, access paths, and multi-use trails;
- Open field play areas and open space areas;
- Interactive recreational areas including interpretive/educational features and public art;
- Park infrastructure including picnic areas, restroom facilities, site furnishings, and parking;
- Park landscaping; and
- Sustainable design, Leadership in Energy and Environmental Design (LEED) criteria, and non-vehicular modes of transportation.

Regional parks require some structures to support their purpose as a regional visitor destination. The more stable soils of the 15 acres of non-fill areas of the landfill are critical for development of buildings, foundations, and utilities. These structures would include, but not be limited to: a visitor center or nature center, restrooms, picnic shelters, amphitheaters, bridges, access roads and park roads, trailheads, kiosks, and signage. The proposed structures would comply with commercial waste and recyclable storage area requirements. The County would require access to additional undisturbed native soil for recreational uses within the landfill site. Specific goals guiding the construction of the new regional park on the former landfill include:

1) **Infrastructure** – Construct infrastructure needed to support the recreational use for a regional park.
2) **Recreation** – Create, maintain, and enhance recreational opportunities for all segments of the community.
3) **Long-Term Viability** – Develop a park that enables park management to co-manage and coordinate maintenance efforts with the on-going maintenance requirements of the Sanitation Districts site operations.

4) **Access** – Provide adequate vehicular, multi-modal transportation, bicycle, equestrian, and pedestrian access to the park for all current and future users.
5) **Natural Resources** – Protect and enhance natural resources at the park and in the adjacent area.
6) **Educational Opportunities** – Provide educational opportunities for visitors to learn about the waste management stream, site history, wildlife at the park, and adjacent areas.
7) **Phasing** – Implement the park in phases over 30 to 50 years as the land settles and stabilizes.



Map Date: 3/16/2016
Source: ESRI

Figure 2-4. Puente Hills Landfill Park 25-Mile Service Radius

2015-050 Puente Hills Landfill Park Master Plan

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

THIS PAGE INTENTIONALLY LEFT BLANK

2.6.2 Project Objectives

The Project Objectives for the Puente Hills Landfill Park Master Plan are:

PROJECT OBJECTIVES	
1. Park For All	Develop a "Park For All" that offers diverse, healthy, passive, and active recreational experiences and programming for visitors of all ages, abilities, interests and backgrounds.
2. Unique Regional Destination	Develop a regional destination park which uniquely reflects the site's history, urban-wildland location, scale and topography.
3. Range of Recreation and Outdoor Fitness	Develop a range of active and passive amenities to meet varied recreational demands and provide outdoor fitness opportunities to help address national trends related to inactivity, obesity and nature-deficit disorder.
4. Gateway to Nature for Diverse New Audiences	Attract diverse, new audiences, particularly underrepresented or disadvantaged populations, to inspire connection to outdoor activities, nature, and environmental stewardship.
5. Integrated Recreation and Habitat	Integrate active recreational facilities with natural habitats to enhance and sustain both the recreational and ecological functions of the park.
6. Wildlife Habitat Connectivity	Promote and support wildlife movement and habitat connectivity through the Puente Hills Significant Ecological Area (SEA), the Rio Hondo College Wildlife Sanctuary SEA and the San Gabriel River.
7. Environmental Sustainability	Demonstrate environmentally sustainable design and practices.
8. Multi-modal and Universal Accessibility	Provide multi-modal, universal access and circulation into and through the park to the extent feasible.
9. Education and Interpretation	Incorporate design elements for education and interpretation on the park's unique landfill history and natural environmental features.
10. Captivating Trail Experience	Provide a captivating trail experience within the park which also alleviates the overuse and degradation of the adjacent trail network.
11. Public Health, Safety and Landfill Operations	Balance development of park facilities with landfill maintenance activities to protect public safety, water quality and meet the Sanitation Districts' regulatory requirements.
12. Balance Multiple Objectives	Balance multiple project objectives in a manner that considers the complex site constraints, park needs of the overall region, and the competing interests and needs of adjacent entities.

2.7 PROJECT SUMMARY

The components of the Proposed Project are summarized in this section. The full description of the Puente Hills Landfill Park Master Plan can be found at: http://www.puentehillslandfillpark.org/.

The Puente Hills Landfill Park Master Plan Project (Proposed Project) is a long range master plan that over multiple phases would develop a portion of what was formerly the largest landfill in the western United States into a regional park, providing recreation and

open space for the greater Los Angeles area. The County would create a new regional park uniquely situated at the western end of the Puente Hills on a large industrial closed landfill site that is owned and maintained by the Sanitation Districts. Of the 600 acres of fill within the site boundaries, which includes the landfill slopes and flat landfill caps, approximately 117 acres of top deck fill area would be the focus over time for the majority of formal park development (or approximately 10 percent of the site's total acreage).

The Proposed Project would include a variety of recreational facilities that can be sustained on the site, including passive and more active facilities. Park development would be integrated with existing landfill facilities, including a shared entrance and joint use of an existing loop road system, which would be improved to accommodate public access. The final park concept as shown on Figure 2-5 consists of a variety of park areas and features.

2.7.1 PARK AREAS

The Proposed Project includes several distinct park areas. These areas are summarized in Table 2-2 below and shown on Figure 2-6.

Table 2-2. Park Areas

PARK AREA	ACRES
Entry Plaza	7.0
Maintenance & Operations Area	5.8
Buttress	10.0
Nike Hill	1.0
Western Deck	40.0
Eastern Deck	49.0
Southern Deck	28.0
Flare Site	1.2
TOTAL	**142.0**

Proposed Project

Puente Hills Landfill
PARK MASTER PLAN

upcycle + recreate

Figure 2-5. Final Park Concept

THIS PAGE INTENTIONALLY LEFT BLANK

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Park_Areas_v2.mxd (AAguirre)-aaguirre 4/29/2016

Map Date: 4/29/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-6. Park Areas

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

2.7.1.1 Entry Plaza

Representative Roundabout/Traffic Circle

The main arrival plaza of approximately 3.5 acres would be located immediately south of Crossroads Parkway South and would act as both the gateway to the greater park and a destination itself. An approximate 8,600-square foot (sf) building would accommodate shared offices for Landfill Park and Sanitation Districts staff and a visitor welcoming center for the public including restrooms and security lighting. Park entrance improvements would include a modified road system that would include crosswalks, either additional signalization or a roundabout (traffic circle), entry re-configuration, and/or additional road lanes. The Proposed Project includes the addition of crosswalks at the existing main entrance of the landfill along Crossroads Parkway South and a sidewalk on a portion of the south side of the landfill access road. Please refer to Figure 3.14-5 in Section 3.14 of this PEIR. No other project improvements are proposed at the main landfill entrance.

Representative trail lift

Security personnel located at the Visitor Center would monitor the park during operating hours. A staffed guard house and island at the entrance of the park road would serve as additional security and informational kiosk. Parking Lot A would provide 60 spaces.

A multi-purpose Americans with Disabilities Act (ADA) compliant ramp and trail into the site from the front access road to the Visitor Center and Entry Plaza would serve regional trail users coming from the north and east using public transit, bicycles, horses, or walking. The Entry Plaza would include a trailhead for the arboretum stair climb and the entry station for the trail lift. A representative trail lift is pictured above. The arboretum is located on the north slopes of the landfill. The trail lift would be anchored by an approximate 1,000 sf base structure at the Entry Plaza supported by up to two

mid-support towers that would carry up to eight visitors per basket up approximately 760 feet in elevation to the top of the park at Nike Hill. The mid-support towers would be approximately 30 to 60 feet high depending on the location. As a destination, the Entry Plaza would be a place to learn about the park, to picnic, and to experience being in the Puente Hills. Sanitation Districts trucks related to the MRF would continue to work on one side of the plaza highlighting the unique mix of passive open space, public recreation, and industrial function.

2.7.1.2 Maintenance and Operations Area

The redesigned Maintenance and Operations (M&O) area would be located approximately 0.5 mile into the park and 300 feet above the Entry Plaza. Parking Lot B (20 spaces) would provide access to the switchback trail up to the Western Deck, and optionally continue further up to Nike Hill. The park loop road would continue for a further 0.5 mile up 400 more feet in elevation to the Western Deck. A new road segment of approximately 2,000 feet in length would be constructed across the Sanitation Districts' new 300,000 cubic yard soil buttress construction, which is designed to stabilize that location's slopes. The M&O area would include an approximately 1,650-square foot building to serve as the shared M&O space for Regional Park and the Sanitation Districts operations. The 6.4-acre M&O yard would be fenced to secure valuable equipment and to control public access to the Sanitation Districts' Western Deck bench road. The inward side of the building would provide park staff offices, a break room, storage, and a restroom, while the outward park side would provide public restrooms adjacent to Parking Lot B and security lighting. The proposed zip line landing pad would be located in this area. The 0.5-mile realignment of the Schabarum-Skyline Trail in this area would provide a connection from the existing eastern trail segment to the M&O area, continuing up to the Western Deck and Nike Hill.

2.7.1.3 Nike Hill

The one-acre Nike Hill park area would serve as a key visitor destination in the park's upper elevations. Access to Nike Hill would be available from both the loop road and the trail lift. Park visitors using the trail lift would travel 1.2 miles from the Entry Plaza, gaining 760 feet of elevation before arriving at Nike Hill, the highest point in the park at 1,160 feet above sea level. The trail lift tower and Nike Hill plaza would connect to two scenic overlooks cantilevered out from the hill: one wing pointing north-west overlooking the Western Deck, and one wing pointing north-east surveying the Eastern and Southern Decks. Scenic views of the front range of the San Gabriel Mountains National Monument and a large swath of Los Angeles County would be visible

Artist rendering of proposed trail lift at Nike Hill

from east to west. A 0.5-mile American with Disabilities Act (ADA) accessible paved or hard surface switchback trail is proposed in this area.

Canopies and terraces would provide some weather protection. The 6,000-square foot Nike Hill plaza and 2,000-square foot trail lift tower would support several structures including a mini-café or food truck space, staff office to organize programming, and public restrooms. Up to two zip lines and slides would also be constructed in this area. Artistic interpretive features at the scenic overlooks would provide information on key topics, from landfill history and environmental stewardship, to local geography and mountain peak identification.

Nike Hill gets its name from the historical guard structure and plaque which were moved in 2000 to the hill to commemorate the Cold War-era Nike missile sites that ringed Los Angeles County from approximately 1954 to 1974. There was never a Nike missile site at this location, however. There were components of the Nike missile system on the current landfill and Rio Hondo College properties. The guard structure was originally located further down from Nike Hill. The U.S. Army operated the site from 1958 to 1964. Prior to its closure in 1971, the site was operated by the California Army National Guard. The guard structure and plaque would be relocated to an appropriate position within the new Nike Hill layout to continue sharing this unique local history with the public.

2.7.1.4 Western, Eastern, and Southern Decks

Western Deck. The 40-acre Western Deck would be the first park area developed and would support two picnic grounds, open play areas, part of an inner trail loop (one mile), running loops, access to two stair climbs, a bike skills area, and a key daytime performance space. The eastern "horn" of the Western Deck (approximately 13 acres) looks out to the northeast and sits in a flat bowl with one wall being the slope of the Eastern Deck. This secluded area would be used as a daytime performance space for live events such as concerts and kite festivals. The western "horn" of the Western Deck encompasses the northern portion of a soil stockpile that would continue to be used by the Sanitation Districts for landfill deck maintenance. The stockpile on the Western Deck would remain in use until depleted, after which the park may use the land and the full 40 acres of the Western Deck. Park visitors might observe Sanitation

Artist rendering of proposed performance space at Western Deck

Districts equipment throughout the park on maintenance roads, transporting stockpiled soil to other decks. A five-acre bike skills course would be a compatible interim use for the soil stockpile area. The soil can be graded and sculpted and serve the community for years until it is needed as landfill cover/repair material in the future. A future meadow is also proposed for the soil stockpile area. In addition, a bridge and overlook from the Schabarum-Skyline Trail in the Ecology Canyon to the multi-use trail/loop road would be built to the west of the Western Deck.

Eastern Deck. The 49-acre Eastern Deck offers a broad expanse for nature, recreation, and fitness, and includes views in all directions along a 1.25-mile inner loop trail. Each point along the inner loop trail offers a different view, from downtown Los Angeles, to San Jose Creek, to the rooftops of Hacienda Heights and Mount San Jacinto to the east. The Eastern Deck would support a group picnic area, dog park, running loops, access to two stair climbs, a three acre bike skills area, bike rental, and two overlooks. Parking Lot D would provide 40 spaces. The Eastern Deck would be connected to the Southern Deck by a grassland planted pedestrian overcrossing over the loop road.

Southern Deck. The 28-acre Southern Deck would be more removed from the central hub of the park, offering a close connection with the Schabarum-Skyline Trail on its western border. The southern entrance to the park would be via the Schabarum-Skyline Trail. The Southern Deck would support a picnic area, running loops, a one-mile portion of the inner loop trail, three interpretive elements, and temporary art installations. A one- to two-acre native plant nursery is proposed to give volunteers an active role in propagation and restoration planting.

Parking Lot E (50 spaces) would accommodate a staging area for equestrian parking, and trailhead parking so hikers and cyclists may connect to the Schabarum-Skyline Trail going north into the park or south into the Puente Hills. A 1,300-square foot restroom structure would also be constructed in this area.

2.7.1.5 Flare Site

The 1.2-acre Flare Site would be available for adaptive reuse in any phase as it is no longer in use. Development of the area is limited, however, by the lack of utilities for public use, namely sewer and water. The site has electricity. With the necessary utilities, the decommissioned industrial site may evolve into a signature park landmark with interpretive, educational, and concessionaire components. An approximate 12,000-square-foot Flare Tower Café and/or educational and recreational area would be constructed in this area. If restroom and water facilities can be provided in a mobile/portable capacity, the site may be used more immediately in a creative pop-up fashion. An approximate 800-foot stair climb connecting the Eastern Deck to the Flare Site would be built to provide direct access. The hillside surrounding the Flare Site would have trails integrated to provide new views overlooking the native eastern canyons, wildlife habitat, and cities stretching to the eastern horizon.

2.7.2 PARK FEATURES

2.7.2.1 Multi-Use Trails and Existing Trail Enhancement

When completed, the park would provide approximately 14 miles of multi-use public trails, paths, and stair climbs. Trail access would also be available from five parking areas (Parking Lots A through E) throughout the park. Several distinct trail systems would be developed including the multi-use loop road trail, inner loop trail, running loops, ADA trails at the Visitor Center and Nike Hill, and top deck paths. Trails would be developed to County standards and would generally consist of a trail tread composed of natural surface materials. Stair climbers would also be of six to ten feet in width and be constructed of movable segments of steel stair components. Wider landings would be installed with benches or rest areas to permit users to enjoy views or interact.

Trails adjacent to the side of the proposed loop road would invite the public to utilize the mountainside for fitness. Trails around the edge of each top deck and through the top decks would provide a scenic trail experience for pedestrians, equestrians, and mountain bikers. The top deck trails would also lead park users to a variety of flexible spaces for park programmed events including art fairs, concerts and other performances, dog training events, food fairs, and kite flying competitions among others. A 0.5-mile portion of the existing Schabarum/Skyline Trail would be relocated off of adjacent property and onto the buttress area which would be filled by the Sanitation Districts to stabilize the Nike Hill. The stabilization of the buttress area is not part of the Master Plan; it is a separate project being implemented as part of the landfill's post closure activities. The Schabarum/Skyline Trail, a section of the park loop road, and a switchback trail would be located in this area. The trailhead located at Workman Mill Road would be expanded to include signage and wayfinding plus additional design elements and plantings.

2.7.2.2 Fitness Amenities

One of the top deck trails would be dedicated to a 3.5-mile fitness running loop with distance markers. This would be a multi-use trail available to runners, hikers, equestrians, and mountain bikers. A two-mile inner loop trail would be constructed to connect all three decks.

Artist rendering of proposed arboretum stair climb

In addition, three miles of paths would be distributed throughout the decks. Utilizing the steepness of the site for fitness and gravity play, five stair climbs and up to two slides are proposed which would be engineered and constructed over the methane pipe system. Up to two zip lines would also be located at the top elevation which would extend in opposite directions over the park. Because the Western Deck has settled more rapidly, this area would be developed first with an interim five-acre bike skills area utilizing the Sanitation Districts' soil stockpile. Future phases may relocate the bike skills area to the Eastern Deck. Bike rentals would be available for park users at the Eastern Deck just west of Parking Lot D. The Flare Site, a decommissioned flare from the landfill gas collection system located east of the Eastern Deck, would be developed for climbing and fitness purposes.

2.7.2.3 Educational and Interpretive Elements

Opportunities for education and interpretation of the landfill, waste stream, gas to energy conversion, history of the site, and the significance of the site in the Puente/Chino Hills are a few of many themes that can be developed for the park. Interpretive signage, cameras into the existing MRF, tours to the MRF, park elements constructed from recycled materials, and park structures that meet Leadership in Energy & Environmental Design (LEED™) criteria are major topics for educational development.

Example of an interpretive panel

A plant nursery would be part of the educational component. Native and drought

tolerant plants would be grown to actively replace and replant park areas requiring patching, repair, or re-construction due to landfill settling and bio-gas production. Ideal locations for bird observation and wildlife observation would be marked along particular trails. The public would be educated on the on-going functions of the landfill and the landfill slopes would be preserved, restored, and/or enhanced for wildlife.

2.7.2.4 Children's Play and Picnic Areas

Nature play with loose parts (i.e. sticks, rocks, log rounds, fabric, crates, ropes, etc.) for young children is an ideal program in a park that must remain flexible in its use of any top deck area for many decades. The park would encourage child fitness, waste stream awareness, history of the San Gabriel Valley and the Puente Hills, nature play with natural materials, wildlife education, and native plant nursery growing. Four picnic areas throughout the park would be located near parking areas for family use (two at the Western Deck and one each at the Eastern and Southern Decks). The picnic areas would range in size from one to five acres. These areas would be planted to provide buffer and shade wherever possible.

2.7.2.5 Circulation, Internal Park Transportation, and Parking

Access into the site would be from Crossroads Parkway South, which currently serves MRF-related traffic. Park entrance improvements would include a modified road system that would include crosswalks, either additional signalization or a roundabout, entry re-configuration, and/or additional road lanes. Park circulation would include a paved one-way loop park road that follows existing landfill roads for approximately four miles. The loop road would vary in width from 22 feet to 24 feet depending on the location. From the park loop road, park users would be able to access all the top deck areas throughout the park. A trail lift is proposed as a transportation alternative for park visitors with a station and parking at the Entry Plaza. The trail lift would provide park visitors access to the highest elevation of the park (Nike Hill) including a scenic overlook and would be ADA accessible. The trail lift would also serve as a people mover to reduce the number of cars operating within the park.

The Entry Plaza associated with the Visitor Center would provide a transit operations area for shuttle/bus loading and unloading and park visitors. Shuttles may also drive visitors to the top decks prior to construction of the trail lift and arboretum stair climb. A 60-space parking area (Parking Lot A) at the base would be utilized for the trail lift loading and for park patrons using the arboretum stair climb to the Western Deck and other fitness activities. Four additional small gravel parking areas (Parking Lots B through E) located near park facilities on the top decks would be constructed to provide for flexible space loading and unloading, family use, and for trail staging. Although the park would encourage alternative modes of transportation, some parking would be necessary. The Proposed Projects would include a total of 200 parking spaces distributed over five parking areas (Parking Lots A through E) as described in Table 2-3 and shown on Figure 2-7.

THIS PAGE INTENTIONALLY LEFT BLANK

A-E = Parking Lots

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Parking_Lots.mxd (AAguirre, 3/17/2016) - mapping_guest

Map Date: 3/17/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-7. Parking Lot Locations

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Table 2-3. Parking Lots

PARKING LOT	PARK AREA	NUMBER OF SPACES
A	Entry Plaza	60
B	Maintenance & Operations	20
C	Western Deck	30
D	Eastern Deck	40
E	Southern Deck	50
	TOTAL:	**200**

Shared Park Access Road. The front entry of the park would share a common gated entrance off of Crossroads Parkway South with the Sanitation Districts' MRF. The MRF is designed specifically for the management of municipal solid waste and recovery of recycled materials and would remain in operation at this location into the foreseeable future. Daily truck trips to the MRF were an average of 566 in the first quarter of 2015 and are anticipated to increase. The MRF operates six days a week, Monday through Saturday, from 6 a.m. to 5 p.m. Ongoing inspections, maintenance, and monitoring of the former landfill would require shared park roads and park space.

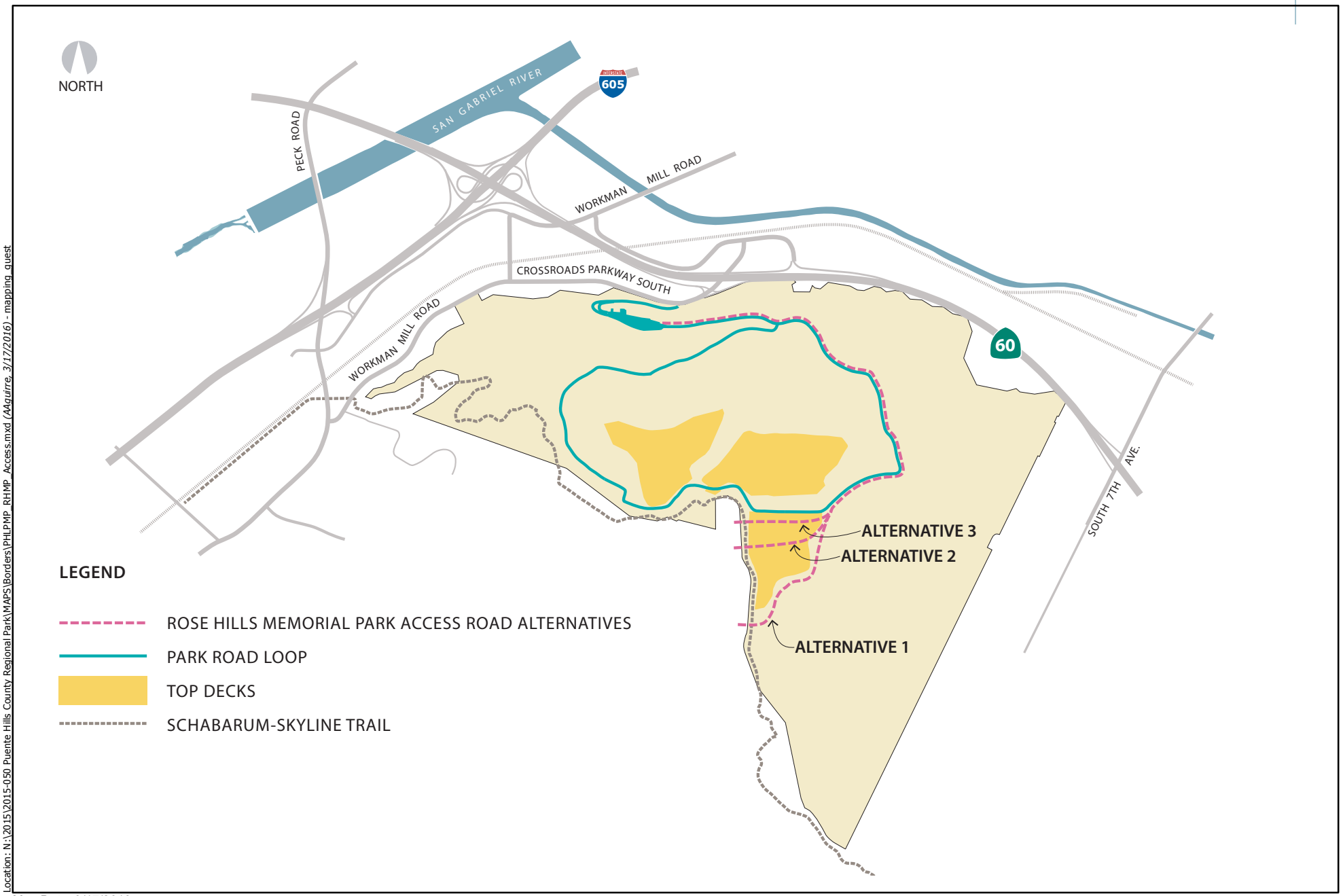
Rose Hills Memorial Park. Rose Hills Memorial Park has an agreement with the Sanitation Districts for a future roadway easement through the landfill property to access their site. Per CUP 92-250-(4) from November 1994, a permanent 300-foot setback along the common boundary of the eastern canyons of the landfill was established and is landscaped, irrigated, and kept in good repair by the Sanitation Districts. The CUP resulted in an Amended Setback and Easement Agreement in 1999 between the Sanitation Districts and Rose Hills Memorial Park, which addresses issues such as noise abatement, limits of operations, shared water storage reservoir, and other technical concerns regarding the operations of the landfill, including reducing the 300-foot setback to 50 feet. The agreement also discusses a future roadway easement for ingress and egress by Rose Hills Memorial Park through the landfill area in perpetuity. The permanent alignment of the roadway easement would be subject to the master planning process for the future park. The proposed Rose Hills Memorial Park access road would be used during daylight hours using the Crossroads Parkway South entrance. Three easement options aligned along the eastern portion of the park loop road are included as part of the Proposed Project and shown on Figure 2-8.

2.7.2.6 Landscaping

The proposed planting includes grasslands with differing heights creating strata of grass varieties. Over this are shrub layers in patterns that define outdoor rooms for flexible park spaces. The ecology of the park is the "base layer" on top of which are the flexible programmed spaces, the bird observation areas, the interpretive areas, and the trails throughout the top decks. The dark lines throughout the plan indicate "Hedgerows" (Figure 2-5). These are plantings of various heights and species that function to:

1) Organize the flexible spaces;
2) Move park users through the park from one event to another;
3) Lead people to an event such as a stair-climb; and
4) Protect and buffer one use from another such as the activity at the soil stock-pile.

THIS PAGE INTENTIONALLY LEFT BLANK



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_RHMP_Access.mxd (AAguirre, 3/17/2016) - mapping_guest

Map Date: 3/17/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-8. Rose Hills Memorial Park Access Road Options

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

The planting would consist mainly of California natives. However, drought-tolerant nonnatives are part of the planting plan because planting is difficult to establish on the mono-soil clay landfill cap that covers the filled areas. The flat 117 acres of top decks are covered with this mono-soil clay cap that is specifically designed to keep rain and irrigation water (reclaimed and potable) from seeping into the landfill and percolating down to create leachate. Due to water balance requirements on the top decks, the park cannot be limited to an all-natives plant palette.

2.8 PHASING

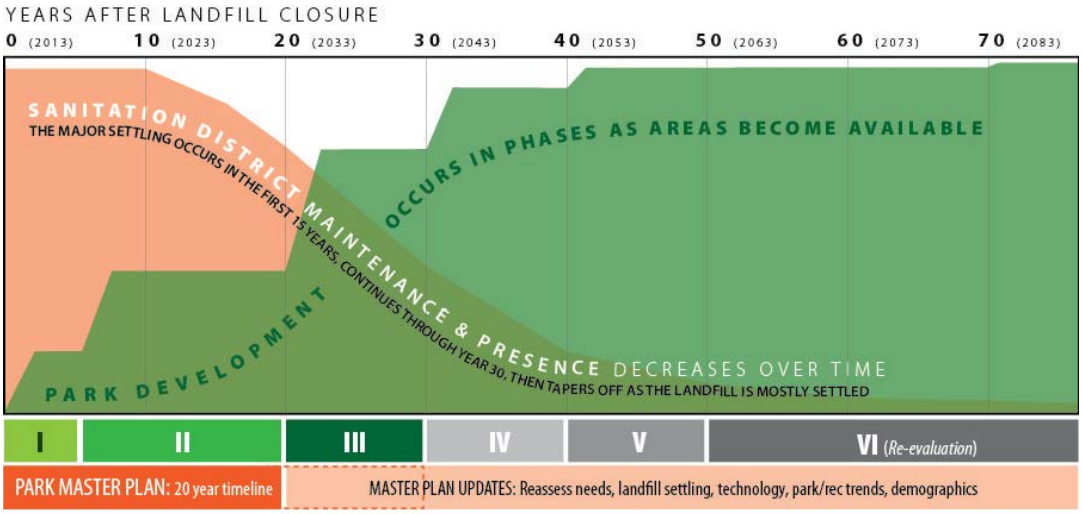
The Master Plan envisions three major phases of development over the next 30 years and two additional phases that would be refined as landfill deck settling is completed, park operations increase, and landfill maintenance operations decline in approximately 2043. Sufficient detail is known about the projects to be implemented at the beginning of the Master Plan timeline so that these projects can be discussed in detail at the Project EIR level. These include the Phase I and Phase II projects (Years 1 through 20) as described in Section 2.8.1 and 2.8.2 below. No further CEQA documentation is anticipated for these projects. However, details of projects that would be implemented in the later stages of Phases II through VI (Years 21 through 75) become speculative. These projects are discussed at the Program EIR level as described in Section 1 of this PEIR. In the first decade, park development would occur on the Western Deck and non-fill areas including the Entry Plaza, M&O areas, and Nike Hill, providing the basic park infrastructure for park visitors and park maintenance. The neighboring Eastern and Southern Decks would continue to lose elevation, up to 125 feet over a 30-year period. As top deck settlement slows and methane gas production decreases, the parklands on the capped areas would become more stable.

The additional phases include proposed park elements that can be implemented once deck settling slows and when environmental systems are no longer required. The park site transformation would be incremental and selective. Each phase is designed to build upon the last in response to public interest for a variety of programs and specific park elements.

Early investments in jointly used maintenance areas and offices would begin the co-agency (County and Sanitation Districts) transition to manage the site as a public space. Extensive infrastructure such as multi-use trails, roads, utilities, and structures would be laid into the site to accommodate a wide range of future park activities. All phases would include new landscape plantings to establish a complex ecology over time that reflects the soil conditions and continual shifting of the top decks.

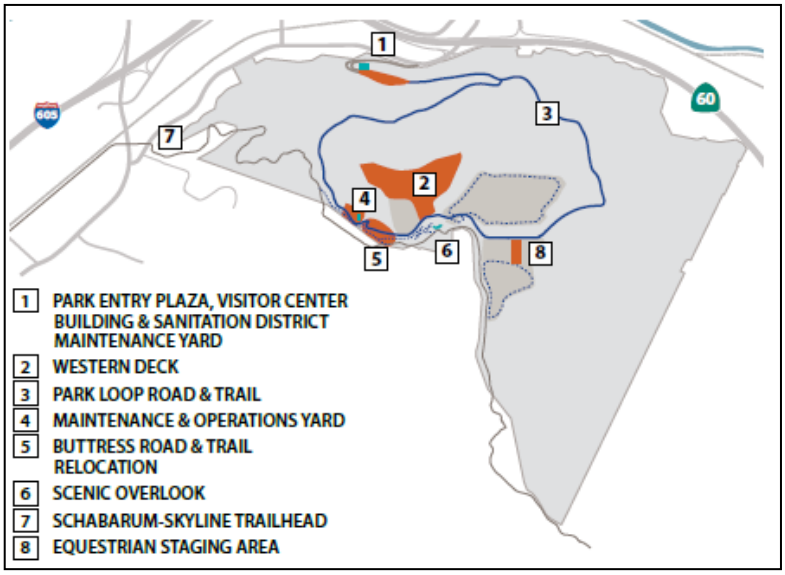
Amenities that would be built and opened in Phase I would create the foundation for a distinctive regional park destination where industrial and passive recreation land uses come together. Beyond the infrastructure, distinctive park elements would be strategically located to showcase the assets of the Puente Hills to provide recreation that is unique to the region. The ever-changing parklands must be safe and secure during a lifetime of transition that may take 50 to 75 years as methane production and landfill settlement ceases. Finally, public involvement and stakeholder partnerships throughout all phases would guide and evolve the programming and management of the park. The

timeline below illustrates the different park phases over time and the increase in park development as the landfill maintenance activities decrease and the landfill settles.



2.8.1 Phase I Projects (Years 1 to 5)

During the early stages of park building, strategic construction of infrastructure would open the site up to the public. Improvements begin at the Entry Plaza with construction of a Visitor Center, staff offices, parking, and a shuttle drop-off. The main park loop road and adjacent multi-purpose trail would be constructed during this phase to provide access to the Western Deck and Nike Hill and the associated recreational facilities and views. The loop road would provide the circuit from which future park features would expand out from. Consolidation and improvements of existing maintenance areas would include an operations office. The placement of this structure in the M&O yard is a critical component of future joint agency site management coordination.



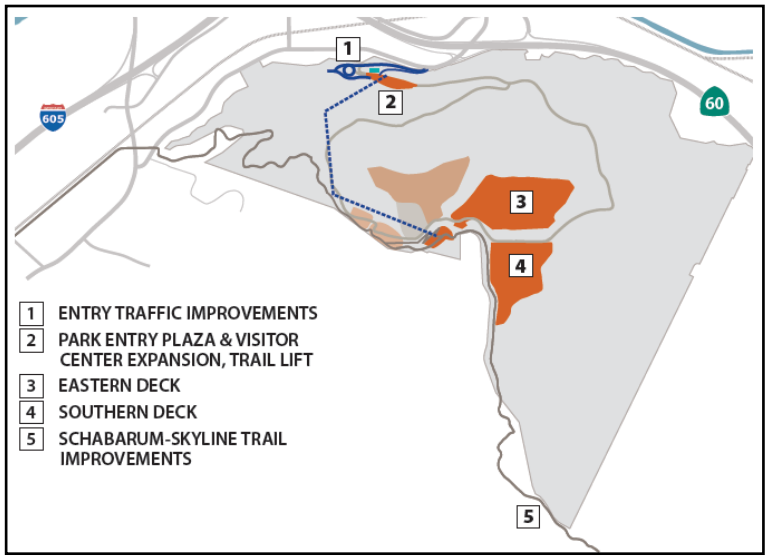
Phase I Project Map

The proposed Phase I projects are described in Table 2-4.

Table 2-4. Phase I Projects (Years 1 to 5)

PHASE I PROJECTS	PROJECT DESCRIPTION
Entry Plaza	♦ Re-organize the former scales area and establish shared agency (County and Sanitation Districts) facilities ♦ Provide parking, controlled access, bus parking, shuttle drop-off, and emergency vehicle turn-around ♦ Realign park road with park guard house and island ♦ Planting and irrigation
Park Circulation, Loop Road, and Parking	♦ Build 4-mile long park loop road plus adjacent multi-use trail ♦ Build Parking Lots A (60 spaces), B (20 spaces) & C (20 spaces) ♦ Construct 0.5-mile switchback trail to Scenic Overlook at Nike Hill (ADA accessible) ♦ Relocate a 0.5-mile portion of the Schabarum/Skyline Trail just south of the M&O Yard in the buttress area ♦ Improve Schabarum/Skyline trailhead design, signage, wayfinding design and implementation at western entrance from Workman Mill Road ♦ Install landscape planting and irrigation
Structures	♦ Construct 8,600-square foot Visitor Center and shared staff offices (for County and Sanitation Districts) ♦ Place pre-fabricated 1,650-square foot Maintenance Office; re-organize M&O Yard for co-operations ♦ Design and construct 6,000-square foot Nike Hill Plaza and Scenic Overlook at Nike Hill ♦ Design and construct moveable and light flex park furniture, railings, dividers, and mileage markers throughout the park ♦ Construct staff and public restrooms at Visitors Center, Maintenance Building, and Nike Hill Plaza
Top Deck Development (primarily portions of Western Deck)	♦ Develop 13 acres of the Western Deck for park use – trails, planting, programming, and parking ♦ Design and construct an approximate 5-acre bike skills area on the soil stockpile area of the Western Deck ♦ Provide a 1.25-mile running loop trail around Eastern Deck ♦ Provide a 1-mile running loop trail around Southern Deck ♦ Construct a portion of the 2-mile inner loop trail on the Western Deck. The remainder of the inner loop trail on the Eastern and Southern Decks would be built during Phase III. ♦ Plant trees, shrubs, and grasses compatible with the landfill cover in newly constructed areas for park use
Park Elements	♦ Design and implement interpretive signage for the Scenic Overlook (at Nike Hill) and Western Deck ♦ Design and construct security fencing and gates ♦ Coffee cart at Scenic Overlook & bike rental

2.8.2 Phase II Projects (Years 6 to 20)



Phase II Project Map

During the second phase of park development, the backbone of park infrastructure at the Entry Plaza and the Scenic Overlook would be completed, including trail lift installation with supporting parking and access improvements. Park improvements would be largely completed on the Western Deck and begin to expand onto the edges of the Eastern and Southern Decks. Habitat restoration efforts would be expanded. Successful programs initiated during the first phase of park development would evolve and change to accommodate public interests. In response to programmatic refinements, the park settings would also evolve. New programs would be initiated as spaces take shape on the Western Deck and the soil stockpile used for cap maintenance decreases in area. Additional trails and circulation refinements would occur during this phase, especially at the park entrance. Defining the park spaces with plantings would provide the opportunity to enhance wildlife habitat throughout the site and onto the western slopes. Initial landscape plantings during the first phase would be assessed for growth and soil coverage efficacy. New plants would be selectively chosen to provide shade, aesthetics, and habitat.

The proposed Phase II projects are described in Table 2-5 and may occur over the course of multiple smaller phases.

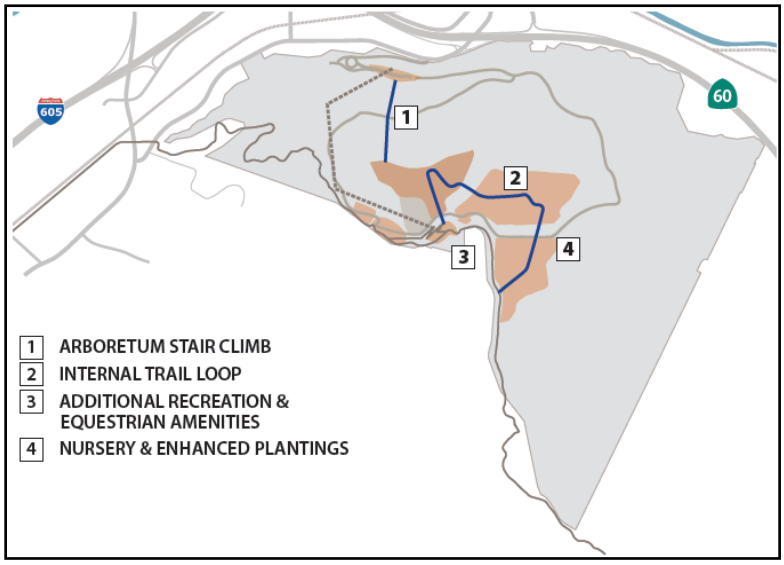
Table 2-5. Phase II Projects (Years 6 to 20)

PHASE II PROJECTS	PROJECT DESCRIPTION
Entry Plaza	♦ Design and construct ADA pedestrian and bicycle entry access ♦ Expand Entry Plaza area and parking in response to trail lift implementation ♦ Planting and irrigation of entry hillside and Entry Plaza area ♦ Decorative fencing and gating at park entry ♦ Wayfinding signage at park entry

PHASE II PROJECTS	PROJECT DESCRIPTION
Park Circulation	♦ Improve Schabarum/Skyline Trail, trailhead design, signage, wayfinding design, and implementation at eastern entrance from the Habitat Authority Preserve Area ♦ Improve the former equestrian trail on the southeast side for safety and aesthetics. Connect back to existing trail on the north slope ♦ Connect park to regional trail improvements as segments are completed ♦ Install landscape planting and irrigation
Structures	♦ Expand Visitor Center structure or canopies per construction phasing plan ♦ Design and install trail lift and associated queue areas ♦ Design and install 1,000-square foot trail lift structure at Entry Plaza ♦ Design and install 2,000-square foot trail lift structure at Nike Hill to include café, restroom, and staff office ♦ Construct plaza between the Scenic Overlook and the new trail lift structure ♦ Construct additional moveable and light flex park furniture, railings, dividers, and mileage markers. Modify designs as necessary per public and staff assessment
Top Deck Development (Eastern and Southern Decks)	♦ Expand trails and facilities around Eastern Deck ♦ Expand trails and facilities around Southern Deck ♦ Provide equestrian staging area on Southern Deck in Parking Lot E ♦ Expand landscape planting with supporting irrigation
Park Elements	♦ Design and implement interpretive signage for the Eastern and Southern Decks ♦ Expand and enrich picnic, children's nature play, interior trails, and trailheads with materials, placement, signage, and wayfinding ♦ Relocate/rework park elements that conflict or are not successful ♦ Expand educational components ♦ Design and construct security fencing and gating ♦ Design and construct moveable and light flex park furniture, railings, dividers, and mileage markers ♦ Mini café at trail lift and Visitor Center

2.8.3 Phase III Projects (Years 21 to 30)

Phase III would initiate full development of all three top decks for a variety of recreational experiences. This phase would expand the acreage of the Eastern and Southern Decks subject to development of new park facilities and programs, as well as expanded habitat restoration. These areas would be fully open to the public to support new uses, including a dog park, hiking trails, trailhead parking, group and individual picnic areas, interpretive areas, and bike rentals. In response to cumulative traffic impacts at the park entrance due to the anticipated MRF truck trip increase and Rose Hills funeral processions, major alterations to the park access road and entrance into the park are anticipated. A standard level of service for all site users would be established as the park reaches the final decade of the Master Plan process. A variety of traffic design alternatives that ensure park user safety would be explored and implemented.



Phase III Project Map

Extreme elevational changes of the top decks in the first 20 years of park development are anticipated to slow down considerably. The end of landfill settlement in some areas of the park, particularly the Western Deck would open the potential for a fully developed wildlife corridor through the Puente Hills. Adaptive management of wildlife habitat would be of primary interest as the expanse of natural areas on the top decks is fully implemented. A native plant nursery at the Southern Deck would be established as interest in educational stewardship programs increase. The native plant nursery may occur prior to Phase III. In this phase, the Master Plan anticipates circulation improvements and recreational enhancements of particular earlier-stage program areas.

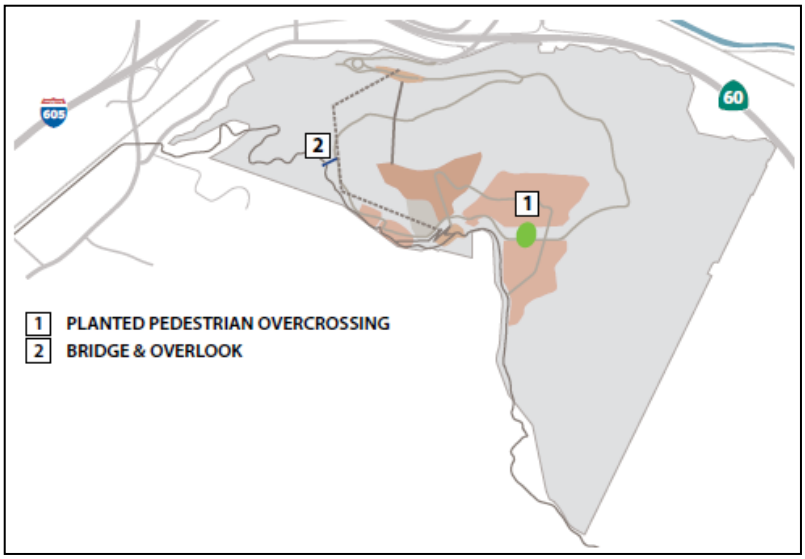
The proposed Phase III projects are described in Table 2-6.

Table 2-6. Phase III Projects (Years 21 to 30)

PHASE III PROJECTS	PROJECT DESCRIPTION
Entry Plaza	♦ Design and implement park access and shared access traffic solution(s) ♦ Update entry and wayfinding signage
Park Circulation	♦ Design and implement 1,900 feet of arboretum stair climbs from Entry Plaza to Western Deck ♦ Continue improvements to the Schabarum/Skyline Trail,

PHASE III PROJECTS	PROJECT DESCRIPTION
	trailhead design, signage, and wayfinding ♦ Finalize and strengthen regional connections from north, west, and east into and out of the park for multi-modal uses ♦ Connect park to regional trail improvements as segments are completed ♦ Continue planting and irrigation
Structures	♦ Modify interiors to meet requirements of evolving programming ♦ Add public restrooms as necessary ♦ Reconstruct restroom buildings to meet new sustainable design standard. Provide sewer line hookup as appropriate ♦ Expand stormwater capture infrastructure
Top Deck Development	♦ Underplant nonnative slopes with native planting for future wildlife corridor ♦ Add additional fencing and gating to meet design expansion ♦ Expand the 2-mile inner loop trail to the Eastern and Southern Decks ♦ Provide equestrian staging area on Southern Deck in Parking Lot E ♦ Design and construct approximate 3-acre bike skills area on Eastern Deck ♦ Intensive area planting and irrigation
Park Elements	♦ Install the zip line from the Nike Hill to adjacent to Parking Lot B in the M&O area. The zip line would be approximately 1,300 feet long. ♦ Install up to two 70-foot long slides from the multi-use loop trail just south of Parking Lot C ♦ Implement native and drought tolerant plant nursery at the Southern Deck ♦ Design and implement additional interpretive signage for the Eastern and Southern Decks ♦ Expand picnic, children's nature play, interior trails, signage, and wayfinding throughout the park ♦ Relocate/rework park elements that conflict or are not successful ♦ Expand educational components

2.8.4 Phase IV Projects (Years 31 to 40)



Phase IV Project Map

Future phasing beyond the reach of the Master Plan focuses on those elements that provide missing connectivity. By this time, landfill methane gas collection systems are expected to decrease in output and the need for landfill cover maintenance and runoff control would also decline as the three decks stabilize. Trails and circulation patterns would have been established. Important connector bridges would improve access between park areas. A pedestrian planted overcrossing that connects the Eastern and Southern Decks, planted with native grasses and shrub hedgerows, would be implemented when the decks are completely stable. This pedestrian planted overcrossing would allow park users to cross between decks unimpeded by the road traffic below which may include Rose Hills Memorial Park processions by this time. A pedestrian stair climb bridge on the west side would connect Rio Hondo College to the Schabarum/Skyline Trail, park loop road, and the multi-use loop trail.

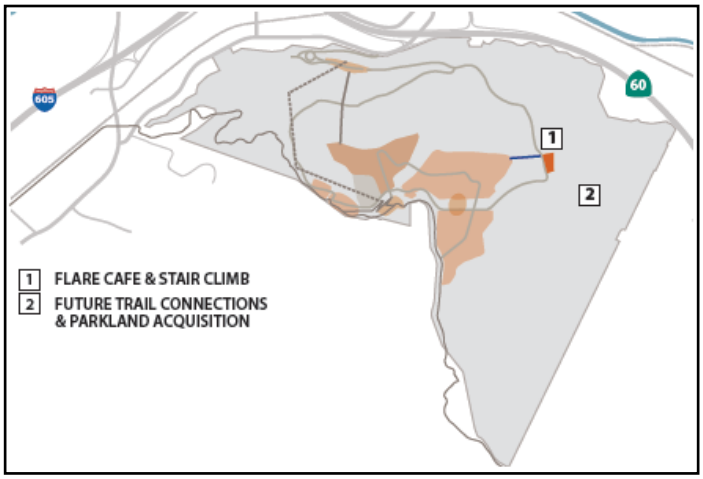
The proposed Phase IV projects are described in Table 2-7.

Table 2-7. Phase IV Projects (Years 31 to 40)

PHASE IV PROJECTS	PROJECT DESCRIPTION
Structures	♦ Design and implement pedestrian planted overcrossing to connect Eastern and Southern Decks ♦ Design and construct west side pedestrian stair climb bridge and overlook from the Schabarum/Skyline Trail to the park loop road/multi-use loop trail (approximately 350 feet long) ♦ Soil production for land bridge ♦ Use on-site nursery grown plants for land bridge planting ♦ Irrigation

2.8.5 Phase V Projects (Years 41 to 50)

Phase V would include reuse of the closed Flare Site and additional parkland acquisitions of the eastern canyons. The Flare Site would be available for adaptive reuse in any phase because it is no longer in use. The site has electricity and would require sewer and water connections. With the necessary utilities, the Flare Site would serve as a signature park landmark with interpretive, educational, and concessionaire components. If restroom and water facilities can be provided in a mobile/portable capacity, the site may be used more immediately in a creative pop-up fashion. An approximate 800-foot stair climb connecting the Eastern Deck to the Flare Site would be built to provide direct access. The hillside surrounding the Flare Site would have trails integrated to provide new views overlooking the native eastern canyons, wildlife habitat, and cities. Finally, the viability of land acquisition for eastside canyons, trails, and trailheads would be determined by the stakeholders they would serve.



Phase V Project Map

The proposed Phase V projects are described in Table 2-8.

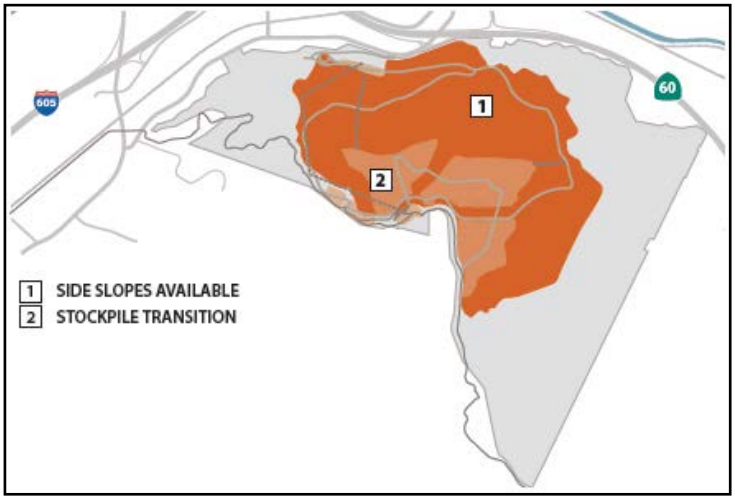
Table 2-8. Phase V Projects (Years 41 to 50)

PHASE V PROJECTS	PROJECT DESCRIPTION
Park Circulation	♦ Construct approximate 800-foot stair climb from Eastern Deck to Flare Site ♦ Provide new trails, signage, and wayfinding ♦ Connect new internal trails to the regional trail system
Structures	♦ Design and implement Flare Café ♦ Bring utilities to Flare Site ♦ Planting and irrigation
Parkland Expansion	♦ Eastern canyon acquisition and trail development

2.8.6 Phase VI Projects (Years 75+)

It will take over 75 years for methane gas production within the landfill to decline to such a level that the surface gas pipes may be removed and the side slopes become available to the park.

Once the landfill has stabilized and is no longer producing methane, the outer gas infrastructure could be removed. Removing the miles of pipe on the slopes would provide a large source of reusable material and opportunity for creative reuse at the park. Independently, the eventual depletion of the soil stockpiles would also enable two smaller park transitions. The first would occur when the southern stockpile is finally used and depleted. The area may need to be filled to have positive drainage and become a useable park area such as a meadow. At such time, the Sanitation Districts would begin harvesting the northern stockpile. The interim bike skills course located there would need to be relocated, possibly swapping locations to the Western or Eastern Decks.



Phase VI Project Map

Similarly, when the northern stockpile is finally diminished to a point where the remaining soil can be transported to a different location like the M&O area, the final transition may take place so the entire Western Deck can be fully utilized. At such time, the uses of the Western Deck would be reassessed and redesigned so it would no longer be fragmented, and become one cohesive deck.

The proposed Phase VI projects are described in Table 2-9.

Table 2-9. Phase VI Projects (Years 75+)

PHASE VI PROJECTS	PROJECT DESCRIPTION
Parkland Expansion	♦ Side slopes available for park development ♦ Removal of outer gas infrastructure ♦ Stockpile transition

SECTION 3.0 ENVIRONMENTAL ANALYSIS

3.1 INTRODUCTION

This section provides a discussion of the environmental issues found to be potentially significant in the Initial Study (Appendix A). Sections 3.2 through 3.15 provide a detailed discussion of the environmental settings, impacts associated with the Proposed Project, and mitigation measures designed to reduce significant impacts to a less than significant level (as required) for the following resources:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural, Tribal, and Paleontological Resources
- Geology and Soils
- Greenhouse Gas
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Recreation
- Transportation and Circulation
- Utilities and Service Systems

To assist the reader in comparing information about the various environmental issues, each section presents information under the following headings:

- **Environmental Setting**
  - The existing environment within and in the vicinity of the Puente Hills Landfill is described.
- **Regulatory Setting**
  - Relevant state and local regulations pertaining to each issue area.
- **Thresholds of Significance**
  - Relevant thresholds of significance as identified by CEQA and the County of Los Angeles Department of Parks and Recreation.
- **Environmental Impacts**
  - The nature and extent of project impacts relative to the issue areas listed above are analyzed. These analyses address direct (or primary effects of the Proposed Project as well as indirect (or secondary) effects. Where applicable, impacts are identified as short-term or long-term.
- **Mitigation Measures**
  - Mitigation measures to reduce or eliminate project impacts are provided, as applicable.

- **Residual Impacts After Mitigation**
  - A discussion of the significance of each impact after mitigation is provided.

As discussed in Section 1.1, Proposed Project environmental impacts are discussed at the project and program level. Implementation of the Master Plan would take approximately 75 years. Sufficient detail is known about the projects to be implemented during Phases I and II (Years 1 through 20) of the Master Plan timeline. Therefore, environmental impacts from these projects are discussed at the Project EIR level. However, details of projects that would be implemented in the later stages, Phases III through VI (Years 21 through 75), are speculative. These projects are discussed at the Program EIR level. Therefore, the impact analysis in Section 3 is organized in two parts: **Phases I and II** (project level analysis) and **Future Phases** (program level analysis).

3.2 AESTHETICS

This section describes the environmental setting for aesthetic and visual resources, including the regulatory setting, existing site conditions, the impacts on aesthetic and visual resources at the project and program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts. In an urban area, aesthetic resources consist of unique or architecturally recognized or historic buildings, street trees, plazas, parks, key vegetation, and important view corridors that contribute to community continuity and identity. In a rural setting, aesthetic resources consist of hillsides, ridgelines and mountains, groves of trees or woodlands, lakes, rivers or streams, large areas of intact native habitats and both close-up views and distant scenic vistas. The project site is located on the edge of both rural and urban areas and the site and vicinity contain aspects of both.

3.2.1 Environmental Setting

3.2.1.1 Regional Visual Setting

The project site is located at the closed Puente Hills Landfill in the San Gabriel Valley (Figure 3.2-1). The San Gabriel Valley is characterized by a built out/urbanized valley surrounded by the San Gabriel Mountains to the north, the Chino Hills and San Jose Hills to the east, the Puente Hills to the south, and the San Rafael Hills to the west. The project site is located within the western end of the Puente Hills in the southern portion of the San Gabriel Valley. The San Gabriel Valley includes more than a dozen incorporated cities, including the City of Industry. A portion of the front entry of the landfill is located within the City of Industry, with the majority of the site within unincorporated Los Angeles County.

Despite the largely built out/urban character of the San Gabriel Valley several prominent open spaces remain in the valley including the Whittier Narrows Recreation Area in the southern portion of the valley and the Santa Fe Dam Recreation Area in the northern portion of the valley. The northern portion of the valley is also characterized by the steep topographical transition and urban-wildland interface with the Angeles National Forest (San Gabriel Mountains). Other prominent visual features of the San Gabriel Valley include the presence of several major transportation infrastructure systems. Interstate 10 (I-10), Interstate/State Route 210 (I-210/SR-210), and State Route 60 (SR-60) all provide east-west access and Interstate 605 (I-605) provides north-south access. The San Gabriel River runs north-south along I-605. The Rio Hondo runs in a north-south direction also just west of the San Gabriel River (Figure 3.2-1). Both rivers come to their closest point to each other in the Whittier Narrows Recreation Area located approximately two miles northwest of the Puente Hills Landfill.

Figure 3.2-1 Puente Hills Landfill (looking northwest, green line delineates Top Decks)

The Puente Hills Landfill Native Habitat Preservation Authority (Habitat Authority) manages a preserve in the Puente Hills, which provide passive recreational opportunities. The Habitat Authority's lands (Habitat Authority Preserve) is located southeast and adjacent to the landfill. This area is also part of the Puente Hills Significant Ecological Area (SEA) connecting Chino Hills to the east of the project site to the San Gabriel River to the west. Rose Hills Memorial Park and Rio Hondo College are located west of the landfill.

3.2.1.2 Local Visual Setting

The project site is located completely within the boundaries of the closed landfill. The landfill rises approximately 900 feet above the valley floor and is approximately 1,365 acres in size (W&S 2015b). The landfill is composed of fill (landfill cells) and nonfill (natural/undeveloped) areas, environmental control and access infrastructure, landscaping, a material recovery facility (MRF), a gas-to-energy facility, recreational trails, and the Nike missile site.

Approximately 600 acres within the landfill boundaries is composed of fill material. Of the fill area, approximately a total of 510 acres have 2:1 or 50 percent slopes. The terraced slopes of the former landfill are layered with concrete drainage ditches and methane pipes positioned horizontally from the bottom to the top of the fill areas accentuating the terraced landscape that makes the landfill site visually distinctive when compared to surrounding natural and built areas (Figure 3.2-2).

Figure 3.2-2 Terraced Landscape of the Puente Hills Landfill (looking southwest)

The Western, Eastern, and Southern Decks and the Maintenance and Operations (M&O) Yard contain no structures and vegetation is still being established (Figures 3.2-3 through -6). Closure operation activities are common on the top decks and include the use of heavy machinery to repair damage to the landfill cap caused by storm events or from the natural settlement of the landfill. The views from the top decks allow an 180° viewshed from east to west, which includes scenic vistas of the San Gabriel Mountain National Monument and the San Gabriel Valley.

Existing uses within the landfill include material and equipment yards and buildings that support landfill closure operations, the gas-to-energy facility, and the MRF. The majority of these buildings are located on the west side of the landfill. Existing structures are utilitarian in their design, which in addition to landfill closure activities, contributes to the overall industrial character of the site (Figure 3.2-7 and 3.2-8). Nike Hill, the highest point of the landfill, contains existing structures including two microwave/radio towers, two lattice towers associated with Southern California Edison (SCE) transmission lines, two water storage tanks, an equestrian water trough, and a picnic area.

Other structures directly adjacent to the site include SCE lattice towers associated with a high-power transmission line located between the landfill, Rio Hondo College, and Rose Hills Memorial Park.

Despite the developed/industrial nature of the Puente Hills Landfill property, several natural open spaces remain along the western, eastern, and southern boundaries of the landfill property (Figure 3.2-9). These areas include the 24-acre Ecology Canyon along the western boundary, several canyons along the eastern boundary, and the 225-acre Habitat Authority preserve area along the southern boundary. Ecology Canyon is

designated as a SEA by the County and is used by the Rio Hondo College for study purposes. Constructed riparian habitat and an oak tree replacement planting area are located in the natural open space along the eastern boundary of the landfill. In addition to these intact and restored native habitats, a hillside "arboretum" of mature planted nonnative trees is located along more than 250 acres of north-facing hillsides.

Figure 3.2-3 Western Deck (looking northwest)

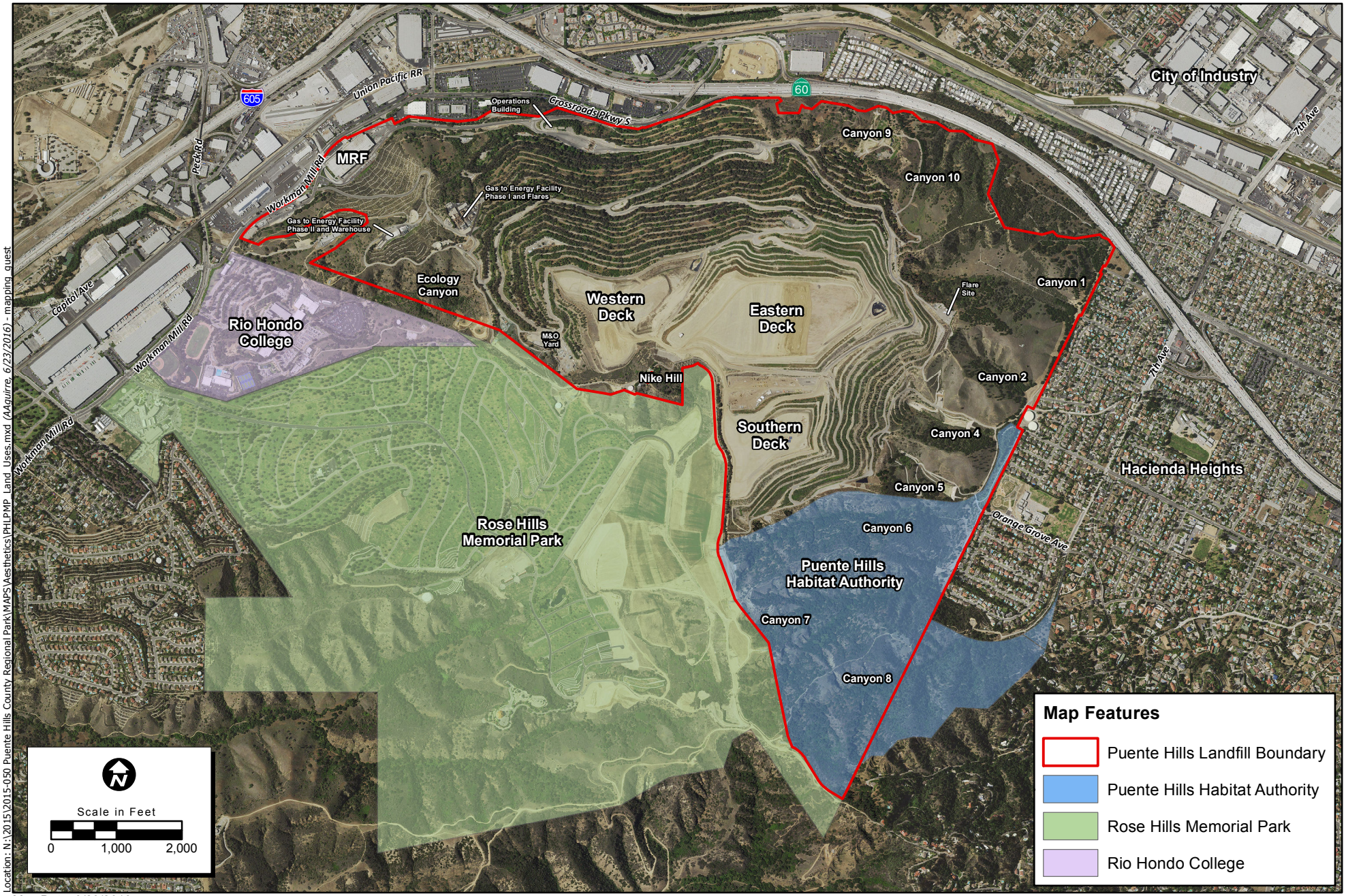
Figure 3.2-4 Eastern Deck (looking northeast)

Figure 3.2-5 Southern Deck (looking south)

Figure 3.2-6 Maintenance and Operations Yard (looking west)

Figure 3.2-7 Truck Route to Materials Recovery Facility (MRF)

Figure 3.2-8 Gas-to-Energy Facility



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Aesthetics\PHLPMP_Land_Uses.mxd (AAguirre, 6/23/2016) - mapping_guest

Map Date: 6/23/2016
Photo (or Base) Source: NAIP 2014

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.2-9 Project Site and Adjacent Land Uses

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

3.2.1.3 Sensitive Receptors and Existing Views of the Project Site

Sensitive receptors or viewers in the project area include motorists travelling on adjacent roads and highways, residents with existing views of the landfill, the public using existing trails with views of the landfill, and visitors to Rose Hills Memorial Park. The level of visual sensitivity for these viewers ranges from low (motorists) to high (residents, public users of existing trails, Rose Hills Memorial Park visitors).

The landfill is visible from many public viewpoints in the San Gabriel Valley due to its higher elevation. Current public views of the landfill include terraced slopes that have been largely revegetated as part of the landfill's closure. The terraced landscape, mostly screened by the planted vegetation, is still visible due to the geometric nature of environmental control infrastructure located on the landfill's slopes. Concrete drainage ditches and methane pipes positioned horizontally from the bottom to the top of the fill areas accentuate the terraced nature of the landfill. Due to the topographically superior top decks, the majority of public do not have direct views of the decks. However, the top decks are visible to people using the Schabarum-Skyline Trail.

Views of the Project Site from the North

The dense and mature ornamental landscaping on the north slopes of the project site generally shield views of landfill-related development from areas north and northwest of the site in the City of Industry, Pico Rivera, South El Monte, and unincorporated County. From this perspective, many viewers experience a relatively lush wooded hillside. Adjacent to the northern side of the SR-60, there is a mobile home community. This community has limited visual access due to the mature, dense vegetation on the project site south of the freeway and the low elevation of the mobile homes. Several single-family residences along Lomitas Avenue, between the SR-60 and Workman Mill Road, have existing views of landscaped hillsides and radio towers on the project site. The Puente Hills Energy Recovery from Gas (PERG) facility is also visible from north of the project site (Sanitation Districts 2001). Golfers on California Country Club have views of the north slopes of the project site.

Views of the Project Site from the East

Residential areas in Hacienda Heights are located along the eastern boundary of the project site. Slopes, including natural canyon areas and hillsides, as well as artificial fill slopes are currently visible through the narrow mouths of Canyons 4 and 5 from Los Robles Avenue and Orange Avenue, respectively (Figure 3.2-9). Views of the landfill become more obscure and limited as distance from the landfill increases. Elsewhere in the Hacienda Heights area, the topography and vegetation in the residential and natural hillside areas within the eastern boundary of the project site block direct visual access to interior portions of the site.

The Sanitation Districts instituted a comprehensive program to minimize impacts to views from east of the landfill site. This program included developing a landscaping palette for the solid waste fill slopes that utilizes native species to the extent possible. Additionally, the Sanitation Districts preserved some native hillsides and canyons through adherence to the setback from the eastern property boundary imposed under a

CUP for the landfill. The setback includes limiting support operations to no closer than 1,750 feet from the eastern boundary and no solid waste fill closer than 2,000 feet from the boundary. These preserved natural hills and canyons are prominent views from the east.

Other areas visible from the east include the constructed riparian habitat developed by the Sanitation Districts in conjunction with the California Department of Fish and Wildlife (CDFW). The Sanitation Districts has also developed oak tree planting areas on hillsides visible from the east (Sanitation Districts 2001).

Views of the Project Site from the South

To the south, the steep natural topography of the Puente Hills restricts visual access to the landfill from most parts of the City of Whittier. Southwest of the project site, in unincorporated areas and in the City of Industry, visual access is limited to certain residences off Spy Glass Hill and from industrial uses on Workman Mill Road. Interior portions of the project site and landfill closure activities are not visible from south of the landfill. However, the PERG Facility and the radio towers (e.g. the Nike Hill) are visible on the site from these locations (Sanitation Districts 2001). The landfill is visible from several trails located in the natural hills just south of the landfill. Trails within this area include the Horse Trail, Puma Trail, Ahwingna Trail, and Coyote Trail. Generally these trails follow ridgelines which afford hikers panoramic views of surrounding areas.

Views of the Project Site from the West

Rio Hondo College is located adjacent to the southwest boundary of the landfill. Campus visitors have very limited visual access to the project site due to the steepness of the Puente Hills. Due to an intervening natural ridgeline, there is no direct visual access of landfill closure operations from Rio Hondo College.

South of the college is Rose Hills Memorial Park, which borders the project site for almost one mile. Rose Hills Memorial Park visitors would have views of the landfill depending on the direction and location within the memorial park the viewer is located. Memorial park visitors of the Buddhist Memorial Columbarium would have views of Nike Hill. Memorial park visitors located in the vicinity of two areas referred to as Greenwood Gardens II and Garden of Comfort II would have views of the M&O Yard, Western Deck, and Nike Hill. These two areas are located within the memorial park west of Nike Hill and south of the M&O Yard (generally in the northeast area of the memorial park). Existing viewsheds from these two areas includes foreground views of natural hillsides (Nike Hill) with the inclusion of man-made structures (SCE transmission lattice towers, water tanks) and background views of the San Gabriel Valley and Mountains. Due to the topography of Rose Hills Memorial Park, views from other locations within the memorial park are generally of natural hillsides (Nike Hill) and the ridgeline where the Schabarum-Skyline Trail is located.

The Whittier Narrows Recreation Area is approximately three miles northwest of the project site adjacent to SR-60 in unincorporated Los Angeles County. There are no direct views of landfill closure activities from this vantage point, although there are accessible views of the soil stockpile and dense, mature vegetation on the north side of the landfill.

On clear days, the project site may be visible to areas as far west of the site as the Monterey Hills. Views from the Monterey Hills are limited to the natural vegetation of the Puente Hills and the vegetated landfill slopes on the north side of the site. Interior portions of the site where landfill closure activities are occurring are not visible from locations to the west (Sanitation Districts 2001).

Views of the Project Site from SR-60

SR-60 runs east and west directly north of the project site. Caltrans has not designated SR-60 as a scenic highway (Caltrans 2016a). From west and immediately north of the site, existing views looking east are limited to views of the more densely vegetated slopes of the landfill. There are no views of the interior portions of the landfill from SR-60 west of the project site. For motorists traveling west along SR-60, from east of the project site, fill slopes are visible at a distance between Hacienda Boulevard and Seventh Avenue; however, these views are intermittent. As westbound traffic approaches Seventh Avenue, trees and a sound wall on the south side of the freeway block views of the site (Sanitation Districts 2001).

Views of the Project Site from I-605

From north of the project site on I-605 there are no direct views of the interior portions of the project site. The views are generally limited to densely vegetated landfill slopes, and the soil stockpile. From the south and southwest on the I-605, the natural ridgeline on the southwest side of the site and Nike Hill are visible from intermittent locations. There are no views of interior portions of the site from the northbound or southbound I-605 (Sanitation Districts 2001).

3.2.2 Regulatory Setting

3.2.2.1 Federal

No federal plans, policies, regulations, and/or laws related to visual resources are applicable to the Proposed Project.

3.2.2.2 State

California Scenic Highway Program

The California Department of Transportation (Caltrans) developed the California Scenic Highway Program to protect and enhance the natural scenic beauty of California's highways and adjacent corridors. The program includes a list of highways that have been officially designated as scenic highways including highways that are eligible for designation. Scenic highways are protected by city or county ordinances, zoning, and/or planning policies aimed to preserve the scenic quality of a corridor.

3.2.2.3 Local

The majority of the Proposed Project is located within Los Angeles County; however, the main access to the project site is located within the City of Industry.

Los Angeles County General Plan

The County recognizes that the coastline, mountain vistas, and other scenic features of the region are significant resources. The Conservation and Natural Resources of the County General Plan contains goals that include the protection of visual and scenic resources (C/NR 13) and hillside development regulation (C/NR 13.8) (Los Angeles County 2015). Several policies are also listed to accomplish each goal. Scenic hillsides in the County include the San Gabriel Mountains, Verdugo Hills, Santa Susana Mountains, Simi Hills, Santa Monica Mountains, and Puente Hills. These hillsides play a major role in physically defining the diverse communities in the unincorporated areas. They not only create dramatic backdrops against densely developed suburbs and communities, but also provide extensive environmental and public benefits to residents.

County of Los Angeles Park Design Guidelines and Standards

The County of Los Angeles Park Design Guidelines and Standards were created to ensure County parks and trails were well-planned, designed, constructed, and preserved for the residents and visitors of the County. The goal of the County of Los Angeles Park Design Guidelines and Standards is to develop a common approach to the design of the County wide park system. This document provides:

- A guide for design professionals and field agency staff in the development of new parks and refurbishment projects; and
- Guidelines for the implementation of sustainable practices.

The Park Design Guidelines and Standards provide information in the following subject areas: spatial organization; site layout; building design parking lot design; circulation; recreation facilities; children's play areas; splash pads; passive recreation areas; park furnishings; landscaping; stormwater management; and utility infrastructure.

City of Industry Municipal Code

The City of Industry Municipal Code identifies land use categories, development standards, and other general provisions that ensure consistency between the City's General Plan and proposed development projects. The following provisions from the City's Municipal Code help minimize visual, light and glare impacts with new development and are relevant to the Proposed Project (City of Industry 2014).

- **Title 15 (Buildings and Construction), Chapter 15.32 (Sign Regulations).** Establishes development standards for signs within the City, including requirements for type, lighting, and location. For example, Section 15.32.070 (Material, Design, Construction and Maintenance Standards) requires that illumination from or upon any sign must be shaded, shielded, directed, or reduced so as to minimize light spillage onto the public right-of-way or adjacent properties.
- **Title 17 (Zoning), Chapter 17.12 (Commercial Zone), Section 17.12.050 (Regulations).** Requires that the architectural and general appearance of all commercial buildings and grounds be in keeping with the character of the

neighborhood so as not to be detrimental to the public health, safety, and general welfare of the community in which such use or uses are located.

- **Title 17 (Zoning), Chapter 17.16 (Industrial Zone), Section 17.16.026 (Special Industrial Zone Development Standards).** Requires that outdoor lighting be shielded to direct light and glare only onto the facility premises. Said lighting and glare is required to be deflected, shaded, and focused away from all adjoining property. Also requires that outdoor lighting not exceed an intensity of one foot-candle of light throughout the facility.
- **Title 17 (Zoning), Chapter 17.36 (Design Review), Section 17.36.020 (Development Plan Review Required).** No person shall construct any building or structure, or relocate, rebuild, alter, enlarge, or modify any existing building or structure until development plans therefore have been reviewed and approved in accordance with this chapter, and no building permit for any such activity shall be issued until such development plans have been reviewed and approved in accordance with this chapter, and the building permit is based upon building plans which are in substantial compliance with the approved development plans.
- **Title 17 (Zoning), Chapter 17.36 (Design Review), Section 17.36.060 (Standard of Review and Development Guidelines).** Contains extensive development guidelines for the purpose of encouraging good professional design practices that will enhance the beauty, livability, and prosperity of the community and result in high-quality development.
- **Title 17 (Zoning), Chapter 17.36 (Design Review), Section 17.36.080 (Standard Conditions of Approval).** Contains a specification for professionally designed landscaping for all projects and the requirement for all street lights installed along the street frontage of a development to be annexed into the appropriate Los Angeles County Lighting Maintenance District.

3.2.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have significant effect on the aesthetic environment if it would:

- Have a substantial adverse effect on a scenic vista;
- Be visible from or obstruct views from a regional riding or hiking trail;
- Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features; or
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

3.2.4 Environmental Impacts

The Proposed Project is a long-range master plan that would develop a portion of the closed landfill into a regional park. Most notably, over the long term, project implementation would lead to the transformation of three barren landfill decks of 120 acres into landscaped parkland supporting a mix of passive and limited active recreational facilities. The top decks of the landfill would be the location of the most

concentrated recreational development activities. The top decks include the 35-acre Western Deck, which has settled the most and would be developed as the first phase of implementing the Proposed Project. The Eastern and Southern Decks total approximately 80 acres and would be developed over a longer period of time due to these areas still undergoing rapid settlement.

The Western Deck would be developed with a bike skills course, grassland patches, play and picnic areas, and a performance space. The Eastern and Southern Decks would be developed with open grasslands, picnic areas, trails, and parking. Nike Hill would also be incorporated into the Proposed Project. This area is the highest point of the landfill and would therefore be the terminus for the proposed trail lift. A mini-café, staff office, and restroom would be constructed here.

The Proposed Project would also develop other portions of the landfill, however, to a lesser extent. Other components of the Proposed Project include main entrance improvements, development of a multi-use trail parallel to the loop road, and trail lift towers located along the western side of the landfill.

Threshold: Would the project have a substantial adverse effect on a scenic vista?

For purposes of determining significance under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Scenic vistas can be officially designated by public agencies, or informally designated by the public. A substantial adverse effect to such a scenic vista is one that degrades the view from a public viewpoint.

Phases I and II

Scenic vistas in the project area include the San Gabriel Mountains and Valley to the north and the Los Angeles Basin to the west. The Proposed Project would not affect scenic vistas of the San Gabriel Mountains or other scenic resources in the region because all of the proposed development would occur within the closed landfill. The Proposed Project would allow the public to enjoy scenic vistas of the surrounding valley, hills, and mountains.

During Phases I and II, the Proposed Project would develop the entry plaza, improve park circulation, build structures, and develop park elements within the project site. Development of the park would be concentrated in the top decks of the landfill which are primarily devoid of vegetation and structures. Currently, views of the top decks are limited to people on trails in the vicinity of the landfill. The panoramic views from area trails are a scenic vista. Furthermore, the Western Deck is visible from Rose Hills Memorial Park from areas west of Nike Hill and south of the M&O Yard. Developing the top decks with landscaping and recreational facilities would enhance the existing barren and industrial state of the site. Park structures would be designed to frame scenic vistas giving park visitors the opportunity to enjoy the vistas available from the project site. Nike Hill, the highest point within the landfill, is a natural vantage point. A scenic overlook would be constructed at Nike Hill allowing the public to enjoy the scenic vistas of the surrounding valley, hills, and mountains. Therefore, scenic vistas that include

parts of landfill from off-site viewpoints would not be adversely affected with implementation of the Proposed Project. A beneficial impact would occur.

Future Phases

Impacts to scenic vistas from Future Phases of the Proposed Project are expected to be similar as those described for Phases I and II. However, due to the lack of project-specific details for projects to be developed under Future Phases, potential visual impacts to scenic vistas would be assessed during the additional environmental review of each project.

Threshold:	*Would the project be visible from or obstruct views from a regional riding or hiking trail?*

Phases I and II

One existing trail, the Schabarum-Skyline Trail, is currently located within the project site. The Schabarum-Skyline Trail is a long connector trail located through open spaces and flood control channels connecting communities from the City of Covina to the City of Whittier. Within the landfill, two water troughs provide water to support equestrian use of the trail. During construction, views of construction equipment, building materials, stockpiles, and construction debris would be visible to people on the trail in the project area. However, this impact would be temporary and end at the completion of construction.

The Proposed Project would relocate a portion of the existing Schabarum-Skyline Trail off of adjacent property (Rose Hills Memorial Park) and onto the buttress area. The buttress area would be filled by the Sanitation Districts to stabilize Nike Hill. The buttress area is located southwest of the Western Deck and west of the Nike Hill. The Proposed Project would not obstruct views from the Schabarum-Skyline Trail. The Proposed Project would incorporate Schabarum-Skyline Trail into the park design by building additional trails within the project site connecting to the Schabarum-Skyline Trail. Phase II would also include the construction of the trail lift structure. This structure would be supported by four towers. Towers would be located at the Entry Plaza, Gas-to-Energy Facility I, M&O Yard, and Nike Hill. The trail lift facility would cross (overhead) the Schabarum-Skyline Trail at two locations just west of the M&O Yard. With operation of this facility, moving gondolas would be introduced into the viewshed of hikers on the trail in the general location of the landfill. The addition of the trail lift structure and its operation would add some aerial clutter to a small segment of the Schabarum-Skyline Trail. However, a trail lift structure is not anticipated to obstruct views from the Schabarum-Skyline Trail. Impacts would be less than significant.

The landfill is also visible from several trails located in the hills just south of the landfill. Trails within this area include Horse Trail, Puma Trail, Ahwingna Trail, and Coyote Trail. Generally these trails follow ridgelines which afford hikers panoramic views of surrounding areas, including the landfill. The project site represents a background component in the view of users of these trails. Currently, the top decks appear as areas devoid of vegetation to these users. The Proposed Project would enhance the barren nature of these areas. Views from trails located in the Puente Hills of the project site are

distant and are not anticipated to be significantly affected. Impacts would be less than significant.

Future Phases

Future Phases would continue the full development of the top decks and the Flare Site. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Three easement alternatives are being evaluated. Generally, all three easements follow the eastern two-way road and differ in the alignment across the Southern Deck. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill are available for development.

During the Future Phases of the Proposed Project, the Schabarum-Skyline Trail would continue to be an important element of the regional park. The Schabarum-Skyline Trail would provide regional connectivity with other recreational resources. Future Phases of the Proposed Project would preserve the Schabarum-Skyline Trail. Impacts to views from the Schabarum-Skyline Trail or other trails in the Puente Hills are anticipated to be similar to impacts described for Phases I and II. Impacts would be less than significant.

Threshold:	*Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?*

Phases I and II

There are no state scenic highways in the project vicinity (Caltrans 2016a). No impact would occur.

Future Phases

As stated above, there are no state scenic highways in the project vicinity (Caltrans 2016a). However, potential impacts to scenic resources may occur if a future designation of a state scenic highway occurs in the vicinity of the project site. This issue, if applicable, would be reassessed during the additional environmental review of each Future Phases project.

Threshold:	*Would the project substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?*

Phases I and II

The project site is currently a closed landfill with ongoing maintenance activities. The Proposed Project would develop a regional park at the landfill, which would add a new use to the landfill property. Recreational uses currently exist on the periphery of the landfill (existing trails); however, the Proposed Project would bring increased recreation use and facilities directly onto the landfill property.

Construction of the Proposed Project would temporarily create visual and aesthetic disturbance associated with construction activities, including the presence of heavy construction equipment, grading and earth disturbance, and materials storage. However, these disturbances are expected to be similar to existing maintenance and operation activities associated with the landfill closure. Therefore, construction-related impacts relative to the existing visual character of the site would be less than significant.

Implementation of the Proposed Project would significantly alter the visual character of the site in a beneficial way. As previously mentioned, development of the regional park would be concentrated within the top decks of the closed landfill, which are mostly devoid of vegetation and structures. Public visibility of the interior of the landfill is limited as described in Section 3.2.1.3. Implementation of the Proposed Project would add landscaping and park structures to the top decks, changing their existing barren character. The design of the new amenities and structures would utilize current architectural standards with design features complementary to the surrounding natural and built environment. The park's landscape plan is designed to be inclusive of the industrial and natural spaces present within the landfill. Figures 3.2-10 through 3.2-12 depict renderings of the proposed development on the top decks. The landscape plan would create shade on the top decks, organize the flexible recreational spaces, move park users through the park from one amenity to another, protect and buffer one use from another, and increase habitat quality and quantity over time. Therefore, the Proposed Project would improve the visual character and quality of the site. A beneficial impact would occur.

The Proposed Project would also add structures to Nike Hill, which is the highest point within the landfill property. People with views of the landfill naturally gravitate to this area of the landfill due to its elevation superiority. As discussed in Section 3.2.1.3, several sensitive receptors have views of Nike Hill including residents to the north and west of the landfill and Rose Hills Memorial Park visitors. Views of Nike Hill from Rose Hills Memorial Park are only available from the eastern side of the memorial park due to topography and vegetation screening.

The viewshed of Nike Hill by sensitive receptors is already dominated by manmade structures. Currently, Nike Hill contains two microwave/radio towers, two lattice towers associated with SCE transmission lines, two water storage tanks, a wildlife guzzler, and a picnic area. The viewshed of Nike Hill is dominated by visual contrast with the surrounding natural areas due to the pronounced unnatural geometric forms and straight lines of the existing man-made structures.

Phases I and II of the Proposed Project would result in the construction of a 6,000 square-foot (sf) Nike Hill Plaza, scenic overlook structure, a café, a restroom, staff office, and a 2,000 sf trail lift structure at Nike Hill. The trail lift would facilitate the movement of people from the park entrance to Nike Hill allowing park visitors to enjoy the scenic vistas from this high vantage point. An entry station for the trail lift would be built at the Entry Plaza. The trail lift would include up to two mid-support towers and final tower to be built at Nike Hill. Each trail lift basket would carry up to eight visitors. Figure 3.2-13 depicts an artist rendering of the trail lift structure at Nike Hill.

The addition of manmade structures to Nike Hill would create additional visual contrast along the ridge of Nike Hill. However, this additional visual contrast would not significantly alter the existing visual character or quality of the site or surroundings. Views from surrounding properties, such as Rose Hills Memorial Park, would be only slightly altered as structures, decks and the lift tower would all be similar in form and height to existing facilities at Nike Hill. Furthermore, the Proposed Project would result in a beneficial impact by allowing public visitors the opportunity to enjoy scenic vistas from Nike Hill.

Figure 3.2-10 Artist Rendering of the Western Deck

Figure 3.2-11 Artist Rendering of the Eastern Deck

Figure 3.2-12 Artist Rendering of the Southern Deck

Figure 3.2-13 Artist Rendering of the Puente Hills Landfill Park trail lift at Nike Hill

Future Phases

Future Phases would continue the full development of the top decks and the Flare Site. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Three easement alternatives are being evaluated. Generally, all three easements follow the eastern two-way road and differ in the alignment across the Southern Deck. Phases

IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill are available for development. Impacts to the existing visual character of the site from Future Phases are expected to be similar as those described for Phases I and II. Even though the development of the top decks proposed under Future Phases would significantly alter the visual character of the project site, it is anticipated that changes in visual character would be complementary, in terms of height, bulk, pattern, scale, and character, to the project site and surrounding areas. Current architectural standards with design features complementary to the surrounding natural and built environment would be implemented. The park's landscape plan would continue to be developed in a manner that is inclusive of the industrial and natural spaces present within the landfill and in adjacent areas. Therefore, the existing visual character or quality of the site and its surroundings would not be degraded by the Proposed Project. Impacts would be less than significant.

Threshold:	*Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?*

Phases I and II

The Proposed Project would develop a regional park at the closed landfill and would result in new sources of light and glare on the project site. The Proposed Project would be open to the public during daylight hours and no nighttime performances would be allowed to preserve nighttime darkness for wildlife.

The Proposed Project would not include park lighting except for security lighting of the M&O Yard. The Proposed Project would include lighting for parking lots, pedestrian pathways, building entries, and landscaping. Light fixtures would provide increased visibility for security and wayfinding and highlight elements of buildings. No stadium-type lighting is proposed. New lighting associated with the Proposed Project would be required to comply with existing County ordinances governing light pollution and the *County of Los Angeles Park Design Guidelines and Standards*, as outline in Section 3.2.2, minimizing light and glare impacts.

Park amenities and structures that include lighting would be designed to ensure that new sources of lighting would not affect surrounding properties. Light fixtures used would have low cutoff angles and be directed downward to minimize light spillover effects on surrounding properties. Light impacts would be less than significant.

Proposed structures would use materials and surface treatments with low glare characteristics. Structure would be painted with earthen colors to complement surrounding natural areas and minimize glare sources. Impacts would be less than significant.

The Proposed Project would include the use of solar photovoltaic (PV) systems to generate renewable energy. PV panels would be installed on roofs of buildings and structures. A solar panel differs from a truly spectral surface in that it has microscopically irregular surface designed to trap the incident rays of sunlight with the intention of generating additional photon collisions and energy production. Any incident radiation, if not absorbed or transmitted, would be reflected. With the current

advancements in PV technology, a typical untreated silicon solar cell absorbs two-thirds of the sunlight reaching the panel's surface, meaning only 1/3 of the sunlight reaching the surface of the panel would be reflected. Recent improvements in PV technology have led to even greater light absorption efficiency through the use of nanoengineered antireflective materials applied directly to solar cells that allow the cells to absorb light from virtually the entire solar spectrum. The intent of solar technology is to increase the efficiency by absorbing as much light as possible which further reduces reflection and glare. Most solar glass sheets (the glass layer that covers the PV panels) are typically tempered glass treated with an antireflective or diffusion coating that further diffuses (scatters) the intensity of glare produced. This type of diffused glare loses intensity as the distance from the reflection source increases. As such, the proposed PV systems are not expected to generate substantial glare. Impacts would be less than significant.

Future Phases

Impacts from light or glare for Future Phases of the Proposed Project are expected to be similar as those described for Phases I and II.

3.2.5 Mitigation Measures

The Proposed Project would not result in any significant aesthetic impacts; no mitigation measures are required.

3.2.6 Residual Impacts After Mitigation

Any residual aesthetic impacts would be less than significant.

THIS PAGE INTENTIONALLY LEFT BLANK

3.3 AIR QUALITY

This section of the PEIR assesses the potential impacts associated with air quality resulting from construction and operation of the Proposed Project. This section also describes the existing setting and regulatory setting with regard to air quality, as well as identifies mitigation measures to reduce air quality impacts. An air quality impact analysis report was completed for the Proposed Project (Kunzman Associates, Inc. [Kunzman] 2016a). The technical report is provided in Appendix B and summarized below.

3.3.1 Environmental Setting

3.3.1.1 Local Air Quality

The project site is located within the unincorporated portion of Los Angeles County, and lies within the South Coast Air Basin (Basin). The project site is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources.

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topography and climate of southern California combine to make the Basin an area of high air pollution potential. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The project site is located toward the northeast portion of the Basin.

Winds are an important parameter in characterizing the air quality environment of a project site because they both determine the regional pattern of air pollution transport and control the rate of dispersion near a source. These winds allow for good local mixing, but also carry significant amounts of industrial and automobile air pollutants from the densely urbanized western portion of the Basin into the interior valleys which become trapped by the mountains that border the eastern edge of the Basin.

In the summer, strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they

cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloud.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution “hot spots” in heavily developed coastal areas of the Basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

The temperature and precipitation levels for the Montebello area (the closest weather station), are shown below in Table 3.3-1. As shown, August is typically the warmest month and January is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 3.3-1. Montebello Area Monthly Climate Data[1]

Descriptor	Month of Year											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	69.4	71.1	72.9	77.6	79.4	83.7	88.5	89.7	87.9	82.6	75.4	70.8
Avg. Min. Temperature	47.8	48.9	50.4	53.2	57.2	60.8	64.2	65.2	63.6	58.3	51.4	47.2
Avg. Total Precipitation (in.)	3.69	3.56	2.82	0.78	0.19	0.06	0.01	0.02	0.17	0.28	1.26	1.94

[1]Source: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5790

3.3.1.2 Pollutants

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in Section 3.3.2, Regulatory Setting, above.

Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

Nitrogen Dioxide (NO_2)

Nitrogen oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx forms when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NOx and the pollutants formed from NOx can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone (O_3)

Ozone is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOCs) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, and chemical solvents, as well as natural sources, emit NOx and VOCs that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOCs are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

Carbon Monoxide (CO)

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly

associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Dioxide (SO_2)

Sulfur oxide (SOx) gases (including sulfur dioxide) are formed when fuel containing sulfur, such as coal and oil, is burned and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead (Pb)

Lead is a metal found naturally in the environment, as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants, and children to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter (PM)

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particulate matter is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM_{10}) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter ($PM_{2.5}$) have been designated as a subset of PM_{10} due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

Volatile Organic Compounds (VOC)

Although not a criteria pollutant, reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.

Other Pollutants of Concern

Toxic Air Contaminants (TACs)

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least 40 different TACs. The most important of these TACs, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

TACs are less pervasive in the urban atmosphere than criteria air pollutants; however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of TACs with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2005 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of $PM_{2.5}$ because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a TAC in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in DPM by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of DPM as a TAC was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have

other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by the CARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Los Angeles County. The nearest likely locations of naturally occurring asbestos, as identified in the *General Location Guide for Ultramafic Rocks in California* prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

3.3.1.3 Existing Ambient Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the *Final 2012 Air Quality Management Plan*, prepared by SCAQMD, December 2012, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions, and 40 percent of directly emitted $PM_{2.5}$, with another 10 percent of $PM_{2.5}$ from road dust.

The EPA and the CARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the Federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. Attainment status is shown in Table 3.3-4 below.

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. For evaluation purposes, the SCAQMD has divided the District into 36 Source Receptor Areas (SRAs) with operating monitoring stations in most of the areas. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. The project is within the South San Gabriel Valley Area (SRA 11). SCAQMD operates the Pico Rivera-4144 air monitoring station at 4144 San Gabriel River Parkway, Pico Rivera (Pico Rivera Station), approximately 1.8 miles west of the project site. Since not all the

monitoring stations monitor for all pollutants the next nearest station located approximately 11.4 miles northwest of the site at 1630 North Main Street, Los Angeles (Los Angeles Station), was used to complete the air pollutants concentration profiles. Table 3.3-2 summarizes 2013 through 2015 published monitoring data from the stations, which is the most recent three-year period available. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site. The monitoring data presented in Table 3.3-2 shows that ozone and particulate matter (PM_{10} and $PM_{2.5}$) are the air pollutants of primary concern in the project area.

Table 3.3-2. Local Area Air Quality Monitoring Summary[1]

Pollutant (Standard)[2]	Year		
	2013	2014	2015
Ozone:[3]			
Maximum 1-Hour Concentration (ppm)	0.101	0.121	0.107
Days > CAAQS (0.09 ppm)	**2**	**7**	**6**
Maximum 8-Hour Concentration (ppm)	0.073	0.092	0.082
Days > NAAQS (0.08 ppm)	0	**5**	**2**
Days > CAAQS (0.070 ppm)	**3**	**7**	**11**
Carbon Monoxide:[4]			
Maximum 8-Hour Concentration (ppm)	*	*	*
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:[3]			
Maximum 1-Hour Concentration (ppb)	104.6	86.7	70.4
Days > NAAQS (0.25 ppm)	1	0	0
Inhalable Particulates (PM10):[4]			
Maximum 24-Hour Concentration (µg/m^3)	74.5	86.8	72
Days > NAAQS (150 µg/m^3)	0	0	0
Days > CAAQS (50 µg/m^3)	**20**	**38**	**2**
Ultra-Fine Particulates (PM2.5):[3]			
Maximum 24-Hour Concentration (µg/m^3)	29.1	35.1	52.7
Days > NAAQS (35 µg/m^3)	0	0	**3**

[1]Source: http://www.arb.ca.gov/adam/.
[2]CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million.
[3]Data obtained from the Pico Rivera-4144 San Gabriel Monitoring Station.
[4]Data obtained from the Los Angeles-North Main Street Monitoring Station.
*insufficient (OR no) data available to determine the value

Ozone

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

The Pico Rivera Station recorded an exceedance of the state 1-hour ozone standards between two and seven days in the past three years. The state 8-hour ozone standards were exceeded between three and 11 days during the 2013 to 2015 monitoring years. The federal 8-hour ozone standards were not exceeded in 2013; however, they were exceeded between two and five days in 2014 and 2015.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Los Angeles Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide

The Pico Rivera Station recorded an exceedance of one day for the Federal NO_2 standard for the year 2013. The Pico Rivera Station did not record an exceedance of the State or Federal NO_2 standards in 2014 or 2015.

Particulate Matter

The Los Angeles Station recorded an exceedance of the PM_{10} state standards between two and 38 days in the years 2013 to 2015, while the Pico Rivera Station recorded an exceedance of the $PM_{2.5}$ federal standard of three days in 2015.

3.3.2 Regulatory Setting

3.3.2.1 Federal

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The NAAQS pollutants were identified using medical evidence and are shown below in Table 3.3-3.

Table 3.3-3. State and Federal Criteria Pollutant Standards

AIR POLLUTANT	CONCENTRATION / AVERAGING TIME		MOST RELEVANT EFFECTS
	CALIFORNIA STANDARDS	FEDERAL PRIMARY STANDARDS	
Ozone (O_3)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.075 ppm/8-hour	(a) Decline in pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppb/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour 0.14 ppm/24-hour	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3/24-hour 20 µg/m^3/annual	150 µg/m^3/24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3/24-hour 12 µg/m^3/annual	
Sulfates	25 µg/m^3/24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.

AIR POLLUTANT	CONCENTRATION / AVERAGING TIME		MOST RELEVANT EFFECTS
	CALIFORNIA STANDARDS	FEDERAL PRIMARY STANDARDS	
Lead	1.5 µg/m^3/30-day	0.15 µg/m^3/3-month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

[1] Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

As indicated below in Table 3.3-4, the South Coast Air Basin (Basin) has been designated by the EPA as a non-attainment area for ozone (O_3) and suspended particulates (PM_{10}). Currently, the Basin is in attainment with the national ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) and is classified as attainment/unclassified for $PM_{2.5}$.

Table 3.3-4. South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	California Standards[2]
1979 1-Hour Ozone[3]	1-Hour (0.12 ppm)	Nonattainment (Extreme)	Extreme Nonattainment
1997 8-Hour Ozone[4]	8-Hour (0.08 ppm)	Nonattainment (Extreme)	Nonattainment
2008 8-Hour Ozone	8-Hour (0.075 ppm)	Nonattainment (Extreme)	
CO	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	Maintenance
NO_2[5]	1-Hour (100 ppb) Annual (0.053 ppm)	Attainment (Maintenance)	Attainment

Pollutant	Averaging Time	National Standards[1]	California Standards[2]
SO_2[6]	1-Hour (75 ppb)	Designations Pending	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	
PM_{10}	24-Hour (150 µg/m^3)	Attainment[7]	Nonattainment
$PM_{2.5}$	24-Hour (35 µg/m^3)	Attainment	Unclassified
Lead	3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial)[8]	Nonattainment (Partial)[8]

[1]Obtained from Draft 2012 AQMP, SCAQMD, 2012. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable. Unclassified is given to an area with insufficient data.

[2]Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.

[3]1-hour O_3 standard (0.13 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.

[4]1997 8-hour O_3 standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.

[5]New NO_2 1-hour standard, effective August 2, 2010; attainment designations June, 2013; annual NO_2 standard retained.

[6]The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations expected in 2012, with SSAB designated Unclassifiable/Attainment.

[7]Annual PM10 standard was revoked, effective December 18, 2006; attainment in western portion of the Basin only; Coachella Valley is in non-attainment.

[8]Partial Nonattainment designation - Los Angeles County portion of Basin only.

In 2011, the Basin exceeded federal standards for either ozone at one or more locations on a total of 124 days, based on the current federal standards for 8-hour ozone. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S. In 2011, three of the top five stations that exceeded the 8-hour ozone NAAQS were located in the Basin (Central San Bernardino Mountains, East San Bernardino Valley, and Metropolitan Riverside County).

$PM_{2.5}$ in the Basin has improved substantially in recent years, with 2010 and 2011 being the cleanest years on record. In 2011, only one station in the Basin (Metropolitan Riverside County at Mira Loma) exceeded the annual $PM_{2.5}$ NAAQS and the 98th percentile form of the 24-hour $PM_{2.5}$ NAAQS, as well as the three-year design values for these standards. Basin-wide, the federal $PM_{2.5}$ 24-hour standard level was exceeded in 2011 on 17 sampling days.

The Basin is currently in attainment for the federal standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). While the concentration level of the new 1-hour NO_2 federal standard (100 parts per billion [ppb]) was exceeded in the Basin at two stations (Central Los Angeles and Long Beach) on the same day in 2011, the NAAQS NO_2 design value has not been exceeded. Therefore, the Basin remains in attainment of the NO_2 NAAQS.

The EPA designated the Los Angeles County portion of the Basin as nonattainment for the recently revised (2008) federal lead standard (0.15 µg/m^3, rolling 3-month average), due to the addition of source-specific monitoring under the new federal regulation. This

designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard in the 2007-2009 period of data used. For the 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard.

3.3.2.2 State

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The CAAQS for criteria pollutants are shown in Table 3.3-3. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The Basin has been designated by the CARB as a nonattainment area for ozone, PM_{10}, and $PM_{2.5}$. Currently, the Basin is in attainment with the ambient air quality standards for CO, lead, SO_2, NO_2, and sulfates and is unclassified for visibility reducing particles and hydrogen sulfide.

On June 20, 2002, the CARB revised the PM_{10} annual average standard to 20 µg/m^3 and established an annual average standard for $PM_{2.5}$ of 12 µg/m^3. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007, CARB approved the Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and $PM_{2.5}$ Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the $PM_{2.5}$ standard by 2015.

On December 12, 2008, the CARB adopted Resolution 08-43, which limits NOx, PM_{10}, and $PM_{2.5}$ emissions from on-road diesel truck fleets that operate in California. On October 12, 2009, Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the Year 2023, all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions, including a one-time per year, three-day pass for trucks registered outside of California.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the Basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

3.3.2.3 Regional

The South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). A revised draft of the 2012 AQMP was released in September 2012, was adopted by the SCAQMD Board on December 7, 2012, and was adopted by CARB via Resolution 13-3 on January 25, 2013. The 2012 AQMP was prepared in order to meet the federal Clean Air Act requirement that all 24-hour $PM_{2.5}$ non-attainment areas prepare a SIP, that were required to be submitted to the EPA by December 14, 2012 and demonstrate attainment with the 24-hour $PM_{2.5}$ standard by 2014. The 2012 AQMP demonstrates attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 in the Basin through adoption of all feasible measures, and therefore, no extension of the attainment date is needed.

The 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023 through implementation of future improvements in control techniques and technologies. These “black box” emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in this AQMP even though the primary purpose of this AQMP is to show compliance with 24-hour $PM_{2.5}$ emissions standards.

The 2012 AQMP is designed to satisfy the California Clean Air Act’s (CCAA) emission reductions of five percent per year or adoption of all feasible measures requirements and fulfill the EPA’s requirement to update transportation conformity emissions budgets based on the latest approved motor vehicle emissions model and planning assumptions. The 2012 AQMP updates and revises the previous 2007 AQMP. The 2012 AQMP was prepared to comply with the Federal Clean Air Act and State CCAA and amendments, accommodate growth, reduce the high pollutant levels in the Basin, meet Federal and State ambient air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive program that will lead this area into compliance with all federal and state air quality planning requirements.

The 2012 AQMP builds upon the approaches taken in the 2007 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the need to engage in interagency coordinated planning of mobile sources to meet all of the federal criteria pollutant standards. Compared with the 2007 AQMP,

the 2012 AQMP utilizes revised emissions inventory projections that use 2008 as the base year. On-road emissions are calculated using CARB EMFAC2011 emission factors and the transportation activity data provided by SCAG from their 2012 Regional Transportation Plan (2012 RTP). Off-road emissions were updated using CARB's 2011 In-Use Off-Road Fleet Inventory Model. Since the 2007 AQMP was finalized, new area source categories such as liquid propane gas (LPG) transmission losses, storage tank and pipeline cleaning and degassing, and architectural colorants, were created and included in the emissions inventories.

The control measures in the 2012 AQMP consist of three components: (1) Basin-wide and episodic short-term $PM_{2.5}$ measures; (2) Section 182(e)(5) implementation measures; and (3) transportation control measures. Many of the control measures are not based on command and control regulations, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes. More broadly, a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards.

During construction and operation, projects must comply with applicable rules and regulations. The following are rules that the Proposed Project may be required to comply with, either directly or indirectly:

SCAQMD Rule 402 prohibits a person from discharging 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.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices (BMPs), such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour (mph), sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with 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. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).

- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 445 prohibits permanently installed wood-burning devices into any new development. A wood-burning device means any fireplace, wood-burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. The rule states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

(1) The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.

(2) Coatings are applied with high-volume low-pressure, electrostatic, and/or airless spray equipment.

(3) An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of projects must comply with SCAQMD Rule 1108.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of projects must comply with SCAQMD Rule 1113.

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase of projects must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD Rule 1303 governs the permitting of relocated or new major emission sources, requiring best available control measures and setting significance limits for PM_{10} among other pollutants.

SCAQMD Rule 1401, New Source Review of Toxic Air Contaminants, specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units, which emit toxic air contaminants.

SCAQMD Rule 2202, On-Road Motor Vehicle Mitigation Options, provides employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state CCAA requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full- or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the Basin. Instead, this is controlled through local jurisdictions in accordance with the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues, the *CEQA Air Quality Handbook (SCAQMD CEQA Handbook)*, prepared by the SCAQMD in 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs of the AQMP. The purpose of the SCAQMD CEQA Handbook is to assist lead agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that the SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air

quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Basin, and adverse impacts will be minimized.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, economy, community development, and environment. SCAG is the federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, RTIP, and AQMP are based on projections originating within the City and County General Plans.

3.3.2.4 Local

The Air Quality Element of the County of Los Angeles General Plan summarizes air quality issues in the Basin, air quality-related plans and programs administered by federal, state, and special purpose agencies, and establishes goals and policies to improve air quality. These goals and policies in the Air Quality Element include:

Goal AQ 1: Protection from exposure to harmful air pollutants.

Policy AQ 1.1: Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
Policy AQ 1.2: Encourage the use of low or no VOC-emitting materials.
Policy AQ 1.3: Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
Policy AQ 1.4: Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Goal AQ 2: The reduction of air pollution and mobile source emissions through coordinated land use, transportation, and air quality planning.

Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
Policy AQ 2.2: Participate in, and effectively coordinate the development and implementation of, community and regional air quality programs.
Policy AQ 2.3: Support the conservation of natural resources and vegetation to reduce and mitigate air pollution impacts.

Policy AQ 2.4: Coordinate with different agencies to minimize fugitive dust from different sources, activities, and uses.

3.3.2.5 Sensitive Receptors

Those who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD defines a sensitive receptor as a land use such as residences, schools, child care centers, athletic facilities, playgrounds, retirement homes, and convalescent homes (SCAQMD 2008). Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours.

The nearest sensitive receptors to the project include: the single-family detached residential dwelling units located directly east and southeast of the project boundary along Beech Hill Avenue; the single-family detached residential dwelling units located along Overcrest Drive approximately 0.6 mile southwest of the site, the Wildwood Mobile Country Club located north of SR-60, approximately 0.5 mile northwest of the project boundary; Rio Hondo College athletic fields located approximately 0.25 mile southwest of the site; and Orange Grove Middle School and Palm Elementary School located adjacent to, and 0.38 mile to, the eastern boundary of the site, respectively.

3.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have a significant impact on air quality if it would:

- Conflict with or obstruct implementation of applicable air quality plans of either the SCAQMD or the Antelope Valley AQMD;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

3.3.4 Environmental Impacts

3.3.4.1 Air Quality Compliance

Threshold:	*Would the project conflict with or obstruct implementation of applicable air quality plans of either the SCAQMD or the Antelope Valley AQMD?*

Phases I and II

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the Proposed Project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the Proposed Project is inconsistent,

the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states, "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key criteria for consistency:

1. Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

2. Whether the project will exceed the assumptions in the AQMP in 2012 or increments based on the year of project buildout and phase.

Criterion 1 – Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis for the Proposed Project, short-term construction impacts would not result in significant impacts based on the SCAQMD regional and local thresholds of significance. The air quality analysis also found that long-term operations impacts would not result in significant impacts based on the SCAQMD thresholds of significance.

Therefore, the Proposed Project is not anticipated to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

Criterion 2 – Exceed Assumptions in the AQMP

Consistency with the AQMP assumptions is determined by performing an analysis of the Proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the Proposed Project are based on the same forecasts as the AQMP. The *2012-2035 Regional Transportation/Sustainable Communities Strategy*, prepared by SCAG in 2012, consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For the Proposed Project, the County of Los Angeles General Plan defines the assumptions that are represented in the AQMP.

The landfill is designated Public and Semi-Public in the County's General Plan Land Use Element. The eastern half of the landfill is located within the Hacienda Heights Community Plan and is designated as Open Space Parks and Recreation (OS-PR). The western half of the landfill is located within the Workman Mill Zoned District and is zoned Heavy Agricultural (A-2-5) with a small portion zoned Light Agricultural (A-1-5).

The eastern half of the landfill is located within the Hacienda Heights Zoned District and is zoned Open Space (O-S). The front entry of the landfill is located within the City of Industry. This area is designated as Employment on the City of Industry General Plan Land Use Map. Because the Proposed Project would include a park, which is a public use and includes passive and active open space uses, the Proposed Project is consistent with the land use designations in the General Plan. Therefore, the Proposed Project would not exceed the AQMP assumptions for the project site and would be consistent with the AQMP for the second criterion.

Based on the above analysis, the Proposed Project would not result in an inconsistency with the SCAQMD AQMP. Therefore, no impacts would occur.

Future Phases

Construction and operation of Future Phases of the Proposed Project would result in similar air quality impacts as Phases I and II. Implementation of Future Phases of the Proposed Project would not result in an inconsistency with the SCAQMD AQMP. Therefore, impacts would be less than significant.

3.3.4.2 Criteria Pollutant Analysis

Threshold:	*Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

Phases I and II and Future Phases

Construction Impacts

The criteria pollutant emissions for each construction-related activity of the Proposed Project (at full buildout) are shown below in Table 3.3-5. As shown in Table 3.3-5, the Proposed Project's emissions would not exceed regional thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the Proposed Project.

Table 3.3-5. Construction-Related Regional Pollutant Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Prep						
On-Site[2]	4.84	51.75	39.40	0.04	10.04	6.43
Off-Site[3]	0.07	0.09	1.13	0.00	0.20	0.06
Total	**4.91**	**51.84**	**40.53**	**0.04**	**10.25**	**6.49**
Grading						
On-Site[2]	5.29	59.53	42.31	0.06	5.23	3.87
Off-Site[3]	0.07	0.09	1.14	0.00	0.23	0.06
Total	**5.36**	**59.63**	**43.45**	**0.06**	**5.46**	**3.93**
Building Construction						

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
On-Site[2]	2.11	19.08	16.81	0.03	1.11	1.05
Off-Site[3]	12.16	57.88	175.92	0.49	30.19	8.79
Total	**14.27**	**76.97**	**192.73**	**0.52**	**31.30**	**9.83**
Paving						
On-Site[2]	1.38	6.98	15.52	0.03	0.32	0.32
Off-Site[3]	0.02	0.03	0.41	0.00	0.17	0.05
Total	**1.40**	**7.01**	**15.93**	**0.03**	**0.49**	**0.37**
Architectural Coating						
On-Site[2]	0.78	0.86	1.80	0.00	0.02	0.02
Off-Site[3]	0.67	0.84	11.36	0.06	4.82	1.31
Total	**1.45**	**1.70**	**13.16**	**0.07**	**4.84**	**1.33**
Total of overlapping phases[4]	**17.12**	**85.68**	**221.82**	**0.61**	**36.64**	**11.53**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	no	no	no	no	no	no

[1]Source: CalEEMod Version 2013.2.2
[2]On-site emissions from equipment operated on-site that is not operated on public roads.
[3]Off-site emissions from equipment operated on public roads.
[4]Construction, architectural coatings and paving phases may overlap.

Operational Impacts

The operations-related criteria air quality impacts created by the Proposed Project were analyzed through use of the CalEEMod model. The operating emissions were based on the year 2035, the anticipated opening year of the Proposed Project. The CalEEMod analyzes operational emissions from mobile sources, area sources, and energy usage.

Mobile sources include emissions from the additional vehicle miles generated from the Proposed Project. The vehicle trips associated with the Proposed Project were obtained from the traffic impact analysis (TIA; Fehr & Peers 2016). The Proposed Project would generate 20 trips per acre.

Area sources include emissions from consumer products, landscape equipment, and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment.

Energy usage includes emissions from the generation of electricity and natural gas used on-site. The 2013 Title 24 commercial standards are at least 25 percent more efficient than the 2008 Title 24 commercial standards used as the default in CalEEMod.

The worst-case summer or winter VOC, NOx, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions generated by the Proposed Project's (worst-case; final buildout) long-term operations

have been calculated and are summarized below in Table 3.3-6. This table shows that the Proposed Project's emissions would not exceed the SCAQMD regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the Proposed Project.

Table 3.3-6. Unmitigated Regional Operational Pollutant Emissions[1]

Final Park Concept (Project)						
	Pollutant Emissions (pounds/day)					
Activity	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	2.24	0.00	0.03	0.00	0.00	0.00
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	4.46	11.41	50.95	0.23	14.44	4.07
Total Emissions	**6.70**	**11.41**	**50.98**	**0.23**	**14.44**	**4.07**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	No	No	No	No	No	No

[1]Source: CalEEMod Version 2013.2.2
[2]Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. Emissions for consumer products = EF x building area. The default EF in CalEEMod for this area is 1.98 x 10^-5 lbs/SF/day. Building area for the project is 30,950 SF. Therefore, (1.98 x 10^-5 lbs/SF/day) x 30,950 SF = 0.61281 lbs/day. Overall area sources (lbs/day) = 1.6233 + 0.61281+ 0.00293 = 2.24 lbs/day. Building area for the high build Alt is 40,250 SF. Therefore, (1.98 x 10^-5 lbs/SF/day) x 40,250 SF = 0.79695 lbs/day. Overall area sources (lbs/day) = 1.5839 + 0.79695 + 0.00661 = 2.39 bs/day.
[3]Energy usage consists of emissions from on-site natural gas usage.
[4]Mobile sources consist of emissions from vehicles and road dust.

3.3.4.3 Cumulative Regional Air Quality Impacts

Threshold:	*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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

Phases I and II

Cumulative projects include local development, as well as general growth within the project area. As with most development, the greatest source of emissions associated with the Proposed Project is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and, when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the Proposed Project's air quality must be generic by nature.

The project area is out of attainment for both ozone and particulate matter (PM_{10}). Construction and operation of cumulative projects would further degrade the local air quality, as well as the air quality of the Basin. The greatest cumulative impact on the quality of regional air cell would be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of

heavy equipment and trucks associated with the construction of these projects. Air quality would be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. Therefore, with respect to long-term emissions, the Proposed Project would result in a less than significant cumulative impact.

Future Phases

Construction and operation of Future Phases of the Proposed Project would result in similar air quality impacts as Phases I and II. Therefore, implementation of Future Phases would result in less than significant cumulative air quality impacts.

3.3.4.4 Exposure of Sensitive Receptors

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

Phases I and II and Future Phases

Construction Impacts

Local Air Quality Impacts from Construction

As shown in Table 3.3-7, the maximum number of acres disturbed in a day during construction of the Proposed Project would be five acres.

Table 3.3-7. Maximum Number of Acres Disturbed Per Day[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Prep	Rubber Tired Dozers	3	0.5	1.5
	Tractors/Loaders/Backhoes	4	0.5	2
Total per phase		-	-	**3.5**
Site Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Excavators	2	0.5	1
	Scrapers	2	1	2
	Tractors/Loaders/Backhoes	2	0.5	1
Total per phase		-	-	**5**

[1] Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to

readily determine if the daily emissions of CO, NOx, PM_{10}, and $PM_{2.5}$ from the Proposed Project could result in a significant impact to the local air quality. The emission thresholds were calculated based on the South San Gabriel Valley, source receptor area (SRA) 11 and a disturbance value of five acres per day. According to Localized Significance Threshold Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25-meter thresholds. The nearest sensitive receptors lie approximately 345 meters from any construction area; therefore, the SCAQMD Look-up Tables for 200 meters was used. Table 3.3-8 details the on-site emissions from the CalEEMod model for the different construction phases and the SCAQMD Localized Significant Threshold emissions thresholds for five acres and a distance of 200 meters.

Table 3.3-8. Local Construction Emissions at the Nearest Receptors[1]

Phase	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM_{10}	$PM_{2.5}$
Site Prep	51.75	39.40	10.04	6.43
Grading	59.53	42.31	5.23	3.87
Building Construction	19.08	16.81	1.11	1.05
Paving	6.98	15.52	0.32	0.32
Architectural Coating	0.86	1.80	0.02	0.02
SCAQMD Threshold for 25 meters (82 feet)[2]	**202**	**4,024**	**91**	**34**
Exceeds Threshold?	no	no	no	no

[1]Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for five acres in South San Gabriel Valley Source Receptor Area (SRA 11). Project will disturb a maximum of 5 acres per day (see Table 8).
[2]The nearest sensitive receptors lie approximately 345 meters from any construction work; therefore, the 200 meter threshold was used.

The data provided in Table 3.3-8 shows that none of the analyzed criteria pollutants would exceed the calculated local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the Proposed Project.

Construction-Related Toxic Air Contaminant Impacts

The greatest potential for TAC emissions would be related to DPMs associated with heavy equipment operations during construction of the Proposed Project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk", which is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment, the intermitted nature and phasing of the construction activities, and the distance from the construction sources to the nearest receptors, the Proposed Project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions and corresponding individual cancer risk. Therefore, no significant short-term TAC impacts are anticipated to occur during construction of the Proposed Project.

Operational Impacts

Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards.

To determine if the Proposed Project could cause emission levels in excess of the CO standards, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

The traffic impact analysis showed that the Proposed Project would generate a maximum of 2,340 trips. The intersection with the highest traffic volume is located at Peck Road and the I-605 Southbound Ramps and has a worst-case cumulative plus project PM peak hour volume of 1,315 vehicles. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection that has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. Therefore, as the intersection with the highest traffic volume would be substantially less than 100,000 vehicles per day, no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the ongoing use of the Proposed Project.

Local Air Quality Impacts from On-Site Operations

Project-related air emissions from on-site sources such as architectural coatings, landscaping equipment, and on-site usage of natural gas appliances, as well as the operation of vehicles on-site, may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the Basin. The nearest sensitive receptors that may be impacted by the Proposed Project are the single-family detached residential dwelling units located directly east and southeast of the project boundary along Beech Hill Avenue; the single-family detached residential dwelling units located along Overcrest Drive approximately 0.6 mile southwest of the project site, the Wildwood Mobile Country Club located north of SR-60, approximately 0.5 mile northwest of the project boundary; Rio Hondo College athletic fields located approximately 0.25 mile southwest of the project site; and Orange Grove Middle School and Palm Elementary School located adjacent to, and 0.38 mile from, the eastern boundary of the site, respectively.

According to SCAQMD Localized Significance Threshold methodology, Localized Significance Thresholds would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site, such as industrial

warehouse/transfer facilities. The Proposed Project does not include such uses. Therefore, due the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted.

Landfill Gas and Enclosed Structures

With the exception of the Entry Plaza and Nike Hill constituents, the majority of the park amenities in Phases I and II would be constructed on the closed landfill. Of the gases produced in landfills, ammonia, sulfides, methane, and carbon dioxide are of most concern. Ammonia and hydrogen sulfide are responsible for most of the odors at landfills. If methane gas infiltrates any enclosed structure, it can build up to dangerous levels. Methane is not toxic, but concentrations of methane in the air above certain levels can constitute an explosion hazard. Methane and carbon dioxide can also collect in nearby buildings and displace oxygen. A landfill gas collection and recovery system is present on the project site, which would minimize the potential for gas infiltration into structures. Routine structures monitoring and compliance with regulatory guidelines further minimize this potential. Impacts would be less than significant with Mitigation Measure HAZ-1.

Landfill Gas Release

An uncontrolled landfill gas release could expose on-site employees and park users to increased explosion and fire risks. In sufficient quantities and under certain conditions, landfill gas, which contains methane, can be flammable or explosive. As discussed above, the closed landfill has a landfill gas collection system to prevent landfill gas from accumulating on-site and migrating off-site. The collection system consists of trenches and wells that collect the gas from the solid waste. The gas is combusted for electricity generation or flared off. The Sanitation Districts has a comprehensive monitoring and maintenance system to ensure that accidental releases of landfill gas are avoided. Collection system piping, wells, and trenches are monitored regularly to check for leaks. Ambient air sampling is conducted to monitor surface gas emissions. Additionally, the system has been designed to withstand the maximum probable earthquake (MPE without damage to the foundation or to the structures that control leachate, surface drainage or erosion, or gas (27 CCR §20370). An MPE is defined as the maximum earthquake that is likely to occur during a 100 year interval. In the unlikely event that an emergency release occurs, the Sanitation Districts has developed an Emergency Action/Fire Protection Plan for potential emergencies such as fire, explosion, accidents, and earthquakes. Contingencies for fires or explosions related to the gas collection system are included in this plan. As part of the JPA between the Sanitation Districts and the DPR, a similar emergency action plan would be developed for the park use that would include the roles of park staff, evacuation routes, and communication protocols in the event of an emergency. Impacts related to emergency access on the shared loop road are discussed in Section 3.14, Transportation/Traffic. A less than significant impact would occur.

The monolithic clay cover needs to be maintained at certain moisture; too much water can cause cracking and gas escape. The Master Plan includes recommendations for a plant palette, soil amendment, fertilizer, and irrigation schedule to maintain the integrity of the landfill cap. No impact is anticipated.

3.3.4.5 Odors

Threshold:	*Would the project create objectionable odors affecting a substantial number of people?*

Phases I and II

Construction Impacts

Potential sources that may emit odors during construction of the Proposed Project may include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process would be short-term in nature and the odor emissions are expected to cease upon the drying or hardening of the odor-producing materials. Due to the short-term nature and limited amounts of odor-producing materials being utilized, impacts related to odors during construction of the Proposed Project would be less than significant.

Operational Impacts

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations. The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation 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. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

Land uses typically considered to be associated with odors include wastewater treatment facilities, waste-disposal facilities, and agricultural operations. The Proposed Project does not include these uses. In addition, the Proposed Project would be required to conform to the odor requirements of SCAQMD Rule 402. Therefore, odor-related impacts are considered to be less than significant.

Future Phases

Construction and operation of Future Phases of the Proposed Project would result in similar odors as Phases I and II. Therefore, implementation of Future Phases would result in less than significant odor impacts.

3.3.5 Mitigation Measures

Due to the potential for gas infiltration into structures Mitigation Measure HAZ-1 is shall be implemented (please see Section 3.8 of this Draft PEIR).

Because no other significant impacts associated with air quality would occur, no additional mitigation measures would be required. Although no significant air quality

impacts would occur, construction and operation of the Proposed Project must comply with applicable SCAQMD rules and regulations, as presented in Section 3.3.3.

3.3.6 Residual Impacts After Mitigation

No significant impacts to air quality would occur with implementation of the Proposed Project.

3.4 BIOLOGICAL RESOURCES

This section describes biological resources in the vicinity of the project site and evaluates the impacts that implementation of Proposed Project may have on these resources. Biological resources examined in this section include sensitive plant and animal species, wildlife habitats, migration corridors, vegetation communities, and aquatic resources under the jurisdiction of state and federal resource protection agencies. A general biological resources assessment was completed for the Proposed Project (ECORP 2015b). This biological technical report described the results of the biological resources assessment for the Proposed Project and included a summary of the literature review, a map of the vegetation communities and habitats present, a list of plant and wildlife species observed, and a discussion of biologically significant resources associated with each project area. The report is included in Appendix C and is summarized in this section.

The Proposed Project contains a mix of developed space, previously disturbed natural habitats, and intact natural habitats. Six plant communities, California sage scrub, mixed chaparral, coast live oak woodland, California annual grassland, non-native woodland, and ruderal, were identified within the Proposed Project. One federal- and state-listed endangered plant species, Nevin's barberry (*Berberis nevinii*) and one federal-listed endangered plant species, Braunton's milk-vetch (*Astragalus brauntonii*), along with nine other sensitive plant species, Catalina mariposa lily (*Calochortus catalinae*), slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Plummer's mariposa lily (*Calochortus plummerae*), intermediate mariposa lily (*Calochortus weedii* var *intermedius*), many-stemmed dudleya (*Dudleya multicaulis*), fragrant pitcher sage (*Lepechinia fragrans*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*), and Coulter's matilija poppy (*Romneya coulteri*) were determined to have a moderate to high potential to occur within the Proposed Project. Critical habitat has been designated for Braunton's milk-vetch, and Nevin's barberry. However, the Proposed Project is not located in designated or proposed critical habitat for either of these species.

One federal-listed wildlife species, coastal California gnatcatcher (*Polioptila californica californica*), was observed during the assessment and a portion of the site is located in a Critical Habitat area for this species. One state-listed threatened wildlife species, Swainson's hawk (*Buteo swainsoni*) and four California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC); American badger (*Taxidea taxus*), Western mastiff bat (*Eumops perotis*), Western red bat (*Lasiurus blossevillii*), and Western yellow bat (*Lasiurus xanthinus*); were identified as having a potential to occur on the project site.

3.4.1 Environmental Setting

3.4.1.1 Regional Setting

The project site is situated in the San Gabriel Valley in eastern Los Angeles County. The San Gabriel Valley is characterized by a built out/urbanized valley surrounded by the San Gabriel Mountains to the north, the Chino Hills and San Jose Hills to the east, the Puente Hills to the south, and the San Rafael Hills to the west. The project site is located within

the Puente Hills in the southern portion of the San Gabriel Valley. To the south and southwest, the project site is border by a mix of uses, including a 230-acre preserve area managed by the Puente Hills Habitat Preservation Authority (Habitat Authority), a cemetery use (Rose Hills Memorial Park), and a Southern California Edison (SCE) ROW that contains two high power overhead electric transmission lines (T/L).

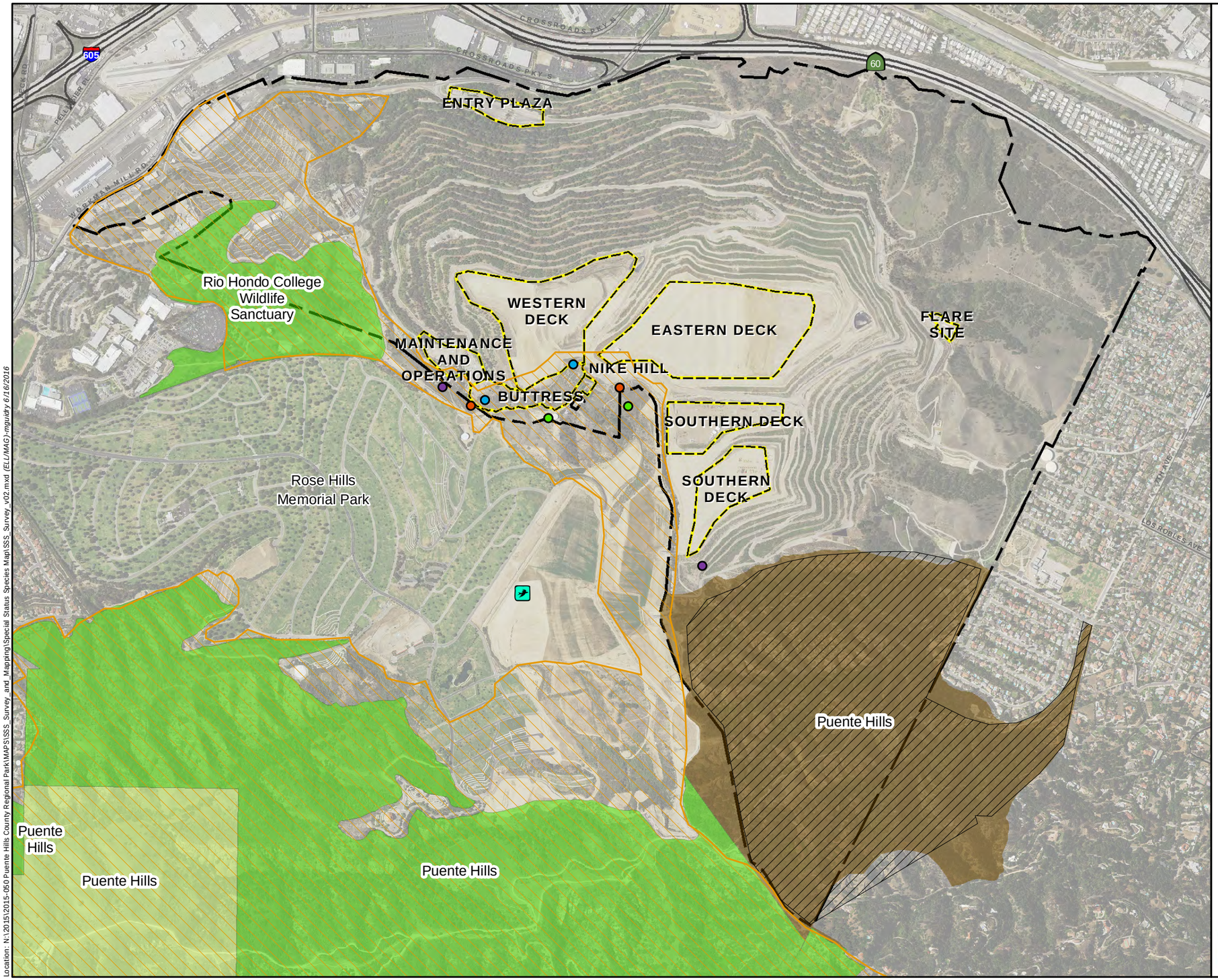
Despite the largely built out/urban character of the valley, several prominent open spaces remain. Some areas within the valley are reserved for open space, including the Habitat Authority's lands (Preserve) which consist of undeveloped land located within the cities of Whittier and La Habra Heights and the unincorporated areas of Hacienda Heights and Rowland Heights, stretching from Harbor Boulevard in the east to the intersection of I-605 and SR-60 in the west (LSA 2007). The northwest portion of the Puente Hills, adjacent to the Rio Hondo Community College (RHCC) campus and the Puente Hills Landfill, includes the RHCC Wildlife Sanctuary Significant Ecological Area SEA. The RHCC SEA is approximately 109 acres and is used primarily by faculty and students at RHCC as a natural classroom and laboratory (Los Angeles County 2016a). The areas of open space are depicted on Figure 3.4-1.

Regional Wildlife Corridors. The project site is located at the northern edge of the Puente-Chino Hills which are well-known for their strategic location between large tracts of open space in the San Gabriel and Santa Ana Mountains, providing for a wildlife corridor (LSA 2007; Penrod, Hunter, and Merrifield 2001). The Puente-Chino Hills represent a continuous series of undeveloped open spaces consisting of both private and public lands, extending west from State Route 91 in Orange and Riverside Counties to I-605 in Los Angeles County (Haas and Crooks 1999).

Natural areas near the project area include the Habitat Authority Preserve to the southeast (Hacienda Hills), in addition to the Hellman Wilderness Park and Sycamore Park to the west, and Arroyo Pescadero Park to the south. These natural areas connect to the southern edge of the project site. The Preserve is an integral part of the Puente-Chino Hills Wildlife Corridor, an unbroken zone of natural habitat extending nearly 31 miles from the Cleveland National Forest in Orange County to the west end of the Puente Hills above Whittier Narrows. The Puente-Chino Hills support a wide variety of habitats covering more than 30,000 acres of land (LSA 2007).

Wildlife linkages and corridors can function to increase the habitat value of blocks of habitat or to mitigate the effects of habitat fragmentation, however there is a limited amount of information on how the mosaic of habitats across the landscape can affect biodiversity patterns and ecosystem processes (Merenlender 2007). Linkages are generally considered to be any connective land between larger blocks of habitat that promotes movement of a variety of species and/or ecosystem processes. These connections can facilitate the movement of larger animals and can serve as "live-in" habitat for smaller species, both of which can improve gene flow among populations.

Figure 3.4-1.
Puente Hills
Sensitive Resources Map



Boundaries

- Project Boundary [1]
- Project Areas

CNDDB Occurrences [2]

Birds

- Vireo bellii pusillus

Survey Observations

California Gnatcatcher

- Family group
- Individual
- Nest
- Pair

- Native Habitat Preservation Area

Critical Habitat

- California Gnatcatcher[3]

Significant Ecological Areas

- Conceptual SEAs
- Significant Ecological Areas (Incorporated City)
- Significant Ecological Areas (SEA)

This map may include multiple species' occurrences at each location, some of which may not be visible on this graphic. The CNDDB occurrences shown may not reflect the actual location of the occurrence.

[1] Project Boundary: Los Angeles County GIS parcels
[2] CDFW California Natural Diversity Database (CNDDB), June 2015 (GIS Shapefile)
[3] USFWS Critical Habitat Data
CNDDB Occurrences Located on USGS 7.5' Quadrangles: El Monte, Whittier

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\SSS_Survey_and_Mapping\Special Status Species Map\SSS_Survey_v02.mxd (ELL/MAG)-mguldry 6/16/2016

2015-050 Puente Hills Landfill

Feet
0 1,000 2,000

Map Date: 6/6/2016

THIS PAGE INTENTIONALLY LEFT BLANK

The Puente-Chino Hills Wildlife Corridor contains discontinuous blocks and patches of habitat. It is not an unbroken corridor but provides "stepping-stone" connectivity between habitats (Crooks and Sanjayan 2006). Movement by larger avian species, such as red-tailed hawks, may not be affected by the lack of continuity because they are capable of traveling longer distances throughout the corridor. Smaller avian species may be able to disperse through neighboring urban areas to access nearby patches of habitat. Additionally, movement through these areas by mammals that tend to tolerate and use urban environments, such as Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*) may not be affected by the lack of continuity.

Significant Ecological Areas (SEA). An SEA designation is given by the Los Angeles County General Plan to land that contains irreplaceable biological resources. These sites were selected in an effort to identify areas that possess uncommon, unique, or rare biological resources, and areas that are prime examples of the more common habitats and communities within Los Angeles County. The objective of the SEA Program is to conserve genetic and physical diversity by designating biological resource areas that are capable of sustaining themselves into the future (Los Angeles County 2015). The original boundaries of the SEAs have been slightly modified over time. In 2014, the proposed SEA map was modified to show proposed SEAs within Altadena, Rowland Heights, and Hacienda Heights, which all have an existing community plan, as Conceptual SEAs (Los Angeles County 2015, 2016b). Conceptual SEAs are to be considered and effective only through the preparation and adoption of community-based plans. The Los Angeles County General Plan Update, including the SEA Program Goals and Policies, Countywide SEA and Coastal Resource Areas Map, and SEA Descriptions were approved at a public hearing by the Board of Supervisors on March 24, 2015 (Los Angeles County 2015). Conceptual areas are still pending approval and require a review for compatibility with the existing community plans (Los Angeles County 2016b).

Located in the far northwest portion of the Puente Hills, adjacent to the RHCC campus and the Puente Hills Landfill, the RHCC Wildlife Sanctuary SEA is approximately 109 acres and is used primarily by faculty and students at RHCC as a natural classroom and laboratory (Los Angeles County 2016a). Within the RHCC Wildlife Sanctuary SEA is Ecology Canyon, a 24-acre area in the western corner of the landfill. The RHCC Wildlife Sanctuary SEA includes examples of riparian woodland, chaparral, oak woodland, and coastal sage scrub communities. Students and professors at RHCC have recorded a wide variety of plant life and over 100 species of vertebrates in this SEA (Moore lacofano Goltsman 2006).

The Conceptual SEA for the Hacienda Heights community is located within and adjacent to the Preserve managed by the Habitat Authority which includes riparian, woodland, grassland, coastal sage scrub, areas of cliff and rock, as well as disturbed areas (LSA 2007; Los Angeles County 2016b). The project site is immediately adjacent to both SEAs but does not extend into either SEA boundary.

3.4.1.2 Site Specific Setting

The Proposed Project is located within the boundaries of the landfill, which is owned by Sanitation Districts. The landfill is approximately 1,365 acres in size. After operating for 56 years, the Puente Hills Landfill closed on October 31, 2013 in accordance with

Conditional Use Permit conditions. Even though the Puente Hills Landfill no longer accepts refuse, other facilities located within the landfill site continue to operate. These facilities include the MRF, the Sanitation Districts Puente Hills Field Office, and the landfill gas management facilities.

Federal and State regulations require the Sanitation Districts to monitor, inspect, maintain, and repair the closed landfill on a regular basis for a minimum of 30 years from its closure date. The Sanitation Districts is responsible for the extensive environmental control systems that are in place including the landfill's final cover, surface water drainage system, landscape and irrigation, groundwater quality protection system, landfill gas recovery system, and fire control measures. These activities would continue even if no park development occurred at the landfill site.

The Puente Hills Landfill site contains a series of ridges, hillsides, and canyons which rise up around surrounding valleys. Elevation in the area ranges from approximately 225 feet (ft) above mean sea level (msl) near the northwestern boundary to approximately 1,240 ft above msl at the southern boundary. The site currently contains a range of environments, including natural and artificial slopes that support native habitats, restored native habitats, non-native planted woodlands, actively managed artificial landfill decks, an extensive paved and unpaved road network, and several maintenance buildings. The landfill decks are still settling as underlying trash decomposes and many of the hillsides are traversed by landfill gas (methane) pipelines ranging in diameter from 12 to 36 inches. The entire site is traversed by more than 10 miles of internal roadways of varying widths, which are not open to the public. Landfill closure and maintenance activities and facilities are currently the dominant uses of the project site, including the operation of heavy equipment and the MRF on the northwestern edge of the site. Landfill closure activities are projected to continue for at least 30 years, decreasing over time as deck settling rates and landfill gas production decline.

Vegetation. Plant species observed in the project area during the biological survey were characteristic of California sage scrub, mixed chaparral, coast live oak woodland, California annual grassland, non-native woodland, ruderal, and disturbed and developed habitat. Plants observed within the project area included a wide variety of native and non-native species. Vegetation consisted predominantly of native species, including white sage (*Salvia apiana*), big saltbush (*Atriplex lentiformis*), chamise (*Adenostoma fasciculatum*), California buckwheat (*Eriogonum fasciculatum*), coast live oak (*Quercus agrifolia*), and blue elderberry (*Sambucus nigra ssp. caerulea*); and non-native species like eucalyptus (*Eucalyptus* sp.), acacia (*Acacia* sp.), rescue grass (*Bromus catharticus*), and wild oat (*Avena fatua*). Many of the species observed in disturbed or developed areas included predominantly non-native species, such as Russian thistle (*Salsola tragus*), black mustard (*Brassica nigra*), milk thistle (*Silybum marianum*), brome grasses, and tree tobacco (*Nicotiana glauca*). A total of 95 plant species were identified during the biological resources assessment (ECORP 2015b). Figure 3.4-2depicts the distribution of the communities across the Proposed Project and adjacent areas. Vegetation community type descriptions followed a combination of descriptions from Holland (1986) and Sawyer et al. (2009).

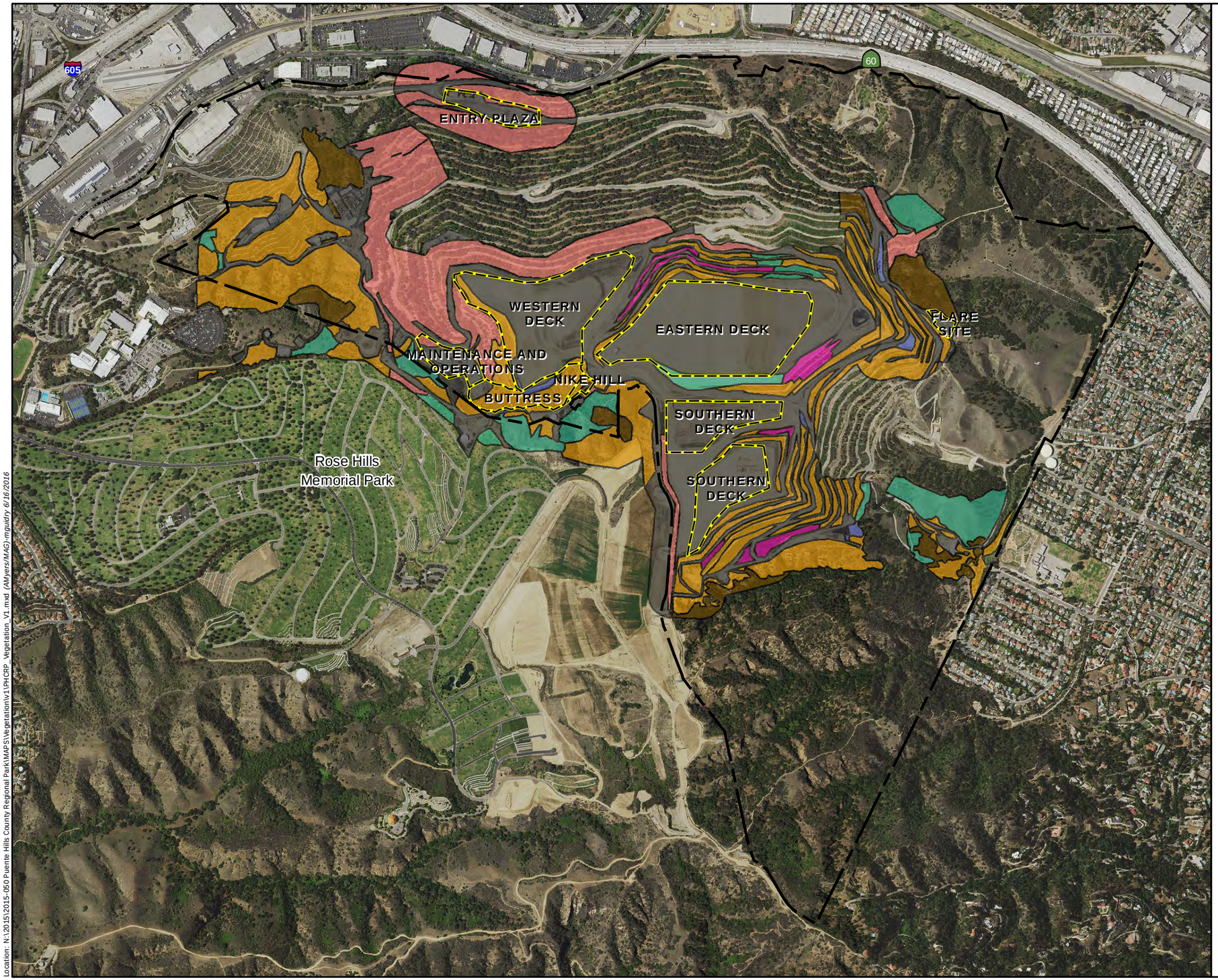


Figure 3.4-2. Vegetation Communities

Project Boundary

Project Areas

Vegetation Code - Vegetation Type

- Disturbed/Developed
- Coastal Sage Scrub
- Non-native Woodlands
- Grass
- Coast Live Oak Woodland
- Mixed Chaparral Annual Grassland
- Ruderal

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Vegetation\v1\PHCRP_Vegetation_V1.mxd (AMyers/MAG)-mguidry 6/16/2016

2015-050 Puente Hills Landfill

Feet
0 1,000 2,000

Photo Source: NAIP 2014

Map Date: 6/6/2016

THIS PAGE INTENTIONALLY LEFT BLANK

3.4.1.3 Sensitive Habitats

Coastal Sage Scrub. Coastal sage scrub habitats are a mixture of herbaceous, suffrutescent, and shrubby species that usually average two meters or less in height. The dominant plants include California sagebrush and California buckwheat scrub. The new classification of this vegetation type is California sagebrush-California buckwheat scrub (*Artemisia californica - Eriogonum fasciculatum* shrubland alliance). Most dominant species are fully or partially drought-deciduous or have terminal dieback, though some species are evergreen including coyote bush (*Baccharis pilularis*), lemonade berry (*Rhus integrifolia*), and laurel sumac *(Malosma laurina*). Other plant species on site include chaparral yucca, white sage, black sage, holly-leaved cherry, and basketbush (*Rhus trilobata*). The canopy is two-tiered and intermittent to continuous, with a seasonally present herbaceous layer and contains soils that are colluvial derived. Due to the relatively soft texture of stems and leaves, coastal sage scrub communities are sometimes called “soft chaparral”.

Coastal sage scrub habitat was the most abundant community within the eastern, western, and southern portions of the project area (ECORP 2015) comprising 12.5 acres primarily within the Buttress and Western Deck as noted in Table 3.4-1.

Table 3.4-1. Vegetation Communities within the Project Site

VEGETATION COMMUNITIES	PROJECT COMPONENTS								
	BUTTRESS	EASTERN DECK	ENTRY PLAZA	FLARE SITE	MAINTENANCE AND OPERATIONS	NIKE HILL	SOUTHERN DECK	WESTERN DECK	GRAND TOTAL
Coast Live Oak Woodland	0.0	0.0	0.0	0.01	0.0	0.0	0.0	0.0	0.01
Coastal Sage Scrub	7.8	0.1	0.0	0.0	0.0	0.6	0.2	3.8	12.5
Disturbed/Developed	1.4	50.7	5.4	1.2	5.1	0.3	28.2	35.7	128
Grass	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Non-native Woodlands	0.01	0.0	1.1	0.0	0.8	0.1	0.1	0.2	2.3
Ruderal	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9
Grand Total	9.9	51.9	6.5	1.2	5.9	1.0	28.5	39.9	144.8

United States Fish and Wildlife Service (USFWS) Critical Habitat. The USFWS has designated 13 critical habitat units for the coastal California gnatcatcher, which includes the Puente Hills and the Preserve within and adjacent to the eastern southern portions of the project site (USFWS 2007). There is approximately 15.2 acres of critical habitat within the project site including 9.4 acres in the Buttress, 1.0 acre within the Eastern Deck, 0.4 acre within areas of Maintenance and Operations, 1.0 acre on Nike Hill, and 3.5 acre on the Western Deck as shown on Figure 3.4-2. No other critical habitat designations are within or adjacent to the project site.

Sensitive Plant Species. According to the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Data Base (CNDDB), the CNPS Inventory of Rare, Threatened, and Endangered Plants of California, six sensitive plant species have been documented on the project site or within the vicinity of the site (CNPS 2015; CDFW 2015a; LSA 2007). One federal- and state-listed endangered plant species, Nevin's barberry and one federal-listed endangered plant species, Braunton's milk-vetch, along with nine other sensitive plant species were found to have a moderate to high potential to occur within the Proposed Project. Critical habitat has been designated for Braunton's milk-vetch, and Nevin's barberry. However, the Proposed Project is not located in designated or proposed critical habitat for either of these species.

The remaining plants are not federally or state protected and/or are not likely to occur. No rare, threatened, or endangered plant species were observed within the project area during the biological assessment.

Wildlife. The project area and surrounding areas provide habitat for a number of wildlife species that are adapted to or tolerant of human disturbance. Birds were the most abundant species observed, some of which included: western scrub-jay (*Aphelocoma californica*), northern mocking bird (*Mimus polyglottos*), red-tailed hawk (*Buteo jamaicensis*), California towhee (*Pipilo crissalis*), black phoebe (*Sayornis nigricans*), and mourning dove (*Zenaida macroura*) (ECORP 2015b).

The trees and buildings on the project site provide habitat and potential nesting sites for a variety of bird species. Additionally, the tall trees as well as the adjacent steel-lattice transmission line towers provide potential nesting sites for raptors and owls. Other wildlife species detected within the project area included: desert cottontail (*Sylvilagus audubonii*), mule deer (*Odocoileus hemionus),* California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), and western fence lizard (*Sceloporus occidentalis*). A total of 1 insect, 1 reptile, 27 bird, and 4 mammal species were observed within the project area and immediate vicinity. Most of the species observed during the biological resources assessment were expected within the area (ECORP 2015b).

Migratory birds, including raptors, hummingbirds, songbirds, and others, may occur in or adjacent to all project areas during the spring and summer nesting season in the trees occurring along the project area and are discussed in the following section.

Sensitive Wildlife Species. The CNDDB lists 17 special status wildlife species that have been documented on the project site or within the vicinity of the site (CDFW 2015). One federally listed threatened and state listed Species of Special Concern (SSC) wildlife species, coastal California gnatcatcher, was detected within the project site during the biological resources assessment. One state listed threatened species, Swainson's hawk, has a low potential to occur, and four SSC: American badger, western mastiff bat, western red bat, and western yellow bat; have a moderate to high potential to occur. The remaining species are not federally or state protected and/or are not likely to occur.

Plant and wildlife potential for occurrence is shown in Table 3.4-2 and Table 3.4-3.

Table 3.4-2. Plant Potential for Occurrence

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Acanthoscyphus parishii* var. *parishii Parish's oxytheca	Fed: Ca: CNPS:	none none 4.2	June - September 1220-2600	Occurs in sandy or gravelly areas within chaparral or lower montane coniferous forest habitats.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Arctostaphylos glandulosa* ssp. *gabrielensis San Gabriel manzanita	Fed: Ca: CNPS:	none none 1B.2	March 595-1500	Occurs in rocky chaparral habitat and is known only from the Mill Creek Summit divide in the San Gabriel mountains.	**Presumed Absent:** The Project site is well below the known elevational range for this species and the species is not known to occur in the vicinity.
Asplenium vespertinum Western spleenwort	Fed: Ca: CNPS:	none none 4.2	February-June 180-1000	Occurs in rocky soils within chaparral, cismontane woodland, and coastal scrub habitat.	**Low:** Only marginal areas of suitable habitat for this species occurs within or adjacent to the Project locations and known observations are more than 5 miles from the Project site.
Astragalus brauntonii Braunton's milk-vetch	Fed: Ca: CNPS:	END none 1B.1	January-August 150-740	Recent burns or disturbed soils, usually sandstone with carbonate layers within chaparral, coastal scrub, or valley and foothill grasslands habitat.	Moderate: Suitable habitat for this species occurs within or adjacent to the Project locations but known observations are more than 5 miles from the Project site.
Atriplex parishii Parish's brittlescale	Fed: Ca: CNPS:	none none 1B.1	June-October 25-1900	Occurs in alkaline soils within chenopod scrub, playas, or vernal pool habitats.	**Presumed Absent:** Suitable habitat for this species does not occur within or adjacent to the Project locations and known observations are documented more than 5 miles from the Project site.
Atriplex serenana* var. *davidsonii Davidson's saltscale	Fed: Ca: CNPS:	none none 1B.2	April-October 10-200	Occurs in alkaline soils in coastal bluff scrub and coastal scrub habitats.	**Low:** Marginal habitat for this species may occur within or adjacent to the Project locations but known observations are more than 5 miles from the Project site.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Berberis nevinii Nevin's barberry	Fed: Ca: CNPS:	END END 1B.1	March-June 274-825	Sandy or gravelly soils within in chaparral, cismontane woodland, coastal scrub, or riparian scrub habitats.	Moderate: Suitable habitat for this species occurs within or adjacent to the Project locations but known observations are more than 5 miles from the Project site.
California macrophylla Round-leaved filaree	Fed: Ca: CNPS:	none none 1B.2	March-May 15-1200	Occurs in clay soils within cismontane woodlands and valley and foothill grasslands.	**Low:** Marginally suitable habitat for this species occurs within or adjacent to the Project locations but known observations are more than 5 miles from the Project site.
Calochortus catalinae Catalina mariposa lily	Fed: Ca: CNPS:	none none 4.2	February-June 15-700	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats.	**High:** Suitable habitat for this species occurs within or adjacent to the study area and known observations occur within 5 miles of the Project site.
Calochortus clavatus* var. *gracilis Slender mariposa-lily	Fed: Ca: CNPS:	none none 1B.2	March-November 320-1000	Occurs in chaparral, coastal scrub, and valley and foothill grassland habitats.	**Moderate:** Suitable habitat for this species occurs within or adjacent to the Project locations but known observations are more than 5 miles from the Project site.
Calochortus plummerae Plummer's mariposa-lily	Fed: Ca: CNPS:	none none 4.2	May-July 100-1700	Occurs in chaparral, coastal scrub, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland habitats.	**High:** Suitable habitat for this species occurs within or adjacent to project locations and, although not detected during the survey, occurrences of this species have previously been documented within the Project site.
Calochortus weedii* var *intermedius intermediate mariposa-lily	Fed: Ca: CNPS:	none none 1B.2	May-July 105-855	Occurs in rocky, calcareous soils within chaparral, coastal scrub, and valley and foothill grassland habitats.	**High:** Suitable habitat for this species occurs within or adjacent to project locations and occurrences of this species have previously been documented immediately adjacent to the Project site just south of the southern deck.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Calystegia felix lucky morning-glory	Fed: Ca: CNPS:	none none 3.1	March-September 30-215	Typically occurs in wetland and marshy areas but can also occur in drier silty loam and alkaline soils within meadows and seeps and alluvial riparian scrub habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Centromadia parryi* ssp. *australis southern tarplant	Fed: Ca: CNPS:	none none 1B.1	May-November 0-480	Coastal marsh and swamp edges, vernal pools, or vernally mesic valley and foothill grassland habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Centromadia pungens* ssp. *laevis smooth tarplant	Fed: Ca: CNPS:	none none 1B.1	April-September 0-640	Found in alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland habitats.	**Low:** Areas of suitable habitat for this species occurs within or adjacent to the study area but only one known observation is documented more than 5 miles from the Project site and is presumed to be extirpated.
Chorizanthe parryi* var. *fernandina San Fernando Valley spineflower	Fed: Ca: CNPS:	**CAN** **END** 1B.1	April-July 150-1220	Sandy areas within coastal scrub and valley and foothill grassland habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: Ca: CNPS:	none none 1B.1	April-June 275-1220	Sandy, rocky open areas within chaparral, cismontane woodland, coastal scrub and valley and foothill grassland habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Cladium californicum California sawgrass	Fed: Ca: CNPS:	none none 2B.2	June-September 60-1600	Meadows and seeps and alkaline or freshwater marsh and swamp habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Clinopodium mimuloides monkey-flower savory	Fed: Ca: CNPS:	none none 4.2	June-October 305-1800	Occurs along streambanks and mesic areas within chaparral and North Coast coniferous forest habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Chloropyron maritimum* ssp. *maritimum Salt marsh bird's-beak	Fed: Ca: CNPS:	END END 1B.2	May-October 0-30	Occurs in costal dune soils within marsh or swampy habitat.	Presumed Absent: No suitable habitat for this species occurs within the project area.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Convolvulus simulans small-flowered morning-glory	Fed: Ca: CNPS:	none none 4.2	March-July 30-740	Clay soils and serpentinite seeps in chaparral openings, coastal scrub, and valley and foothill grassland habitats.	**Low:** Limited suitable habitat for this species occurs within the study area. No records for this species occur within 5 miles of the Project site.
Cuscuta obtusiflora* var. *glandulosa Peruvian dodder	Fed: Ca: CNPS:	none none 2B.2	July-October 15-280	Freshwater marsh and swamp habitat.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Dodecahema leptoceras Slender-horned spineflower	Fed: Ca: CNPS:	END END 1B.1	April-June 200-760	Chaparral, Cismontane woodland, or coastal scrub alluvial fans.	Presumed Absent: No suitable habitat for this species occurs within the project area.
Dudleya cymosa* ssp. *crebrifolia San Gabriel River dudleya	Fed: Ca: CNPS:	none none 1B.2	April-July 275-457	Granitic chaparral habitat.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Dudleya densiflora San Gabriel Mountains dudleya	Fed: Ca: CNPS:	none none 1B.1	March-June 244-610	Granitic soils on cliffs and canyon walls in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Dudleya multicaulis many-stemmed dudleya	Fed: Ca: CNPS:	none none 1B.1	April-July 15-790	Chaparral, coastal scrub, and valley and foothill grassland habitat.	**High:** Suitable habitat for this species occurs within or adjacent to project locations and, although not detected during the survey, occurrences of this species have previously been documented within the Project site.
Galium angustifolium* ssp. *gabrielense San Antonio Canyon bedstraw	Fed: Ca: CNPS:	none none 4.3	April-August 1200-2650	Granitic, sandy or rocky areas within chaparral or lower montane coniferous forest habitat.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Galium grande San Gabriel bedstraw	Fed: Ca: CNPS:	none none 1B.2	January-July 425-1500	Broadleafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest habitats.	**Presumed Absent:** The Project site is below the known elevational range for this species.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Galium johnstonii Johnston's bedstraw	Fed: Ca: CNPS:	none none 1B.2	June-July 1220-2300	Chaparral, lower montane coniferous forest, pinyon and juniper woodland, and riparian woodland.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Helianthus nuttallii* ssp. *parishii Los Angeles sunflower	Fed: Ca: CNPS:	none none 1A	August-October 10-1675	Coastal salt and freshwater marshes and swamps.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Heuchera caespitosa Urn-flowered alumroot	Fed: Ca: CNPS:	none none 4.3	May-August 1155-2650	Rocky soils within cismontane woodland, lower montane coniferous forest, montane riparian forest, and upper montane coniferous forest habitats.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Hordeum intercedens Vernal barley	Fed: Ca: CNPS:	none none 3.2	March-June 5-1000	Coastal dunes, coastal scrub, saline flats and depressions in valley and foothill grassland, and vernal pool habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Horkelia cuneata* var. *puberula Mesa horkelia	Fed: Ca: CNPS:	none none 1B.1	February-September 70-810	Sandy or gravelly areas within maritime chaparral, cismontane woodland and coastal scrub.	**Low:** Limited suitable habitat for this species occurs within the study area. No records for this species occur within 5 miles of the Project site.
Imperata brevifolia California satintail	Fed: Ca: CNPS:	none none 2B.1	September-May 0-1215	Mesic areas within chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps, and riparian scrub.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Lasthenia glabrata* ssp. *coulteri Coulter's goldfields	Fed: Ca: CNPS:	none none 1B.2	February-June 1-1220	Coastal salt marshes and swamps, playas, and vernal pools.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Lepechinia fragrans Fragrant pitcher sage	Fed: Ca: CNPS:	none none 4.2	March-October 20-1310	Chaparral habitat.	**Moderate:** Suitable habitat for this species occurs within the study area; however, no occurrences of this species are documented within 5 miles of the Project site.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Lepidium virginicum* var. *robinsonii Robinson's pepper-grass	Fed: Ca: CNPS:	none none 4.3	January-July 1-885	Dry soils in chaparral and coastal scrub habitats.	**Moderate:** Suitable habitat for this species occurs within the study area; however, no occurrences of this species are documented within 5 miles of the Project site.
Lilium humboldtii* ssp. *ocellatum Ocellated Humboldt lily	Fed: Ca: CNPS:	none none 4.2	March-August 30-1800	Openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland habitats.	**Moderate:** Suitable habitat for this species occurs within the study area; however, no occurrences of this species are documented within 5 miles of the Project site.
Linanthus concinnus San Gabriel linanthus	Fed: Ca: CNPS:	none none 1B.2	April-July 1520-2800	Rocky areas in openings within chaparral, lower montane coniferous forest, and upper montane coniferous forest habitats.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Linanthus orcuttii Orcutt's linanthus	Fed: Ca: CNPS:	none none 1B.2	May-June 915-2145	Openings in chaparral, lower montane coniferous forest, and pinyon and juniper woodland habitats.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Mimulus johnstonii Johnston's monkeyflower	Fed: Ca: CNPS:	none none 4.3	May-August 975-2920	Rocky, gravelly, disturbed, or roadside areas in lower montane coniferous forests.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Muhlenbergia californica California muhly	Fed: Ca: CNPS:	none none 4.3	June-September 100-2000	Occurs in mesic areas, seeps, and streambeds within chaparral, coastal scrub, lower montane coniferous forest, and meadow and seeps habitat.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Navarretia prostrata Prostrate vernal pool navarretia	Fed: Ca: CNPS:	none none 1B.2	April-July 3-1210	Mesic areas of coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pools.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Orcuttia californica California orcutt grass	Fed: Ca: CNPS:	END END 1B.1	April-August 15-660	Occurs in vernal pools.	Presumed Absent; No suitable habitat for this species occurs within the project area.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Orobanche valida* ssp. *valida Rock Creek broomrape	Fed: Ca: CNPS:	none none 1B.2	May-September 1250-2000	Granitic chaparral and pinyon and juniper woodland habitats.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Phacelia hubbyi Hubby's phacelia	Fed: Ca: CNPS:	none none 4.2	April-June 0-1000	Gravelly, rocky areas within chaparral, coastal scrub, and valley and foothill grassland habitats.	**Low:** Limited suitable habitat for this species occurs within the study area and no records for this species occur within 5 miles of the Project site.
Phacelia ramosissima* var. *austrolitoralis South coast branching phacelia	Fed: Ca: CNPS:	none none 3.2	March-August 5-300	Sandy, sometimes rocky, areas within chaparral, coastal dunes, coastal scrub, and coastal salt marshes and swamps.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Phacelia stellaris Brand's star phacelia	Fed: Ca: CNPS:	none none 1B.1	March-June 1-400	Open areas in coastal dunes and coastal scrub habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Pseudognaphalium leucocephalum White rabbit-tobacco	Fed: Ca: CNPS:	none none 2B.2	July-December 0-2100	Sandy, gravelly areas in riparian woodland, cismontane woodland, coastal scrub, and chaparral habitats.	**Low:** Limited suitable habitat for this species occurs within the study area. No records for this species occur within 5 miles of the Project site.
Ribes divaricatum* var. *parishii Parish's gooseberry	Fed: Ca: CNPS:	none none 1A	February-April 65-300	Riparian woodland habitat.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Romneya coulteri Coulter's matilija poppy	Fed: Ca: CNPS:	none none 4.2	March-July 20-1200	Chaparral and coastal scrub habitats.	**Moderate:** Suitable habitat for this species occurs within the study area; however, no occurrences of this species are documented within 5 miles of the Project site.
Rupertia rigida Parish's rupertia	Fed: Ca: CNPS:	none none 4.3	June-August 700-2500	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, pebble plain, and valley and foothill grassland habitats.	**Presumed Absent:** The Project site is well below the known elevational range for this species.

SCIENTIFIC NAME COMMON NAME	STATUS		FLOWERING PERIOD ELEVATION (METERS)	HABITAT	POTENTIAL FOR OCCURRENCE
Scutellaria bolanderi* ssp. *austromontana southern mountains skullcap	Fed: Ca: CNPS:	none none 1B.2	June-August 425-2000	Mesic chaparral, cismontane woodland, and lower montane coniferous forest habitat.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Senecio astephanus San Gabriel ragwort	Fed: Ca: CNPS:	none none 4.3	May-July 400-1500	Rocky slopes within coastal bluff scrub and chaparral.	**Presumed Absent:** The Project site is well below the known elevational range for this species.
Symphyotrichum defoliatum San Bernardino aster	Fed: Ca: CNPS:	none none 1B.2	July-November 2-2040	Near ditches, streams and springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernally mesic valley and foothill grassland habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Symphyotrichum greatae Greata's aster	Fed: Ca: CNPS:	none none 1B.3	June-October 300-2010	Mesic areas of broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland habitats.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.
Thelypteris puberula* var. *sonorensis Sonoran maiden fern	Fed: Ca: CNPS:	none none 2B.2	January-September 50-610	Seeps and streams within meadows and seeps habitat.	**Presumed Absent:** No suitable habitat for this species occurs within the study area.

Federal Designations:
(Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS])
END: Federally listed, endangered
THR: Federally listed, threatened
CAN: Candidate for federal listing

State Designations:
(California Endangered Species Act, California Department of Fish and Wildlife [CDFW])
END: State-listed, endangered
THR: State-listed, threatened

California Rare Plant Ranks (CRPR):
1A: Presumed extirpated in California and rare or extinct elsewhere
1B: Rare, threatened, or endangered in California and elsewhere
2A: Presumed extirpated in California, but more common elsewhere
2B: Rare, threatened, or endangered in California, but more common elsewhere
3: Review list of plants requiring more study
4: Watch list of plants of limited distribution

California Native Plant Society (CNPS) Threat Code:
0.1: Seriously threatened in California
0.2: Moderately threatened in California
0.3: Not very threatened in California

Sources: California Natural Diversity Data Base (CDFW 2015) and California Native Plant Society Electronic Inventory (CNPS 2015) Azusa, Baldwin Park, El Monte, La Habra, Los Angeles, Mt Wilson, Pasadena, South Gate, and Whittier 7.5- minute USGS topographic quadrangles.

Table 3.4-3. Wildlife Potential for Occurrence

COMMON NAME SCIENTIFIC NAME	STATUS		HABITAT	POTENTIAL TO OCCUR
AMPHIBIANS				
Rana muscosa Southern mountain yellow-legged frog	Fed: Ca:	END END	Occurs within a few feet of water. Tadpoles may require 2-4 years to complete their aquatic development.	**Presumed Absent**: No suitable habitat for this species occurs within the project area.
FISH				
Catostomus santaanae Santa Ana sucker	Fed: Ca:	THR SSC	Occurs in small to medium sized rivers with rocky pools and clear water.	**Presumed Absent**: No suitable habitat for this species occurs within the project area.
BIRDS				
Buteo swainsoni Swainson's hawk (Nesting)	Fed: Ca:	none THR	Occurs in riparian areas, savannahs, juniper-sage flats, and agricultural lands with scattered trees with abundant small mammal population.	**Low**: Limited suitable nesting habitat for this species occurs in or adjacent to the Project locations and the last known observation of this species in the vicinity occurred in 1968.
Circus cyaneus Northern harrier (Nesting)	Fed: Ca:	none SSC	Occurs in a variety of habitats associated with water bodies and wetlands. Does not breed in southern California.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area and this species is not expected to nest in the vicinity.
Chaetura vauxi Vaux's swift (Nesting)	Fed: Ca:	none SSC	Occurs in forest openings especially above streams; Only found to migrate through southern California.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area and this species is not expected to nest onsite but may be observed as a migrant within the area.
Coccyzus americanus occidentalis Western yellow-billed cuckoo (Nesting)	Fed: Ca:	THR END	Occurs in riparian woodland with an abundance of cottonwoods and willows.	**Presumed Absent:** No suitable nesting habitat for this species occurs within the project area and this species is not expected to nest onsite.
Falco columbarius Merlin (Wintering)	Fed: Ca:	none WL	Only occurs in California over winter. Wintering habitats include open grasslands, semi-open forests, and coastal areas	**Presumed Absent**: No suitable wintering habitat exists within the Project locations and no known observations are within 5 miles of the Project site.
Falco peregrinus Peregrine falcon (Nesting)	Fed: Ca:	none FP	Occurs in open landscapes with cliffs or man-made structures such as skyscrapers.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area.
Riparia riparia Bank swallow (Nesting)	Fed: Ca:	none THR	Occurs in riparian and lowland habitats. Requires vertical bank or cliffs with fine-textured sandy soils near streams, rivers, lakes, or ocean to dig nest hole.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area.
Polioptila californica californica Coastal California gnatcatcher	Fed: Ca:	THR SSC	Occurs in coastal sage scrub habitat.	**Present**: This species was observed within the project area during survey and is well

COMMON NAME SCIENTIFIC NAME	STATUS		HABITAT	POTENTIAL TO OCCUR
				documented as occurring on site. Nesting activity was also identified within the project area.
Setophaga petechia Yellow warbler (Nesting)	Fed: Ca:	none SSC	Occurs in thickets and other disturbed or re-growing habitats, particularly along streams and wetlands.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area and this species is not expected to nest onsite but may be observed as a migrant within the area.
Empidonax traillii extimus Southwestern willow flycatcher (Nesting)	Fed: Ca:	END END	Occurs in riparian woodlands in southern California.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area and this species is not expected to nest onsite but may be observed as a migrant within the area.
Vireo bellii pusillus Least Bell's vireo	Fed: Ca:	END END	Occurs near water in willow-cottonwood forests, thickets, and scrub oak woodland.	**Presumed Absent**: No suitable nesting habitat for this species occurs within the project area and this species is not expected to nest onsite but may be observed as a migrant within the area.
MAMMALS				
Eumops perotis californicus Western mastiff bat	Fed: Ca:	none SSC	Found in a wide variety of habitats, including desert scrub, chaparral, woodlands, floodplains, and grasslands. Roosts in primarily natural substrates such as cliff faces, large boulders, and exfoliating rock surfaces; less commonly found in artificial structures such as buildings and roof tiles.	**Moderate**: Limited suitable roosting habitat occurs within the project area. Recorded observations are less than 5 miles from the Project in Arroyo Pescadero (Remington 2006).
Lasiurus blossevillii Western red bat	Fed: Ca:	none SSC	Rely on woodland and riparian habitats for both roosting and foraging.	**High**: Suitable habitat occurs within the project area and observations have been recorded within the PHLP in Ecology Canyon (Remington 2006)
Lasiurus xanthinus Western yellow bat	Fed: Ca:	none SSC	Rely on woodland and riparian habitats for both roosting and foraging.	**Moderate**: Very limited suitable roosting habitat occurs within the project area. Recorded observations are less than 5 miles from the Project in Turnbull Canyon (Remington 2006).
Taxidea taxus American badger	Fed: Ca:	none SSC	Occurs in various habitats with friable soils throughout the region.	**Moderate to High**: Suitable habitat for this species occurs within the project area. One dead American badger was

COMMON NAME SCIENTIFIC NAME	STATUS		HABITAT	POTENTIAL TO OCCUR
				documented on Colima Road (Elliott and Stapp 2008); less than 5 miles from the Project.
Federal Designations: (Federal Endangered Species Act, United State Fish and Wildlife Service [USFWS] Bureau of Land Management [BLM], United States Forest Service [FS]) END: Federally listed, endangered THR: Federally listed, threatened CAN: Candidate for federal listing			State Designations: (California Endangered Species Act, California Department of Fish and Wildlife [CDFW]) END: State-listed, endangered THR: State-listed, threatened SSC: Species of Special Concern WL: Watch List FP: Fully Protected	

Sources: California Natural Diversity Data Base (CDFW 2015) and California Native Plant Society Electronic Inventory (CNPS 2015) Azusa, Baldwin Park, El Monte, La Habra, Los Angeles, Mt Wilson, Pasadena, South Gate, and Whittier 7.5- minute USGS topographic quadrangles.

Project Site Wildlife Corridor Value. The more recent landfill use sites in the project area currently provide poor conditions for wildlife movement as a majority is disturbed/developed comprising nearly 128 acres out of the total 144.8 acres, or 88 percent. As a result of the recent landfill activities, wildlife movement is restricted in those areas due to the lack of vegetative cover. However, most of the non-fill sites and areas adjacent to fill sites in the project area support sufficient vegetative cover and dispersal is likely more prevalent, particularly to mammalian carnivores. Mammalian carnivores are not typically constrained by the open conditions found within the recently active landfilling areas because they are less dependent on cover. Movements by species such as mule deer would likely be more constrained due to the lack of escape cover from predators. Although some species may use the fill areas for movement, the majority of species would tend to avoid the area and to use the more natural adjacent canyons and watersheds.

Although the project area provides linkage to the Puente-Chino Hills Wildlife Corridor via the Preserve, it is also adjacent to existing residential developments and industrial use areas and is bounded by SR-60 and I-605 to the north and west. As a result of these factors, the project area only offers marginal local corridor value on its own and does not provide any additional connectivity further to the west. The fragmented areas within the Puente-Chino Hills Wildlife Corridor occur further to the east (Los Angeles County 2016b, Haas and Crooks 1999, Cooper 2000). The proximity of the natural open space to urban populations does, however, make the project site a potentially valuable biological resource by effectively maintaining larger habitats within the corridor and providing a larger urban buffer for less tolerant species.

3.4.2 Regulatory Setting

Regulations protecting biological resources are summarized below.

3.4.2.1 Federal

Endangered Species Act of 1973 (16 United States Code [USC] Sections 1531 et. seq.). The Endangered Species Act was established to protect and allow for recovery of species in danger of extinction and their associated habitat. The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and protects habitat considered critical to the existence and recovery

of the species. The U.S. Fish and Wildlife Service (USFWS) maintains the list of federally listed threatened and endangered species.

Migratory Bird Treaty Act (16 USC Section 703 et. seq.). The purpose of the Migratory Bird Treaty Act (MBTA) is to protect migratory birds. It states that it is unlawful to pursue, hunt, take, capture, or kill a migratory bird by any means, including any part, egg, or nest. The list of bird species protected by the MBTA is included in 50 CFR Section 10.13.

Clean Water Act Sections 404 and 401.

The U.S. Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the U.S., including wetlands, under Section 404 of the Clean Water Act (CWA). The definition of waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes and wetlands. Wetlands that fall under the jurisdiction of the USACE are defined as areas "inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). Areas not considered jurisdictional waters include, for example, non-tidal drainage and irrigation ditches excavated on dry land; artificially irrigated or created bodies such as small ponds, lakes or swimming pools; and water-filled depressions (33 CFR 328.3; 40 CFR 230.3).

A Section 404 permit may not be required if the project avoids the discharge of any fill material into waters of the U.S., including wetlands. If the project cannot be designed to avoid the discharge of fill or excavating in waters of the U.S., including wetlands, a Section 404 permit must be obtained.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the Clean Water Act is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

3.4.2.2 State

California Endangered Species Act (California Fish and Game Code [CFGC] Section 2081). The purpose of California Endangered Species Act is to ensure that all native species of flora and fauna, including associated habitat, threatened by extinction and/or significantly declining populations that could lead to a threatened or endangered designation, are protected. The California Department of Fish and Wildlife (CDFW) maintains a list of state threatened and endangered species.

Streambed Alteration Regulations (CFGC Section 1602). Submittal of a Notification of Lake or Streambed Alteration to CDFW is required for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and jurisdictional data and, if necessary, submits to the Applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the Applicant is issued a Streambed Alteration Agreement.

Oak Woodland Conservation Act (2001) and California Public Resources Code (Section 21083.4). The Oak Woodland Conservation Act (CFGC, Sections 1360 et seq.), passed by the California Legislature in 2001, established an Oak Woodland Conservation Fund administered by the Wildlife Conservation Board (WCB) to help and encourage local governments, park and open space districts, resource conservation districts, nonprofit organizations and private property owners to protect and enhance oak woodlands. It offers landowners, conservation organizations, and cities and counties an opportunity to obtain funding for projects designed to conserve and restore California's oak woodlands. The Act defines oak woodlands as "an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover" (CFGC, Section1361[h]).

California Public Resources Code (PRC), Section 21083.4 (Senate Bill [SB] 1334), which references the Oak Woodland Conservation Act, provides an additional layer of protection for oak woodlands. Section 21083.4 requires that counties determine if a project may result in a conversion of oak woodlands that will have a significant impact on the environment. If it is determined that it would, the county must require one or more of the following to mitigate the significant effect of the conversion of oak woodlands:

1. Conserve oak woodlands, through the use of conservation easements;
2.
    a. Plant an appropriate number of trees, including maintaining plantings and replacing dead or diseased trees,
    b. The requirement to maintain trees pursuant to this paragraph terminates seven years after trees are planted,
    c. Mitigation pursuant to this paragraph shall not fulfill more than one-half of the mitigation requirement for the project,
    d. The requirements imposed pursuant to this paragraph also may be used to restore former oak woodlands;
3. Contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Game Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. A project applicant that contributes funds under this paragraph shall not receive a grant from the Oak Woodlands Conservation Fund as part of the mitigation for the project;
4. Other mitigation measures developed by the county.

California Department of Fish and Wildlife Habitat Connectivity Planning for Fish and Wildlife. CDFW works closely with federal, tribal, state, and local agencies on three primary strategies to ensure habitat connectivity for wildlife (CDFW 2016, Spencer et al. 2010). The three strategies are

1. Protect connectivity while habitat is still intact, through permanent conservation and adaptive management.

2. Avoid further fragmentation of habitat. Cluster urban development and site roads and other infrastructure projects where they are least likely to disrupt habitat connectivity.

3. Minimize or mediate the effects of existing barriers. Create wildlife crossings or fish passage structures.

Furthermore, CDFW has recently updated the State Wildlife Action Plan (SWAP) which examines the health of wildlife and prescribes actions to conserve wildlife and vital habitat before they become rarer and more costly to protect. The plan also promotes wildlife conservation while furthering responsible development and addressing the needs of a growing human population (CDFW 2015b).

3.4.2.3 Local

Los Angeles County Oak Tree Ordinance. Any tree of the oak tree genus (*Quercus*) which is eight inches or more in diameter at breast height (dbh), or in the case of oaks with multiple trunks, a combined diameter of 12 inches or more of the two largest trunks; on any lot or parcel of land within the unincorporated area of Los Angeles County; or any tree that has been provided as a replacement tree, pursuant to Section 22.56.2180, on any lot or parcel of land within the unincorporated area of Los Angeles County is protected under this ordinance. Dbh is defined as diameter of the tree when measured 4.5 feet above mean natural grade. Pursuant to the Los Angeles County Oak Tree Ordinance, a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any oak tree, without first obtaining a permit. The protected zone is defined as 5 feet from the drip-line or 15 feet from the trunk, whichever is greater.

Los Angeles County Oak Woodlands Conservation Management Plan (OWCMP). The Oak Tree Ordinance (Section 22.56.2050 of the Los Angeles County Code) is intended to protect individual trees while the OWCMP (Los Angeles County Oak Woodlands Habitat Conservation Strategic Alliance 2011) is intended to protect oak woodlands. A project may be subject to both the ordinance and plan requirements. This plan defines oak woodlands as an oak stand, including its understory, which consists of two or more oak trees of at least five inches dbh, with greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover as early as January 1, 2005. The main goal of the Oak Woodlands Conservation Management Plan is to preserve and restore oak woodlands so they are conserved in perpetuity with no net loss of existing woodlands.

Los Angeles County Significant Ecological Areas (SEA). SEAs are officially designated areas within the Los Angeles County (County) identified for their biological value. These areas warrant special management because they contain biotic resources that are considered to be rare or unique; are critical to the maintenance of wildlife; represent relatively undisturbed areas of County habitat types; or serve as linkages (Los Angeles County 2015).

The SEA Program is the name given to the regulations, policies, and maps by the County used to guide development within SEAs. As stated in the Chapter 9 of the County's General Plan:

> "The objective of the SEA Program is to conserve genetic and physical diversity by designating biological resource areas that are capable of sustaining themselves into the future. However, SEAs are not wilderness preserves. Much of the land in SEAs is privately-held, used for public recreation, or abuts developed areas. The SEA Program must therefore balance the overall objective of resource preservation against other critical public needs. The General Plan goals and policies are intended to ensure that privately-held lands within the SEAs retain the right of reasonable use, while avoiding activities and developments that are incompatible with the long-term survival of the SEAs."

The County relies on the SEA Program to balance preservation of the County's natural biodiversity with the development rights of property owners located within the SEAs. There are 3 main components of the SEA Program; 1) SEA Boundary Map, 2) General Plan Policies, and 3) SEA Ordinance.

The General Plan establishes the location of the SEAs, the description of SEA (habitat types, unique resources, etc.), and program policies. The SEA Ordinance, a component of the County Zoning Code (Title 22) is the implementation tool of the SEA Program which establishes the permitting standards and process for development within SEAs.

3.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have significant effect on the biological environment if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS);
- Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by § 404 of the federal Clean Water Act or California Fish & Game code § 1600, et seq. through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10 percent canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.);
- Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, §

22.56.215), and Sensitive Environmental Resource Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6); or

- Conflict with the provisions of an adopted state, regional, or local habitat conservation plan.

3.4.4 Environmental Impacts

The determination of impacts in this analysis is based on a detailed review of historic land uses (i.e., 56 years as active landfill), ongoing maintenance and operations, use of GIS spatial data, comparison of maps depicting the PHLPMP and maps of onsite biological resources. Due to the location of the project area within critical habitat and adjacent to open space areas, an urban/wildlands interface assessment was conducted to analyze the potential for indirect impacts to result from the construction and placement of developments adjacent to open space areas as well as ongoing maintenance and operations. The analysis included an assessment of the potential indirect project impacts that may result from noise, invasive species, barriers, access, and grading/development.

Direct impacts are those that involve the loss of habitats due to grading and construction of park amenities and ongoing use. Indirect impacts are those that would be related to disturbance from construction activities, including temporary increases in noise and vibration, fugitive dust, increased vehicular traffic, and increased human activity and use of the project site.

The assessment concluded that the Proposed Project may result in potential indirect impacts to open space areas during project construction and operation. Mitigation measures herein include avoidance and minimization measures to reduce potential indirect impacts resulting from the construction and placement of developments adjacent to open space areas.

Additional indirect effects that may occur to biological resources from the Proposed Project include habitat fragmentation, disruption of wildlife movement, habitat degradation due to invasive plant species, increased risk of nest parasitism from brown-headed cowbirds (*Molothrus ater*), increased predation (e.g., by urban-related predators such as cats and dogs and mesopredators such as raccoons and skunks), increased light, and increased noise. Further, offsite impacts may occur due to increased visitation to area trails as well as disruption of potential onsite wildlife corridors.

To offset impacts park landscaping would consist mainly of California native species. However, drought tolerant non-natives are part of the planting plan because plants are difficult to establish on the mono-soil clay landfill cap that covers the filled areas. The flat 117 acres of top decks are covered with this mono-soil clay cap that is specifically designed to keep rain and irrigation water from seeping into the landfill and percolating down to create leachate. Due to water balance requirements on the top decks, the park would not be limited to an all natives plant palette.

All phases would include landscape plantings to establish a complex ecology over time that reflects the soil conditions and continual shifting of the top decks. During Phase II, initial landscape plantings during the first phase would be assessed for growth and soil coverage efficacy. New plants would be selectively chosen to provide shade, aesthetics, and habitat. The proposed native plant nursery may occur prior to Phase III on the

Southern Deck. The one to two acre native plant nursery is proposed to give volunteers an active role in propagation and restoration planting. Impacts from the native plant nursery and landscaping would be less than significant and would result in beneficial impacts as native plants are introduced on the project site and provide habitat and restoration opportunities.

3.4.4.1 Sensitive Plant and Wildlife Species

Threshold:	*Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?*

Phases I and II

Sensitive Plant Species

No listed, candidate, sensitive, or special status species were observed during the biological resources assessment; however, 11 sensitive plant species were identified as having a moderate to high potential to occur and suitable habitat in or adjacent to the project site exists.

The special status species include: Braunton's milk-vetch, Nevin's barberry, Catalina mariposa lily, slender mariposa lily, Plummer's mariposa lily, intermediate mariposa lily, many-stemmed dudleya, fragrant pitcher sage, Robinson's pepper-grass, ocellated Humboldt lily, and Coulter's matilija poppy, and are associated with coastal sage scrub and grasslands.

Six CNPS List 4 plants (Plants of Limited Distribution) have been determined to have a moderate to high likelihood of occurring within the project area: Catalina mariposa lily, Plummer's mariposa-lily, fragrant pitcher sage, Robinson's pepper-grass, ocellated Humboldt lily, and Coulter's matilija poppy.

Three additional species that are exclusively identified as CNPS List 1B (Plants rare, threatened, or endangered in California and elsewhere), been determined to have a moderate to high likelihood of occurring within the project area: many-stemmed dudleya, slender and intermediate mariposa lilies.

Development of the Proposed Project would remove approximately 13.6 acres of coastal sage scrub/ grassland habitats in which these species are typically found.

The CDFG considers the loss of any listed, proposed, or CNPS List 1B species as a potentially adverse impact under the CEQA. Therefore, potential impacts to the many-stemmed dudleya, slender and intermediate mariposa lilies would be potentially significant, but mitigable.

Potential impacts to CNPS List 4 species, however, are not typically considered significant by CDFW. As a result, potential impacts to these species due to project development would be considered less than significant.

Braunton's milk-vetch is a perennial herb that is federally listed as endangered and has a CNPS listing of 1B.1. This species has strong substrate requirements and is often

found in limestone deposits, marine terraces, and other calcareous soils in association with chaparral and coastal sage scrub. It is found in recently burned or otherwise disturbed soil areas (e.g., firebreaks) below 1,500 ft elevation in the foothills bordering the Los Angeles plain, from the Santa Monica, Santa Ana and San Gabriel Mountains within Los Angeles, Riverside, Ventura and Orange counties, California. Braunton's milkvetch typically flourishes in the first years after fires and/or site disturbances and can therefore be extremely difficult to detect. (Skinner et al. 1994). Potential habitat for this species occurs in or adjacent to the Western Deck including the zip-line and development associated with Nike Hill.

Nevin's barberry is an evergreen shrub that is federally and state-listed as endangered and has a CNPS listing of 1B.1. This species occurs in chaparral, coastal and riparian scrub communities and cismontane woodland, in gravelly soils. It is associated with steep slopes and low-grade sandy washes within Los Angeles County in the San Fernando Valley, as well as in the Arroyo Seco, San Timoteo Canyon and Redlands areas. Potential habitat for this species occurs in or adjacent to the Western Deck including the zip-line and development associated with Nike Hill.

Many of the special status plant species potentially occurring in the Proposed Project are annuals or herbaceous perennials that may emerge and bloom only once every several years and then generally for only a few months. Other species are conspicuous perennials. Different mitigation strategies were adopted for these two categories of plants because mitigation measures involving pre-construction surveys and avoidance are principally feasible only for the perennial species which can potentially be detected even when not in bloom.

The overall approach to mitigation for impacts to special status plant populations is to avoid through redesign to the extent practicable. Where avoidance of impacts is not feasible, mitigation should be accomplished through restoration and preservation of onsite habitats. There are a number of limiting factors in regard to locating areas that would be suitable for restoration/revegetation, such as lack of irrigation water in remote locations, existing unique resources, existing noxious weed infestations, access, topography, soil conditions, and hydrology.

Project impacts are considered permanent if they involve the conversion of land to a new use, such as with the construction of the stair climb, slides and zip-line on the Western Deck. Temporary project impacts are those effects that do not result in a permanent land use conversion. Temporary effects to vegetation communities or other ground disturbance activities restricted solely to the construction phase, such as grading roads and clearing vegetation within staging areas, are considered temporary provided that native vegetation is not replaced with infrastructure or the area is not maintained free of vegetation, and that restoration is deemed feasible prior to project implementation.

Direct impacts to native vegetation communities and associated special status plant species would occur as a result of the removal of vegetation during construction activities. These ground-disturbing construction activities would include clearing and grading for the trail lift, mini café, staff office and restrooms on Nike Hill. Table 3.4-1 present the approximate temporary and permanent impacts to vegetation communities that would occur from implementation of the Proposed Project.

Once the park is operational there will be opportunity for native plantings, which would further help to minimize any indirect effects. Mitigation Measures B-1, B-2 B-3, B-6, B-8, and B-13 would reduce this impact to a less than significant level.

Sensitive Wildlife Species

A total of 17 sensitive wildlife species are known to occur within the project region.

The urban/wildlands interface guidelines, as discussed below, shall be incorporated into the project design to ensure that all direct and indirect project-related impacts to open space areas, including that which may result from lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized to the greatest extent feasible.

Trails, major roads, and other smaller roads that cut across the project site similar to the Preserve decrease the quality and functionality of the native habitat (LSA 2007). On the Preserve there has been a long history of uncontrolled access has facilitated the development of visitor-created unauthorized trails and shortcuts, which may be reduced through the Proposed Project (LSA 2007). Trails throughout the project site are to be constructed and maintained with sensitivity to the environment as further described below.

No lighting associated with the construction phase of the project are proposed as construction would be conducted during daylight hours. Security lights and other project-related illumination sources would be positioned, directed, and shielded to avoid “light spill” into any open space areas, in addition to areas containing sensitive biological resources. Shielding shall be incorporated into project designs to ensure ambient lighting is not increased to area of open space.

Construction-related noise shall be mitigated by limiting construction activities to daytime hours and requiring construction equipment to be tuned and equipped with mufflers. If construction occurs during the nesting season, particularly in the coastal sage scrub associated with California gnatcatcher habitat, appropriate measures to reduce noise may be used. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged consistent with Mitigation Measure B-4. The Proposed Project-related noise impacts are anticipated to be less than significant due in part due the ongoing nature of the landfill maintenance and operations. Furthermore, the existing level of noise produced by the adjacent freeways, streets, residential and commercial developments is expected to be equal to or greater than noise generated from park usage. Development within the project area will also incorporate landscape elements including trees, shrubs, and groundcover, which would assist in noise reduction onsite.

Landscaping plans for development of the Proposed Project will provide a list of native landscaping materials that may be used with a track record of successfully establishment and self-sustaining populations. Recently the Habitat Authority successfully used native landscaping materials in an old oil field in the Puente Hills which provided habitat for bobcat (Scauzillo 2016). The project will incorporate special edge treatments designed to separate development areas from open space areas.

Landscape buffers will be incorporated into the project designs that minimize the intrusion of non-native plant species into natural areas providing valuable cover for wildlife throughout the park, in particular the barren decks. These areas of native landscaping and fencing will serve to minimize unauthorized public access, domestic animal predation, and illegal trespass and dumping.

One federally listed threatened and SSC, coastal California gnatcatcher, was detected within the project area during the biological resources assessment. Five other sensitive species have some potential to occur on the project site; including one state listed endangered species, Swainson's hawk; and four SSC: American badger, western mastiff bat, western red bat, and western yellow bat.

California gnatcatchers were observed during the biological resources assessment and have been recorded nesting in and adjacent to the project site associated with coastal sage scrub primarily along the western portion of the Proposed Project. Additionally, critical habitat for the species occurs within and adjacent to the west and south of the project site. Direct impacts from the Proposed Project include the loop park road, stair climb and switch back trails, bike skills, slides, and trail lift tower with café, staff office and restrooms at Nike Hill. Impacts to this species would be potentially adverse and significant due removal of suitable habitat and a low potential for mortality during construction activities resulting in a "take". Mitigation Measures B-3, B-4, B-5, B-9, B-10, and B-13 will be implemented to reduce this impact to a less than significant level.

Swainson's hawks were not observed during the biological resources assessment. No focused surveys were conducted for Swainson's hawk; however, the only known occurrence of this species nesting within the vicinity, was recorded in 1808, and was possibly extirpated. Impacts to this species as a result of the Proposed Project are not expected.

American badgers were not observed during the biological resources assessment however suitable habitat (e.g., coastal sage scrub and grassland) is present within the project area. One known occurrence of this species was recorded approximately 3 miles southeast of the project area on Colima Road (Elliott and Stapp 2008). The construction of the Proposed Project will result the loss of suitable habitat. Additionally, the increased vehicular traffic resulting from the Proposed Project may result in harm or injury to individuals of this species, which would constitute a significant impact due to traffic-related mortality as the species is considered uncommon in the area (Elliott and Stapp 2008). Mitigation Measures B-3, B-9, B-10, B-12, and B-13 will be implemented to reduce this impact to a less than significant level.

Western mastiff bats have been recorded in the vicinity and limited suitable roosting habitat occurs within the buildings on and adjacent to the project site. Impacts to this species as a result of the Proposed Project are not expected.

Western red bats have been recorded adjacent to the project site in Ecology Canyon. Roosts are primarily located in trees, less often in shrubs, and often are in edge habitats adjacent to streams, fields, or urban areas. The Proposed Project could result in direct impacts to roosting individuals of this species from grading and construction activities only in areas where roosting habitat would be removed (e.g., riparian/woodland tree

species), which would constitute a significant impact. Mitigation Measures B-3, B-11, and B-13 will be implemented to reduce this impact to a less than significant level.

Western yellow bats are an obligate foliage roosting species that prefers dead palm fronds to other types of tree substrates but can also occur within grasslands, scrublands, and wooded areas in riparian zones. The Proposed Project could result in direct impacts to roosting individuals of this species from grading and construction activities only in areas where roosting habitat would be removed (e.g., planted palm trees or other tree species), which would constitute a significant impact. Mitigation Measures B-3, B-11, and B-13 will be implemented to reduce this impact to a less than significant level.

Nesting Birds. Construction activities could result in the direct loss of active bird nests or the abandonment of active nests by adult birds as they may utilize any of habitats across the project site including disturbed/developed areas (e.g., killdeer). In particular, raptor species are prone to nest abandonment. Migratory birds and raptors are protected by the MBTA [USFWS 1918] and all raptors are protected from "take" pursuant to CFGC Code Section 3503.5.

Specific provisions of the statute include the establishment of a federal prohibition, unless permitted, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of the Convention for the protection of migratory birds or any part, nest, or egg of any such bird (16 U.S.C. 703).

The large trees found throughout the project area provide potential nesting habitat for several raptors including red-shouldered hawk (*Buteo lineatus*), red-tailed hawk, and owls. Potential nesting sites for migratory birds are also present throughout the project site. Raptors in the vicinity of the Proposed Project typically breed between February and August while non-raptor birds protected under the MBTA generally nest between March and August.

Any vegetation removal, grubbing, or tree trimming conducted during the breeding season for native birds (February 15 through August 30) could have impacts on nesting birds, including raptors, that would be considered significant. Mitigation Measures B-3, B-4, B-5, B-10, and B-13 will be implemented to reduce this impact to a less than significant level.

Indirect Impacts

To date, human activities have been somewhat limited in the project area due to the active landfill. Increased human activity from park users may cause increased disturbances and degradation of conserved areas within and adjacent to public use areas. Increased recreational and other human activities such as regional day-time festivals/performances with a surge of up to 5,000 people may result in increased noise disturbances. Use of trails, stair climbs, switchbacks and ziplines in and over open space areas may affect wildlife (especially within the breeding season of birds) which can, in turn, result in nest abandonment and cessation of local breeding activity. In addition, increased human use of the area increases the potential for displacement of wildlife

species, and causes soil compaction and trampling of ground-dwelling plants and wildlife (LSA 2007).

Increased use of open space and natural areas by local residents would also result in a corresponding increase in the presence of domestic animals on the site. Domestic/feral pets enter the Preserve to roam and forage for food (LSA 2007) immediately adjacent to the project site. In particular, dogs disturb nesting or roosting sites and disrupt the normal foraging activities of wildlife in adjacent habitat areas. Mitigation Measures B-8, B-9 and B-10 will be implemented to reduce this impact to a less than significant level.

During construction, temporary noise from construction equipment could disrupt the foraging, nesting, roosting, and denning activities for sensitive wildlife species and nesting birds near the construction activity. These impacts are considered adverse and significant because the Proposed Project would impact a large landscape area, especially during the construction of Phases I and II. Nesting raptors would potentially incur temporary impacts from construction noise if present in the Proposed Project vicinity, and could be temporarily displaced. The effects of increased noise levels have been well documented for many types of animals and can be responsible for reduced bird nesting success. Although no specific noise thresholds have been established for wildlife in the project area, noise-level increases can be expected relative to the amount of construction. Mitigation Measure B-9, B-10, and B-13 will be implemented to reduce this impact to a less than significant level.

Future Phases

Sensitive Plant Species

As described above, no special status plant species have been identified within the project site. However, three special status species were identified as having a potential to occur and suitable habitat in or adjacent to the project site exists. The special status species include: Braunton's milk-vetch, Nevin's barberry, and Lyon's pentachaeta. Impacts to these species may occur during site ground-disturbing activities (e.g., grading) resulting in the loss of these plants and a potential adverse effect. Mitigation Measures B-1, B-2, B-3 B-6, B-8, and B-13 will be implemented to reduce this impact to a less than significant level.

Sensitive Wildlife Species

Continued construction, maintenance, and use of the project site is expected to impact the same vegetation types and associated wildlife habitat previously described, and the potential for presence of sensitive species is expected to be the same. As a result, implementation of Future Phases including the stair climb on the Eastern Deck, Flare site would have potentially adverse and significant impact on the species identified above due to habitat impacts. Implementation of Mitigation Measures B-3, B-4, B-5, B-9, B-10, B-11, B-12, and B-13 would reduce impacts to sensitive wildlife species to a less than significant level.

Nesting Birds

Future construction activities could result in the direct loss of active bird nests or the abandonment of active nests by adult birds. In particular, raptor species are prone to nest abandonment. As described above, many bird species in the project region are

protected under the provisions of the MBTA. Mitigation Measures B-3, B-4, B-5, B-10, and B-13 will be implemented to reduce this impact to a less than significant level.

Indirect Impacts

Future Phases of the Proposed Project would further increase human activities as new areas of the project site become available in the Eastern and Southern Decks. Increased human disturbance from trail use and festival/performances are expected to further impact sensitive species and nesting activities within the area. Noise and dust caused by future construction could also disrupt foraging, nesting, roosting, and denning activities for sensitive wildlife species and nesting birds, particularly if conducted during the breeding season. Such disruptions over a long time period results in long-term effects on the behavior of both common and sensitive wildlife, including California gnatcatcher, and would likely result in their extirpation from the area.

Overall, the Future Phases of the Proposed Project may have substantial indirect impacts on sensitive wildlife species and nesting birds within and adjacent to the project site. Implementation of Mitigation Measures B-8, B-9, B-10, and B-13 would reduce indirect impacts to a less than significant level.

Threshold:	*Would the project have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS?*

Phases I and II

Coastal Sage Scrub

Coastal sage scrub habitat is considered sensitive by the resource agencies because it provides habitat to federally and state listed endangered, threatened, and sensitive species. Areas of coastal sage scrub occur on a variety of slopes and aspects from nearly level hilltops to steep xeric slopes. This was the most abundant community within the eastern, western, and southern portions of the project site (12.5 acres). Direct impacts from the Proposed Project on include the loop park road, stair climb and switch back trails, bike skills, slides, and trail lift tower with café, staff office and restrooms at Nike Hill. The loss or substantial alteration of the existing coastal sage scrub vegetation, if it were to occur, would constitute an adverse and significant impact. Mitigation Measures B-6 and B-8 would be implemented to reduce this impact to a less than significant level.

Oak Woodlands

All oak woodlands found on the site are subject to Senate Bill (SB) 1334 (*California Public Resources Code* [PRC] Section 21083.4), which “provides funding for the conservation and protection of California’s oak woodlands”. This bill mandates that oak woodlands be regulated by mitigation measures that are defined in the bill itself. Additionally, the loss of individual oak trees would be subject to the Los Angeles County Oak Tree Ordinance, and therefore would require an oak tree permit with associated conditions if any Proposed Project impacts to oak trees were anticipated. This community was found mainly within the southern portion of the project area and a few areas along the eastern boundary (0.01 acres). The proposed Rose Hills Memorial Park

road easement is most likely to impact oak woodlands. Mitigation Measures B-3, B-6, B-7, and B-8 would be implemented to reduce this impact to a less than significant level.

Future Phases

Coastal Sage Scrub

Impacts to coastal sage include the stair climb in the Eastern Deck as well as development of the Southern Deck which abuts the Preserve including coastal sage scrub. As with Phases I and II impacts to coastal sage scrub habitat would be less than significant with Mitigation Measure B-6 and B-8.

Oak Woodlands

As discussed above, all oak woodlands found on the site are subject to SB 1334 (*California PCR* Section 21083.4) and would be regulated by mitigation measures that are defined in the bill. Additionally, the loss of individual oak trees would be subject to the Los Angeles County Oak Tree Ordinance and therefore would require an oak tree permit with associated conditions if any Proposed Project impacts to oak trees were anticipated. Impacts to oak woodlands in the Future Phases of the Proposed Project would be the same as Phase I and II. Mitigation Measures B-3, B-6, B-7, and B-8 would be implemented to reduce this impact to a less than significant level.

Threshold:	*Would the project have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by § 404 of the federal Clean Water Act or California Fish & Game code § 1600, et seq. through direct removal, filling, hydrological interruption, or other means?*

Phases I and II

No wetlands or waters of the United States were found on the project site; therefore, no impacts on wetland resources are associated with implementation of the Proposed Project.

Future Phases

As discussed above, no wetlands or waters of the United States were found on the project site; therefore, no impacts on wetland resources are associated with the Future Phases of the Proposed Project.

Threshold:	*Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Phases I and II

Wildlife Corridors

Possible impacts on wildlife corridors from the implementation of the Proposed Project were evaluated with respect to blockages or barriers to movement in a regional context (i.e., the animal's ability to move between existing large, regional open space areas). Construction of the Proposed Project is not expected to interfere with a majority of regional wildlife movement due to the recent landfill use in the project area. The project site currently provides poor conditions for wildlife movement as a majority is disturbed/developed at nearly 128 acres out of the total 144.8 acre project site, or 88 percent. As a result of the recent landfill activities, wildlife movement is restricted in those areas due to the lack of vegetative cover. However, most of the non-fill sites and areas adjacent to fill sites in the project area support sufficient vegetative cover and dispersal is likely more prevalent, particularly to mammalian carnivores.

Mammalian carnivores are not typically constrained by the open conditions found within the recently active landfilling areas because they are less dependent on cover. Movements by species such as mule deer would likely be more constrained due to the lack of escape cover from predators. Although some species may use the fill areas for movement, the majority of species would tend to avoid the area and to use the more natural adjacent canyons and watersheds.

Although the project area provides linkage to the Puente-Chino Hills Wildlife Corridor via the Preserve, it is also adjacent to existing residential developments and industrial use areas and is bounded by SR-60 and I-605 to the north and west. As a result of these factors, the project area only offers marginal local corridor value on its own and does not provide any additional connectivity further to the west. The fragmented areas within the Puente-Chino Hills Wildlife Corridor occur further to the east (Los Angeles County 2016b, Haas and Crooks 1999, Cooper 2000). The proximity of the natural open space to urban populations does, however, make the project site a potentially valuable biological resource by effectively maintaining larger habitats within the corridor and providing a larger urban buffer for less tolerant species. As a result, construction of the Proposed Project is not expected to have significant impacts to regional movement of wildlife populations.

Local Wildlife Movement

The areas surrounding the project site contain sufficient vegetative cover to support local movement of native wildlife species, particularly small and medium sized species (LSA 2005). Construction of the Proposed Project is not expected to directly impact wildlife movement of these species in those areas. The direct impacts of the Proposed Project on local wildlife movement are considered less than significant.

During construction, temporary noise impacts could disrupt the foraging, nesting, roosting, and denning activities for a variety of wildlife species such as birds and medium to large mammals. These impacts are considered adverse and significant because the Proposed Project would impact a large landscape area. Nesting raptors would potentially incur temporary impacts from construction noise if present in the project vicinity, and could be temporarily displaced. The effects of increased noise levels have been well documented for many types of animals and can be responsible for

reduced bird nesting success. Although no specific noise thresholds have been established for wildlife in the project area, noise-level increases can be expected relative to the amount of construction. Noise will likely also increase after construction; therefore, open spaces and wildlife remaining within and immediately surrounding the project area would likely be subject to increased disturbance. Wildlife stressed by noise may be displaced and may alter wildlife movement patterns.

Indirect Impacts

Dispersal events by some species, such as mountain lion, may be rare, but are nonetheless important in facilitating ecological interactions and for retaining genetic diversity among regional populations. The Proposed Project's indirect impacts may affect dispersal events by individuals of some species, resulting in reduced genetic diversity. Genetic diversity is often important to organisms by allowing for greater potential to adapt to changing environmental conditions.

After implementation of the Proposed Project, certain non-native plant species that are more adapted to urbanized environments are likely to increase in population and may locally displace native species because of their ability to more effectively compete for resources. Certain non-native plant species are adapted to a wide variety of growing conditions and may out-compete native plant populations for available nutrients, prime growing locations, and other resources. Because some non-native plants reproduce so quickly, they can replace many native plant populations. This eventually results in lower species diversity, loss of areas suitable for breeding and/or nesting by common and sensitive wildlife species, changes to the local ecosystem, and overall reductions in habitat values. Such impacts may result in reduced viability of wildlife movement within the project site and in adjacent open space areas.

Areas of higher public use also tend to attract wildlife species that are better adapted to urbanized settings; these include house sparrows, European starlings, rock doves, brown-headed cowbirds, American crows, ravens, striped skunks, Virginia opossum, red foxes, raccoons, and Norway rats. Most native species are less adapted to urban development; their populations tend to decrease or be eliminated entirely in the vicinity of residential or recreational developments. In addition, local increases in meso-predators (e.g., skunk, opossum, and fox) can adversely impact native rodent and bird populations. Such impacts may result in reduced viability of wildlife movement within the project site and in adjacent open space areas.

To date, human activities have been somewhat limited in the project area. Added human activity from park users would likely cause increased disturbances and degradation of conserved areas within and adjacent to public use areas. Increased recreational and other human activities along proposed trails and in open space areas would likely result in increased noise disturbances to wildlife (especially within the breeding season of birds) which can, in turn, result in nest abandonment and cessation of local breeding activity. In addition, human habitation increases the harassment and/or capture of slower moving species, such as some reptiles and amphibians, increases the displacement of wildlife species and causes soil compaction and trampling of ground-dwelling plants and wildlife.

Increased use of open space and natural areas by park users would over time replace also result in a corresponding increase in domestic animals. In particular, dogs disturb

nesting or roosting sites and disrupt the normal foraging activities of wildlife in adjacent habitat areas. Over time, the effects of these indirect impacts would reach further into open space reducing habitat quality and may result in reduced wildlife movement through the area.

According to the report prepared for Caltrans and CDFW, *California Essential Habitat Connectivity Project: A Strategy for Conservation A Connected California* (Spencer et al. 2010) noise from traffic or road construction may alter habitat use and activity patterns, increase stress, reduce reproductive success, and increase predation risk for terrestrial vertebrates. Roads also increase the spread of exotic plants and animals, promote erosion and recent studies demonstrate that vehicles deposit 300 to 800 exotic seeds per square meter per year to roadside areas. Thus an increase in vehicular traffic in the project area due to construction and public access, may impact the wildlife within the project area.

The Proposed Project may have indirect impacts on wildlife movement within and adjacent to the project site. Although some wildlife movement in adjacent areas may be disrupted, areas further south and southeast in the Habitat Authority preserve area would not likely be impacted. As a result, the Proposed Project's indirect impacts are not expected to reach the primary regional linkage area, and regional connectivity is expected to be minimally impacted. The Proposed Project would not cause any regional populations of plants or animals in adjacent regions to become isolated. The Proposed Project's indirect impacts on regional wildlife movement are therefore considered to be less than significant.

Future Phases

Direct and indirect impacts to wildlife corridors and local wildlife movement would be similar as for Phases I and II. As a result, construction of the Proposed Project is not expected to have significant impacts to regional movement of wildlife populations. However, Alternative 1 of the proposed Rose Hills Memorial Park roadway easement would further degrade wildlife movement due to the loss or substantial alteration of the existing native vegetation, noise due to initial road construction, and ongoing vehicular traffic if it were to occur, would constitute an adverse and significant impact. Mitigation Measures B-1 through B-13 in Section 3.4.5 would be implemented to reduce this impact to a less than significant level. Impacts from Alternatives 2 and 3 of the proposed Rose Hills Memorial Park roadway easement would be similar to Phases I and II as they are contained to the road between the Eastern and Southern Decks and within a portion of the Southern Deck.

Threshold:	*Would the project convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.)?*

Phases I and II

Oak Trees

The Los Angeles County Oak Tree Ordinance protects oak trees within unincorporated areas of Los Angeles County that are 25 inches or more in circumference (8 inches in diameter) as measured 4.5 feet above mean natural grade; in the case of oaks with more than 1 trunk, the ordinance protects those trees with a combined circumference of any 2 trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above mean natural grade (Los Angeles County 1988). A "Heritage Oak", as defined by the oak tree ordinance, is any oak tree that: (1) measures 36 inches or more in diameter, as measured 4.5 feet above the natural grade or (2) any oak less than 36 inches in diameter having a significant historical or cultural importance to the community. The oak tree ordinance requires that all potential impacts to oak trees be preceded by an application to the County that includes a detailed Oak Tree Report, and that requires mitigation for impacts to oak trees (which may include the replacement of oak trees at a ratio of at least two to one [2:1]; this ratio may be greater if required as a condition in the County-issued Oak Tree Permit) (Los Angeles County 1988).

Any oak tree removals would be subject to a mitigation plan, which would be reviewed subject to County approval. Oak tree impacts would be considered significant. Mitigation Measures B-7 and B-8 will be implemented to reduce this impact to a less than significant level.

Future Phases

Oak Trees

As described above, the oak tree ordinance requires that all potential impacts to oak trees be preceded by an application to the County that includes a detailed Oak Tree Report, and that requires mitigation for impacts to oak trees. No impacts are anticipated initially as part of the Proposed Project. Implementation of Future Phases including the stair climb on the Eastern Deck, Flare site may have a potentially adverse and significant impact on the species identified above due to habitat impacts. Mitigation Measures B-7 and B-8 apply to the Future Phases of the Proposed Project and will be implemented to reduce this impact to a less than significant level.

3.4.4.2 Significant Ecological Areas

Threshold:	*Would the project conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, § 22.56.215), and Sensitive Environmental Resource Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6)?*

Phases I and II

The Rio Hondo College Wildlife Sanctuary SEA, including Ecology Canyon, a 24-acre area in the western corner of the landfill, is designated as native habitat. The area is used by

Rio Hondo College staff and students for biological studies. The Conceptual SEA for the Hacienda Heights community is located within the native preservation area managed by the Puente Hills Habitat Preservation Authority. The project site is immediately adjacent to both SEAs but does not extend into either SEA boundary. Consequently, no development would occur within either SEA and there would be no direct impacts. Indirect impacts from implementation and use of the project site are expected and would be similar to those described in Sections 3.4.4.1 and 3.4.4.4.

Future Phases

Direct impacts to the Rio Hondo College Wildlife Sanctuary SEA and Conceptual SEA for the Hacienda Heights community would not occur. However, a pedestrian stair climb bridge on the west side would connect Rio Hondo College to the Schabarum/Skyline Trail, park loop road, and the multi-use loop trail. As with Phases I and II, indirect impacts from implementation and use of the project site are expected and would be similar to those described in Sections 3.4.4.1 and 3.4.4.4.

Threshold:	*Would the project conflict with the provisions of an adopted state, regional, or local habitat conservation plan?*

Phases I and II

The project site does in is not located within the limits of any Habitat Conservation Plan, Natural Community Conservation Plan, or approved local, regional, or state conservation plan, therefore, the Proposed Project would not conflict with existing conservation plans.

Future Phases

As mentioned above, the site is not located within the limits of any Habitat Conservation Plan, Natural Community Conservation Plan, or approved local, regional, or state conservation plan, therefore, the Future Phases of the Proposed Project would not conflict with existing conservation plans. Should a conservation plan be developed in the future that encompasses all or a portion of the project, the Future Phases of park development would be evaluated for consistency with the plan. A less than significant impact is anticipated.

3.4.5 Mitigation Measures

B-1: Conduct surveys for State and federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and avoid any located occurrences of listed plants.

Prior to grading of each development phase, focused surveys shall be conducted during the prior flowering season for the many-stemmed dudleya, slender and intermediate mariposa lilies to determine the presence or absence of those special-status plants. If no specimens are found within the Proposed Project, then no additional mitigation is required.

In the event that the many-stemmed dudleya, slender and/or intermediate mariposa lilies are identified within the Proposed Project, the County shall prepare special-status

plant restoration plan. Target sites for mitigation shall be sampled for soil type and habitat criteria sufficient for the establishment and growth of the affected special-status species. The plan shall additionally include, but not be limited to, the following components:

1) Performance criteria (i.e., what is an acceptable success level of revegetation to mitigate past impacts);

2) Monitoring effort (who is to check on the success of the revegetation plan, and how frequently);

3) Contingency planning (if the effort fails to reach the performance criteria, identify the remediation steps need to be taken); and

4) Irrigation method/schedule (how much water is needed, where, and for how long).

B-2: Conduct surveys for State and federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and avoid any located occurrences of listed plants.

Prior to issuance of a grading permit and future phase approval, the County shall conduct surveys for federally and state listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants in all areas subject to ground-disturbing activity. The surveys shall be conducted during the appropriate blooming period(s) by a qualified plant ecologist/biologist according to protocols established by the USFWS, CDFW, and CNPS. If none of the listed plants are found, no further mitigation is required.

In the event a listed plant is discovered onsite, the current and anticipated future distribution of the species shall be mapped by a qualified biologist. The CDFW, USFWS and County shall be formally notified and consulted regarding the presence of either the federal and/or state listed species onsite. A preservation and management plan shall be prepared for the species by a qualified biologist and shall include, but not be limited to, the following:

1) The County will provide a buffer between development and any listed plant that may be found onsite as required by CDFW. This buffer zone shall be designated with appropriate fencing to exclude construction vehicles and public access, but not wildlife access;

2) The size of the buffer depends upon the use of the immediately adjacent lands, and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist and/or botanist. At minimum, the buffer

shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) in order to protect and preserve the root systems of the plant. The buffer for herbaceous species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS and/or CDFW;

3) Stormwater runoff, irrigation runoff, and other drainage from developed areas shall not pass through areas populated by the listed species;

4) Listed species areas shall not be artificially shaded by structures or landscaping within the adjacent development areas;

5) Pesticide use shall not be permitted within listed plants areas;

6) The County will be responsible for monitoring the listed plant areas during construction and after project completion shall be identified and the frequency and extent of monitoring shall be determined.

In the event it is determined that Proposed Project could potentially affect listed plants, the CDFW shall be contacted to determine the need for a “take permit” under the California Endangered Species Act. Appropriate mitigation required to minimize or mitigate impacts to the listed plants shall be implemented and may include the following: the creation of a preserve, establishment of vegetated buffers or other setbacks, drainage modification of the adjacent areas, revegetation, and monitoring to ensure the success of the mitigation.

B-3: Pre-construction surveys and biological monitoring.

Qualified biological monitor(s) shall be assigned to the project. Pre-construction biological clearance surveys shall be performed to minimize impacts on sensitive plants or wildlife species. The monitors will be responsible for ensuring that impacts to sensitive species, native vegetation, wildlife habitat, or unique resources will be avoided to the fullest extent possible. Where appropriate, monitors will flag the boundaries of areas where activities need to be restricted to protect native plants and wildlife, or sensitive species. These restricted areas shall be monitored to ensure their protection during construction.

B-4: Conduct protocol surveys for California gnatcatcher and avoid occupied habitat.

Prior to issuance of a grading permit, the County shall conduct protocol surveys for California gnatcatcher. A qualified biologist who is permitted

by the USFWS to conduct surveys for California gnatcatcher shall conduct surveys in areas of suitable habitat prior to construction or site-preparation activities in these areas. The surveys shall be conducted in accordance with the accepted USFWS survey protocol. If California gnatcatchers are identified within proposed work areas, agency coordination may be required.

If construction activities occur during the breeding season in known occupied habitat for California gnatcatcher, focused surveys shall be conducted within the project site and adjacent areas within 500 feet. The surveys shall be of adequate duration to verify potential nest sites. These surveys may be modified through the coordination with the agencies based on the condition of habitat, the observation of the species, or avoidance of coastal sage scrub areas during the breeding season.

If a territory or nest is confirmed, a 500-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted provided noise levels do not exceed 60 dB(A) hourly Leq at the edge of the nest site as determined by a qualified biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the qualified biologist determines that the construction activities are disturbing nesting activities, the qualified biologist shall have the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No construction shall occur within this buffer during the breeding season for these species.

B-5: Conduct nesting bird surveys to ensure that there would be not significant impacts to nesting birds and no violation of the Migratory Bird Treaty Act.

Prior to issuance of a grading permit, the County shall conduct nesting bird surveys. A qualified biologist shall conduct nesting bird surveys prior to construction or site-preparation activities occurring during the nesting and breeding season of native bird species (typically February through August). The survey area shall include all potential bird nesting areas, including grasslands, scrub habitat, woodlands, and isolated trees that are within 500 feet of construction activities. The survey shall be conducted no more than three days prior to commencement of construction activities (i.e., grubbing or grading).

If active nests of bird species protected by the Migratory Bird Treaty Act and/or the CFGC (2008) (which, together, apply to all native nesting bird species) are present in the construction zone or within 500 feet of the construction zone, a temporary buffer fence shall be erected a minimum of 300 feet around the nest site. This temporary buffer may be greater or lesser depending on the bird species and construction activity, as determined by the qualified biologist and/or applicable regulatory agency permits.

Vegetation clearing and construction within temporarily fenced areas shall be postponed or halted until juveniles have fledged and there is no evidence of a second nesting attempt. The qualified biologist shall serve as a Construction Monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur.

B-6: Protection of native vegetation communities.

Prior to issuance of a grading permit, the County shall document the community type and acreage of vegetation that would be subject to project disturbance. Disturbance or removal of native vegetation shall not exceed the minimum necessary to complete operations. Every effort would be made to minimize vegetation removal and permanent loss at construction sites. If necessary, native vegetation would be flagged for protection. A project revegetation plan would be prepared for areas of native habitat temporarily affected during construction.

B-7: Protection of oak trees.

An oak tree permit will be obtained prior to cutting, destroying, removing, relocating, inflicting damage, or encroaching into the protected zone of any oak trees with a diameter at breast height (dbh) of eight inches or more. All protection and replacement measures shall be consistent with the Los Angeles County Oak Tree Ordinance.

B-8: Preparation of a landscaping plan.

Prior to issuance of a grading permit, the County shall prepare a landscaping plan for the Proposed Project as part of the Master Plan. It shall include a plant palette derived from the existing Sanitation Districts approved plant palette for the landfill. The plant palette shall be composed of non-invasive species that are adapted to the conditions found on the project site and do not require high irrigation rates. The landscaping plan will also include a list of invasive plant species (e.g., California Invasive Plant Inventory Database online at http://www.cal-ipc.org/paf/) prohibited from being planted on the project site. In addition, retail sales of these invasive plant species will be prohibited at any businesses (nurseries) located within the project site. Landscape

plans shall encourage planting of local natives typical of native vegetation within ten miles of the project site.

B-9: Placement of wildlife proof receptacles.

Prior to issuance of a building permit the County shall provide waste and recycling receptacles and educational signage that discourage foraging by wildlife species adapted to urban environments. The receptacles shall be installed in common areas (i.e., any area where public trash receptacles would be placed, such as picnic areas, parking areas, and walking trails) throughout the project site. Additionally, educational signs shall be placed throughout the project site regarding: the importance of not feeding wildlife and information stating that trash (containing food) shall not be accessible to wildlife.

B-10: Implementation of public awareness program.

Prior to issuance of a building permit, a public awareness program shall be designed and implemented in an effort to restrict public access to the native habitat areas on the project site to designated trails and to prevent unleashed domestic animals from entering these areas by the County. This program shall include: signs that identify the boundaries of ecologically sensitive areas; the use of temporary fencing around sensitive areas that appear to be receiving a high level of disturbance until the disturbance is reversed; and promotion of public education and awareness of such areas.

Only passive recreational activities shall be permitted within the designated natural open space areas and shall be restricted to trails. Some areas may allow slightly greater impacts if designated as picnic areas. All dogs shall be required to be leashed while in the native habitats and natural open space areas.

A plant nursery will be part of the educational component. Native and drought tolerant plants will be grown to actively replace and replant park areas requiring patching, repair, or re-construction due to landfill settling and bio-gas production. Ideal locations for bird observation and wildlife observation will be marked along particular trails. The public will be educated on the on-going functions of the landfill and the landfill slopes would be preserved, restored, and/or enhanced for wildlife.

B-11: Maternity colony or hibernaculum surveys for roosting bats.

Prior to issuance of a grading permit, the County shall conduct maternity colony or hibernaculum survey for roosting bats. A pre-activity (e.g., vegetation removal, grading) survey for roosting bats within 200 feet of project activities shall be conducted within 15 days prior to any grading of rocky outcrops or removal of trees (particularly trees 12 inches in

diameter or greater at 4.5 feet above grade with loose bark or other cavities) within 200 feet of project activities.

Conduct surveys for roosting bats during the maternity season (March 1 to July 31) within 300 feet of project activities. Trees and rocky outcrops shall be surveyed by a qualified bat biologist. Surveys shall include a minimum of one day and one evening.

If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the Proposed Project, if feasible. For active roosts or hibernacula that are present in the construction zone or within 300 feet of the construction zone, a temporary buffer fence shall be erected a minimum of 100 feet around the roost or hibernacula site. This temporary buffer may be greater or lesser depending on the bat species and construction activity, as determined by the qualified biologist and/or applicable regulatory agency permits.

If avoidance of the maternity roost is not feasible, the qualified bat biologist shall survey (through the use of radio telemetry or other CDFW approved methods) for nearby alternative maternity colony sites. If the qualified bat biologist determines in consultation with and with the approval of CDFW that there are alternative roost sites used by the maternity colony and young are not present then no further action is required, and it will not be necessary to provide alternate roosting.

If impacts to the potential bat roosting habitat are unavoidable, or if the size, configuration, or complexity of a potential roost warrants additional surveys as determined by the qualified biologist, a one-night emergence survey (acoustic survey) will be conducted per roost to assess the species and population size. Note that night emergence surveys to determine absence cannot be performed during the inactive period (between November 1 and February 15). All observations of sensitive species and occupied bat roosts will be reported to the County.

Should a maternity roost be identified within the disturbance footprint and impacts cannot be avoided, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony will be provided on, or in close proximity to, the project site no less than 3 months prior to the eviction of the colony. Should a hibernaculum (i.e., non-breeding roost) be identified within the disturbance footprint and impacts cannot be avoided, passive humane eviction will be conducted in coordination with CDFW.

B-12: Conduct pre-construction surveys for American badgers and passively relocate during the nonbreeding season.

Prior to issuance of a grading permit, the County shall implement pre-construction surveys for American badgers within suitable habitat. If

present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den avoided. Maternity dens shall be avoided during pup-rearing season (February 15 through July 1) and a minimum 200-foot buffer established. Buffers may be modified with the concurrence of CDFW. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction. Any relocation of badgers shall occur only after consultation with the CDFW. A written report documenting the badger removal shall be provided to CDFW within 30 days of relocation.

B-13: Prepare a Worker Environmental Awareness Program (WEAP).

Prior to issuance of a grading permit, the County shall prepare a WEAP. All construction crews and contractors shall be required to participate in WEAP training prior to starting work on the project. The WEAP training will include a review of the sensitive species and other biological resources that could exist in the project area, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. A record of all personnel trained will be maintained.

3.4.6 Residual Impacts After Mitigation

With implementation of the above mitigation measures, the Proposed Project would result in less than significant impacts to biological resources.

3.5 CULTURAL, TRIBAL, AND PALEONTOLOGICAL RESOURCES

This section of the PEIR assesses the potential effects to cultural, paleontological, and tribal resources that could result from implementation of the Proposed Project. Cultural resources are defined as historic-period buildings, structures, districts, and objects and/or archeological sites dating from either the prehistoric or historic period. Paleontological (fossil) materials are defined as the remains of once-living, nonhuman organisms and early hominids. Tribal cultural resources (TCRs) are defined as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe. This section includes a brief overview of the cultural, geologic, and ethnographic settings of the project area to assist in understanding the resources present.

This section also describes the regulatory framework, and known or anticipated cultural and tribal resources within the project area, followed by impact analysis and mitigation measures, as applicable, to reduce adverse impacts. A cultural resources survey report was completed for the Proposed Project (ECORP 2015c). This technical report is provided in Appendix D and summarized below.

3.5.1 Environmental Setting

3.5.1.1 Cultural Resources

Definition of Resources. Cultural resources include prehistoric archaeological sites, historic archaeological sites, and historic structures, and generally consist of artifacts, food waste, structures, and facilities made by people in the past. Prehistoric archaeological sites are places that contain the material remains of activities carried out by the native population of the area (Native Americans) prior to the arrival of Europeans in southern California. Artifacts found in prehistoric sites include flaked stone tools such as projectile points, knives, scrapers, drills, and the resulting waste flakes from tool production; ground stone tools such as manos, metates, mortars, pestles for grinding seeds and nuts; bone tools such as awls ceramic vessels or fragments; and shell or stone beads. Prehistoric features include hearths or rock rings bedrock mortars and milling slicks, rock shelters, rock art, and burials.

Places that contain the material remains of activities carried out by people during the period when written records were produced after the arrival of Europeans are considered historic archaeological sites. Historic archaeological material usually consists of domestic refuse, i.e., bottles, cans, ceramics, and food waste, disposed of either as roadside dumps or near structure foundations. Archaeological investigations of historic-period sites are usually supplemented by historical research using written records. Historic structures include houses, garages, barns, commercial structures, industrial facilities, community buildings, and other structures and facilities that are more than half a century old.

Cultural Background. It is generally believed that human occupation of southern California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 6,000 years BP, a predominately

hunting economy existed, characterized by the archaeological site that contain numerous projectile points and butchered large bones.

Approximately 10,000 years ago, at the beginning of the Holocene Period, warming temperatures and the extinction of the megafauna resulted in changing subsistence strategies with an emphasis on hunting smaller game and increasing reliance on plant gathering. Early Holocene sites are represented by only a few sites and isolated artifacts found along former lakebeds and grasslands of the Mojave Desert and in inland San Diego County. Early Holocene sites have also been found along the Santa Barbara Channel, in western Riverside County, and along the San Diego County coast (Mason 2015).

During the Milling Stone Period (8,000 to 3,000 BP), small mobile groups moved between the coast and inland areas foraging for plant resources and engaging in small game hunting. They lived in a residential base or base camp. The most common artifacts are manos and milling stones (metates) for processing seeds and other plant resources, and large core-cobble chopping tools. Other artifacts include hammerstones, large flake tools including scraper-planes and scrapers, worked bone, beads, cogged stones, discoidals, doughnut stones, and stone balls. Projectile points (usually large leaf-shaped points and Elko points) are not plentiful, but faunal remains indicate deer and rabbits were hunted. Sites near bays and estuaries contain abundant shell and fish remains. Burials were inhumations with associated grinding implements (ECORP 2015c).

Mortars and pestles were first used during the Intermediate Period (3,000 to 1,350 BP) and probably indicate the beginning of acorn exploitation. Use of the acorn, a storable, high-calorie food source, probably allowed greater sedentism (living in one place for an extended period of time). Large projectile points, including Elko points, indicate that hunting was probably accomplished with the atlatl or spear thrower.

The complex hunter-gatherer cultures encountered by the Spaniards in southern California developed during the Late Prehistoric Period (1,350 BP to Spanish Contact [A.D. 1769]). People lived in villages of up to 250 people located near permanent water and a variety of food sources. Each village was typically located at the center of a defended territory from which resources for the group were gathered. Small groups left the village for short periods of time to hunt, fish, and gather plant foods. While away from the village, they established temporary camps and created locations where food and other materials were processed. Archaeologically, such locations are evidenced by manos and metates for seed grinding, bedrock mortars for acorn pulverizing, and lithic scatters indicating manufacturing or maintenance of stone tools (usually made of chert) used in hunting or butchering. Overnight stays in field camps are evidenced by fire-affected rock used in hearths (ECORP 2015c).

Trade among local groups and inland and coastal groups was important as a means of obtaining resources from outside the local group's territory. Items traded over long distances included obsidian from the Obsidian Butte source in Imperial County and from the Coso source in Inyo County, steatite bowls and ornaments from Catalina Island, shell beads and ornaments from the Santa Barbara Channel area, rabbit skins and deer hides from the interior, and dried fish and shellfish from the coast. Acorns, seeds, and other food resources were probably exchanged locally.

At the time of contact with Europeans, the Gabrieleño were the main occupants of the southern Channel Islands, the Los Angeles Basin, much of Orange County, and extended as far east as the western San Bernardino Valley. The term "Gabrieleño" came from the group's association with Mission San Gabriel Archangel, established in 1771. The Gabrieleño were one of several Takic-speaking groups in southern California at the time of Spanish contact.

The Gabrieleño occupied villages located along rivers and at the mouths of canyons. Populations ranged from 50 to 200 inhabitants. Residential structures within the villages were domed, circular, and made from thatched tule or other available wood. Gabrieleño society was organized by kinship groups, with each group composed of several related families who together owned hunting and gathering territories. Settlement patterns varied according to the availability of floral and faunal resources (ECORP 2015c).

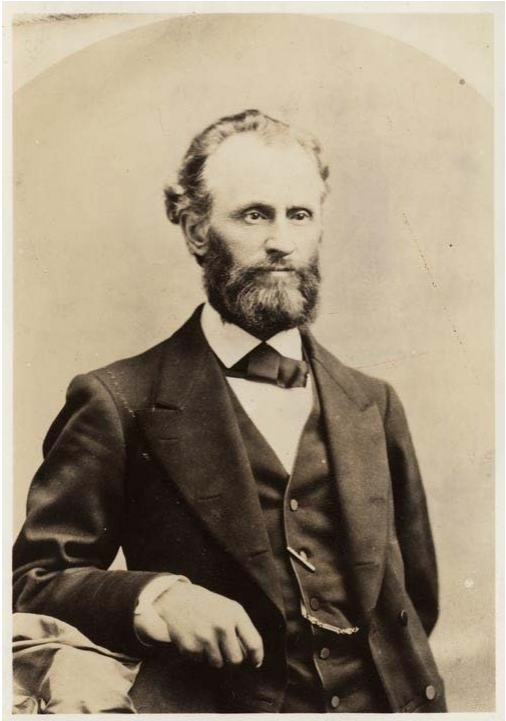
Spanish colonization of California began with the Portolá land expedition in 1769. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area. As a result of this expedition, Spanish missions (to convert the native population), *presidios* (forts), and towns were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. Mission San Gabriel Archangel was founded in 1771 east of what is now Los Angeles to convert the Gabrieleño. Mission San Fernando, in Gabrieleño and Tataviam territory, was established in 1797.

Mexico became independent from Spain in 1822 and the Mexican government closed the missions beginning in 1834. Former mission lands were granted to soldiers and other Mexican citizens for use as cattle ranches. Most of the land in the San Gabriel Valley was granted during the Mexican period.

The project area is in the La Puente land grant, granted to John Rowland and William (Julian) Workman in 1845. William Workman and John Rowland came from Santa Fe and Taos to southern California over the Santa Fe Trail in 1841. Rancho La Puente covered 49,000 acres east of the San Gabriel River and north of Puente Hills. Workman took the western part of the rancho and Rowland took the eastern part. In 1842 Workman built a three-room adobe house near what is now the intersection of Hacienda Boulevard and Valley Boulevard in the City of Industry. By the 1870s Workman had 3,000 head of cattle, 600 horses, vineyards, fruit orchards, and wheat fields. Wheat was ground into flour in a grist mill on the north bank of San Jose Creek (ECORP 2015c).

The American period in California began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, the Mexican province of Alta California became a territory of the United States. California became a state in 1850. Most of the Spanish and Mexican land grants were confirmed to their grantees by the U.S. government.

In 1871 Workman went into partnership with his son-in-law, Frances Temple, and opened the Temple & Workman Bank in Los Angeles. When the bank experienced financial problems in 1875, Temple and Workman received a loan from Elias J. "Lucky" Baldwin, the owner of Rancho Santa Anita (now in Arcadia). When the Temple & Workman Bank failed in 1876, Baldwin foreclosed on the loan and took all of Workman's assets, including Workman's portion of Rancho La Puente.



Elias J. "Lucky" Baldwin, a successful entrepreneur and the founder of the City of Arcadia (Peters 2009)

Baldwin used his newly acquired rancho lands for cattle, sheep, and horse ranches. His ranch operations in the Whittier Narrows area were supervised by his foreman, Gaetano Castino, who built his house on Workman Mill Road near San Jose Creek in part of Rancho La Puente. He also operated the grist mill formerly owned by Workman until it burned in 1889. Baldwin began to subdivide and sell his properties beginning in the mid-1880s (Wilkman 1999). Industrial and commercial enterprises developed on the land along San Jose Creek which Baldwin had sold. This area was incorporated as the City of Industry in 1957.

Baldwin had loaned money to Frank L. Pellissier so he could begin dairy farming on land that Baldwin owned on the east bank of the San Gabriel River and below the west end of the Puente Hills. Using income from his dairy business, Pellissier purchased various tracts of land from Baldwin between 1876 and 1898 and greatly expanded his dairy operations. The part of the Puente Hills where the Proposed Project is located was owned by the Pellissier family and remained undeveloped until 1957 when the Pellissier family leased 500 acres to the San Jose Development Company for use as the San Gabriel Valley Dump. The Sanitation Districts purchased 1,214 acres (including the 500 acres that contained the Dump) from the Pellissier family in 1970 and began operating the Puente Hills Landfill. An additional parcel (141 acres), known as the Amfac property, was purchased in 1981 to complete the Puente Hills Landfill property which totals 1,365 acres. Landfill operations ceased in 2013 (ECORP 2015c).

Cultural Resources in the Project Area. A cultural resources records search was conducted on June 29, 2015, at the South Central Coastal Archaeological Information Center (SCCIC), located at California State University, Fullerton. The purpose of the records search was to determine the extent of previous cultural resources investigations and to identify previously recorded archaeological sites or other historical resources on the landfill property, which contains the survey areas. Materials reviewed included reports of previous cultural resources investigations, archaeological site records, historical maps, and listings of resources on the NRHP, CRHR, California Points of

Historical Interest, California Landmarks, and National Historic Landmarks. In addition, a search of the Sacred Lands File was requested from the NAHC.

Results of the records search conducted at the SCCIC indicate that 15 cultural resources studies have been previously conducted on the landfill property between 1978 and 2011. As a result of these studies, the landfill property, which includes the project survey areas, was previously surveyed.

The records search results indicate that 13 cultural resources have been previously documented on the landfill property (Table 3.5-1).

Table 3.5-1. Previously Recorded Cultural Resources on the Landfill Property.

RESOURCE DESIGNATION	PERIOD	DESCRIPTION	RECORDED BY
P19-002553	Prehistoric	Four mano fragments	R. Shepard 1997
P19-002554	Prehistoric	Three mano fragments	R. Shepard 1997
P19-002555	Historic	Brick platform for an oil well	R. Shepard 1997
P19-002556	Historic	Livestock watering trough and access road	R. Shepard 1997
P19-002557	Historic	Platform with bricks dated 1921	R. Shepard 1997
P19-002558	Historic	Material from demolished corral with scattered cattle or horse bones	R. Shepard 1997
P19-002559	Prehistoric	Ground stone fragments	R. Shepard 1997
P19-002560	Prehistoric	Ground stone fragments	R. Shepard 1997
P-19-188496	Historic	Nike Missile Site	W. Becker and M. Bassett 2009
P-19-190505	Historic	SCE transmission line	W. Becker and H. Crane 2010
P-19-190508	Historic	SCE transmission line	W. Becker, H. Crane, and M. Bassett 2010

The Nike Missile Site consists of a guard house and a plaque that were moved from elsewhere.

As part of the previous studies for the landfill, the archaeological sites were recorded and evaluated as not significant. The archaeological sites in the landfill operations area were destroyed by landfill operations, subject to monitoring (Sanitation Districts 2001). The Nike Missile Site and the Southern California Edison transmission lines were not affected by landfill operations. The Nike Missile Site operated from 1958 to 1964 and was officially closed in 1971. The current site consists of a guard house and a plaque at the top of Nike Hill. Both of these were moved from their original locations, farther down the hill, in 2000. The Nike Missile Site (P-19-188496) has been evaluated as not eligible for the CRHR. The NAHC reported that a search of the Sacred Lands File failed to indicate the presence of Native American cultural resources in or near the project area.

3.5.1.2 Tribal Cultural Resources

The Los Angeles Basin and the Santa Ana River drainage west of Cajon Wash were occupied by the Takic-speaking Gabrieleño. The term “Gabrieleño” came from the group’s association with Mission San Gabriel Arcángel, established in 1771, now in the City of San Gabriel east of Los Angeles. The Gabrieleño are believed to have been one of the most populous and wealthy Native American tribes in southern California prior to European contact (Bean and Smith 1978; McCawley 1996; Moratto 1984).

The Gabrieleño occupied numerous villages with populations ranging from 50 to over 200 inhabitants. Villages were located near permanent water sources at the mouths of canyons and along rivers and creeks that crossed the Los Angeles Basin. Residential structures within the villages were domed, circular, and made from thatched tule or other available materials. Gabrieleño society was organized by lineage kinship groups, with each group composed of several related families who together owned hunting and gathering territories.

Settlement patterns varied according to the availability of floral and faunal resources (Bean and Smith 1978; McCawley 1996). People from the village moved to seasonal camps within the territory to collect specific resources, such as acorns in the mountain canyons, grass seeds on the plains, and shellfish and fish at the coast, depending on what resources were found within the territory. The Gabrieleño village of Ahwiinga was located somewhere on Rancho La Puente and shamans were said to have lived in Sycamore Canyon (McCawley 1996:45-46). The Gabrieleño settlements of Iisanchanga

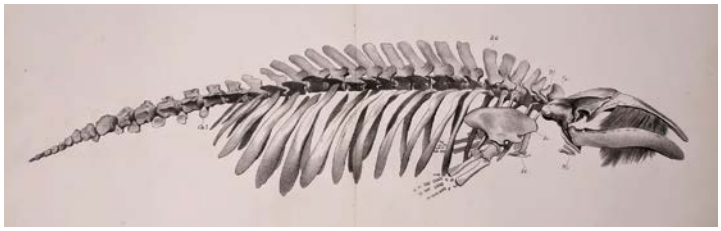
and Wiichinga were located in the Whittier Narrows area, west of the project area (McCawley 1996:44).

Vegetal staples consisted of acorns, chia, seeds, piñon nuts, sage, cacti, roots, and bulbs. Animals hunted included deer, antelope, coyote, rabbits, squirrels, rodents, birds, and snakes. The Gabrieleño groups whose territories were along the coast also fished and collected shellfish (Bean and Smith 1978; McCawley 1996). Villages near the mountains probably exchanged acorns for dried fish and shellfish from villages at the coast. By the late 18th century, Gabrieleño population had significantly dwindled due to introduced diseases and dietary deficiencies. However, contemporary descendants of the Gabrieleño continue to preserve Gabrieleño culture.

3.5.1.3 Paleontological Resources

Definition of Resources. Paleontological resources are the recognizable remains of once-living, nonhuman organisms and early hominids. Identified as fossils, these resources represent a record of history of life on the planet dating back as far as four billion years ago. Paleontological resources can include shells, bones, leaves, tracks, trails, and other fossilized floral or faunal materials.

Paleontological Resources in the Project Vicinity. The project area is underlain by upper Cenozoic marine formations including the Sycamore Canyon Member of the Puente Formation and the Fernando Formation. These rock units are overlain by Pleistocene alluvium. The Sycamore Canyon Member of the Puente Formation has yielded fish and whale fossils, along with birds, clams, and leaves from 15 plant species. The Fernando Formation has yielded fossils of marine snails, clams, and other invertebrates. Fossilized whale bones have come from the lower member of the Fernando Formation. The Pleistocene alluvium or older alluvium has yielded the remains of many intact late Pleistocene land mammals in the Los Angeles Basin (Sanitation Districts 2001).



The Sycamore Canyon Member of the Puente Formation has yielded fish and whale fossils, along with birds, clams, and leaves (representative pygmy right whale fossil pictured).

Paleontological monitoring of landfill operations has recovered many significant fossils from the Puente Formation and the Fernando Formation. All recovered fossils have been curated at the Natural History Museum of Los Angeles County (Sanitation Districts 2001).

Most of the areas proposed for park facilities are on landfill or in areas previously graded and disturbed by landfill operations. There are natural and undisturbed landforms in portions of Nike Hill.

3.5.2 Regulatory Setting

3.5.2.1 Federal

There is no federal funding and a federal permit is not required for the Proposed Project. Therefore, regulations implementing Section 106 of the National Historic Preservation Act (the federal law regarding cultural resources) do not apply to the Proposed Project.

3.5.2.2 State

California Environmental Quality Act (CEQA)

CEQA is the state law that applies to a project's impacts on cultural resources. A project is an activity that may cause a direct or indirect physical change in the environment and that is undertaken or funded by a state or local agency or requires a permit, license, or lease from a state or local agency. CEQA requires that impacts to Historical Resources be identified and, if the impacts will be significant, that mitigation measures to reduce the impacts be applied.

An Historical Resource is a resource that 1) is listed in or has been determined eligible for listing in the California Register of Historical Resources (CRHR) by the State Historical Resources Commission, or has been determined historically significant by the CEQA lead agency because it meets the eligibility criteria for the CRHR, 2) is included in a local register of historical resources, as defined in Public Resources Code 5020.1(k), or 3) has been identified as significant in an historical resources survey, as defined in Public Resources Code 5024.1(g) [CCR Title 14, Section 15064.5(a)].

The eligibility criteria for the CRHR are as follows [CCR Title 14, Section 4852(b)]:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2) It is associated with the lives of persons important to local, California, or national history.
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)]. Resources that have been determined eligible for the National Register of Historic Places (NRHP) are automatically eligible for the CRHR.

Archaeological sites are usually evaluated under Criterion 4, the potential to yield information important in prehistory. An archaeological test program may be necessary to determine whether a site has the potential to yield important data. The CEQA lead agency, in this case, the County, makes the determination of eligibility based on the results of the test program.

Assembly Bill 4239

Assembly Bill (AB) 4239 established the Native American Heritage Commission (NAHC) as the primary government agency responsible for identifying and cataloging Native American cultural resources. The bill authorized the NAHC to act in order to prevent damage to and ensure Native American access to sacred sites and authorized the NAHC to prepare an inventory of Native American sacred sites located on public lands.

California Public Resources Code 5097.97

This code section states that no public agency and no private party using or occupying public property or operating on public property under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

Public Resources Code 5097.98 (b) and (e)

Public Resources Code 5097.98 (b) and (e) require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until he/she confers with the NAHC-identified Most Likely Descendants (MLD) to consider treatment options. In the absence of MLDs or of a treatment acceptable to all parties, the landowner is required to reenter the remains elsewhere on the property in a location not subject to further disturbance.

California Health and Safety Code 7050.5

This code makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the county coroner.

Assembly Bill 52

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include Tribal Cultural Resources (TCRs), the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the Public Resources Code defines California Native American tribes as “a Native American tribe located in California that is on the contact

list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the Public Resource Code defines TCRs for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
    c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a historical resource under CEQA, a TCR may also require additional consideration as a historical resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

County of Los Angeles General Plan

The County of Los Angeles General Plan contains goals and policies to guide the management of cultural resources. The General Plan includes goals to protect cultural heritage resources and to promote the preservation and enhancement of landmarks, sites, and areas of cultural, historical, archaeological, and urban design significance. The Conservation and Natural Resources Element includes six policies to promote public awareness and protection of cultural resources (County of Los Angeles 2015). The policies are:

- Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
- Support the preservation and rehabilitation of historic buildings.
- Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
- Promote public awareness of historic, cultural, and paleontological resources.

- Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

County of Los Angeles Historic Preservation Ordinance

The County of Los Angeles Historic Preservation Ordinance established the Historical Landmarks and Records Commission which evaluates nominations for the County Register of Landmarks and Historic Districts. The Commission also considers and recommends to the County of Los Angeles Board of Supervisors local landmarks that are defined to be worthy of registration by the State of California Department of Parks and Recreation, either as a "California Historical Landmark" or as a "Point of Historical Interest". The commission may also consider and comment for the Board of Supervisors on applications relating to the National Register of Historic Places (NRHP).

3.5.3 Thresholds of Significance

3.5.3.1 Cultural Resources

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries; or

The CEQA Guidelines state that a project that causes a substantial adverse change in the significance of a Historical Resource is considered to have a significant effect on the environment unless mitigated. Historical Resources are buildings, structures, districts, archaeological sites, or objects that are listed in or considered eligible for listing in the CRHR or is on a local (city or county) inventory of historical resources (California Code of Regulations [CCR], Title 14, Section 15064.5).

The CEQA Guidelines (Section 15064.5 (a) (3)) define Historical Resources as any object building, structure, site, place, record, or manuscript which the lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource has integrity and meets the criteria for listing on the CRHR. Thus, Historical Resources are cultural resources that are eligible for inclusion in the CRHR.

3.5.3.2 Tribal Resources

A project would have a significant impact on tribal cultural resources (TCRs) if it would:

- Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in CEQA Guidelines Section 21074.

AB 52 established that a substantial adverse change to a TCR has a significant effect on the environment. In assessing substantial adverse change, the County must determine whether or not the project will result in a significant impact to the qualities of the resource that convey its significance. The qualities are expressed through integrity. Integrity of a resource is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)]. Impacts are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are materially impaired [CCR Title 14, Section 15064.5(a)]. Accordingly, impacts to a TCR would likely be significant if the project negatively affects the qualities of integrity that made it significant in the first place. In making this determination, the County need only address the aspects of integrity that are important to the TCR's significance.

3.5.3.3 Paleontological Resources

According to the Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have a significant impact on paleontological resources if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources.

CEQA Guidelines indicate that a project that directly or indirectly destroys a unique paleontological resource or site or a unique geologic feature is considered to have a significant effect on the environment unless mitigated. Unique paleontological resources are significant, nonrenewable fossils that are rare or unique regionally, diagnostically, or taxonomically. This definition includes vertebrate and invertebrates fossils that are previously unknown within the given context, or fossils that will aid in further scientific interpretations (National Research Council 1987; Science Applications International Corporation 1994).

Adverse impacts to paleontological resources would include the physical destruction or damage of fossil-bearing geologic formations and the resulting loss of fossil resources. Other adverse impacts could occur within increased public accessibility to known fossil-bearing localities.

3.5.4 Environmental Impacts

3.5.4.1 Cultural Resources

Only impacts to resources that meet the CEQA definition of a Historical Resource can be considered significant (CEQA Guidelines Section 15064.5) In CEQA, a historical resource

is one which meets the eligibility criteria of the CRHR or is listed an official City or County historical inventory.

Threshold:	*Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5?*

Phases I and II

All previously recorded archaeological sites on the project site have been evaluated as not significant and were destroyed by landfill activities. One small area within Nike Hill remains as a natural slope with the original ground surface intact. No archaeological material more than 50 years old was found during the intensive walk-over archaeological survey of this area. The Nike Missile Site (P-19-188496), also located on Nike Hill, is not eligible for the CRHR and is not a historical resource as defined by CEQA.

Because there are no known historical resources in the project site, Phases I and II of the Proposed Project will not result in significant impacts to any known Historical Resources.

Future Phases

Because there are no known historical resources on the project site, future phases of the Proposed Project would not result in significant impacts to any known historical resources. The three proposed road easement alternatives for Rose Hills Memorial Park would not impact known historical resources. The easements alternatives are located at the Southern Deck and would not affect Nike Hill.

Threshold:	*Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?*

Phases I and II

Because there are no known archaeological sites on the project site, Phases I and II of the Proposed Project would not result in significant impacts to any unique archeological resource, as defined in Section 21083.2 of the Public Resources Code. In the unlikely event that archaeological material is found during construction on Nike Hill, implementation of Mitigation Measure CR-1 and CR-2 will reduce impacts to less than significant.

Future Phases

Because there are no known archaeological sites on the project site, future phases of the Proposed Project would not result in significant impacts to any unique archeological resource, as defined in Section 21083.2 of the Public Resources Code. In the unlikely event that archaeological material is found during future phases of construction, implementation of Mitigation Measure CR-1 and CR-2 will reduce impacts to less than significant.

Threshold:	*Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Phases I and II

There are no known human remains or cemeteries within the project site. Prehistoric human remains may occur within residential archaeological sites. However, all archaeological sites were destroyed by landfill activities. In the unlikely event that human remains are found during construction in the Nike Hill area, implementation of Mitigation Measure CR-3 will reduce impacts to less than significant.

Future Phases

In the unlikely event that human remains are found during construction during future phases, implementation of Mitigation Measure CR-3 will reduce impacts to less than significant.

3.5.4.2 Tribal Cultural Resources

Threshold:	*Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in §21074?*

Phases I and II

Summary of Tribal Consultation

On August 22, 2015, the Los Angeles County Board of Supervisors received a letter from the Gabrieleño Band of Mission Indians-Kizh Nation (Kizh Nation) requesting consultation under AB 52 for the Puente Hills Landfill Park Master Plan Project (Proposed Project). Consultation with the Kizh Nation was carried out within the context of compliance with AB 52 and is discussed below.

On November 3, 2015, the Los Angeles County Department of Parks and Recreation (DPR) initiated environmental review of the Puente Hills Landfill Park Master Plan under CEQA. Fourteen days following the initiation of CEQA, on November 17, 2015, DPR sent a letter to the Kizh Nation that described the Project and provided a map showing the preferred park concept. DPR invited the Kizh Nation to respond within 30 days to the offer to consult on the Proposed Project. On November 17, 2015, DPR received an email from the Kizh Nation, indicating that the Kizh Nation accepted the offer to consult on the Proposed Project. The Kizh Nation requested an on-site meeting and review of the project site. A formal on-site meeting was scheduled with the Kizh Nation for January 13, 2016. Attendees included representatives from the DPR, Kizh Nation, ECORP Consulting, Inc. (the EIR preparer for the Proposed Project), and the Los Angeles County Sanitation Districts. Topics discussed during this meeting included, but were not limited to: the locations of several nearby Gabrieleño villages; depth of fill at the site, previous cultural studies conducted on the property, native vegetation, and possible prehistoric ceremonial uses of the area. In addition, the Kizh Nation requested that a Native American monitor be present during construction for the Proposed Project. Consultation activities continued via multiple emails through which the DPR requested

that the Kizh Nation provide information on any TCRs within the project area. On April 5, 2016, the Kizh Nation provided the DPR with documentation of the prehistoric village of Juyubit. The village of Juyubit overlaps the project area. After receiving documentation from the Tribe, DPR concluded consultation on May, 31, 2016 by sending a formal completion letter to the Kizh Nation.

Project Site Tribal Cultural Resources

The Kizh Nation indicated that the Gabrieleño Village of Juyubit is a TCR. Based on a 1938 map by Kirkman and Harriman, the project area overlaps the village of Juyubit (also known as Jutucunga). During the January 13 meeting, the Kizh Nation noted that hills, such as those located in the project area, were often used for ceremonial purposes by their ancestors. The Kizh Nation believes that the hills within the project area would likely have been used for religious ceremonies by occupants of Juyubit. This village has also been called Jutucunga, Jujubit, Jutucubit, Jutucuvit, Jutubit, Utucubit, Otocubit, Uchubit, Ychubit, and Uchunga. Ethnographic sources also report a village in the area called Iisanchanga by McCawley (1996:44). McCawley also identifies another village called Wiichinga in this area.

The Village of Juyubit was an important prehistoric occupation center in the region. Many current tribal elders of the Kizh Nation descend directly from occupants of Juyubit. Given this, the TCR is significant through its association with important prehistoric events in the region and for its association with the ancestors of current tribal elders. The Kizh Nation believes that the hills where the landfill was constructed were used as ceremonial locations by their ancestors and people residing in the Village of Juyubit.

The project area is situated on a landfill that has been heavily graded and filled over the last several decades and the majority of the project area is covered with fill dirt. In some portions, there is up to 500 feet of fill dirt overlying the native sediments. This fill overlies landfill deposits, which are covered with a barrier or cap that is continually being maintained by the Sanitation Districts as part of its post-closure activities. The landfill cap is an environmental control measure and no extensive grading would occur on the landfill decks or other fill areas.

The ceremonial use of the property is directly related to the location of hill tops and the viewsheds from those hill tops. For most of the project area, the original hill contours have been drastically altered. Therefore, the ceremonial locations and viewsheds for the majority of the TCR located within the project area are no longer present or have been altered beyond recognition. Therefore, the majority of the TCR within the project area does not retain enough integrity to be considered significant. There are several locations within the project area that do not contain fill soils. These consist of portions of the Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site. Thus, the integrity of these four portions of the TCR is mainly intact and these portions of the TCR are considered significant.

Impact Analysis

The majority of the TCR located within the project area does not contain enough integrity to be considered significant. However, the Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site portions of the TCR would impact native soil in a portion of the

TCR that is significant. Construction in these areas would involve disturbing native soil and altering the hilltop elevation and viewshed setting of the resource. Therefore, the proposed park construction would have a significant impact to a TCR under CEQA. Implementation of Mitigation Measures TCR-1 and TCR-2 will reduce the impacts to less than significant. The County can further lessen the impact to the TCR by dedicating a portion of Nike Hill as Tribal space. A dedicated Tribal space may include native vegetation that will be available for ceremonial use by modern Tribal members and an informational area for the public that contains plaques and/or kiosks about Native American people who lived in and used the Whittier Narrows, Puente Hills, and San Gabriel Valley region.

Future Phases

Future excavation in areas undisturbed by past landfill activities could impact the TCR. Implementation of Mitigation Measures TCR-1 and TCR-2 will reduce impacts to less than significant.

3.5.4.3 Paleontological Resources

Threshold:	*Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources?*

Phases I and II

Excavation in the Nike Hill area could encounter and damage or destroy unique paleontological resources in Pleistocene alluvium, the Puente Formation, or the Fernando Formation. Implementation of Mitigation Measure CR-4 will reduce impacts to less than significant.

Future Phases

Future excavation in areas undisturbed by past landfill activities could encounter unique paleontological resources in Pleistocene alluvium, the Puente Formation, or the Fernando Formation. Implementation of Mitigation Measure CR-4 will reduce impacts to less than significant.

3.5.5 Mitigation Measures

CR-1: A worker education awareness program will be enacted to train construction workers about cultural resources. The Kizh Nation shall be provided an opportunity to review and contribute to the Worker Education Program. The program shall be designed to inform construction workers about what cultural resources are, state regulations pertaining to cultural resources, the authority of the monitors (when present) to halt construction in the event of a find, and penalties and repercussions from non-compliance with the program. Worker education training shall occur prior to initiation of any construction within the Nike Hill project area, and at regular intervals during the course of construction to train new hires

and provide refresher training for existing workers, if needed. If appropriate, the worker education program shall be delivered in both English and Spanish.

CR-2: If subsurface deposits believed to be cultural in origin are discovered during construction, then all work must halt within a 200-foot radius of the discovery. A qualified professional archaeologist shall be retained to evaluate the significance of the find. Work cannot continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project proponent shall arrange for either 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility for the CRHR and, if eligible, data recovery as mitigation.

CR-3: If human remains of any kind are found during construction activities, all activities must cease immediately and the Los Angeles County Coroner must be notified, as required by state law (Section 7050.5 of Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the most likely descendant(s) (MLDs) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). Work may resume once the MLD's recommendations have been implemented or the remains have been reburied by the landowner if no agreement can be reached with the MLD (Section 5097.98 of the Public Resources Code).

CR-4: In the Nike Hill area, a qualified paleontological monitor under the supervision of a qualified vertebrate paleontologist shall monitor excavations into the Pleistocene alluvium, as well as any deeper excavations into the Puente Formation and the Fernando Formation. Sediment samples shall be collected and processed to determine the small fossil potential in the project area. The monitor will be equipped to recover fossils and sediment samples during excavation and will have the authority to temporarily halt or divert equipment to allow for recovery of large or numerous fossils.

Any fossils recovered during monitoring shall be prepared to a point of identification and preservation and be deposited in an accredited and permanent scientific institution. A report detailing the findings with an appended itemized inventory of identified specimens shall be prepared by a qualified vertebrate paleontologist. The report and inventory shall be submitted to the Los Angeles County Department of Parks and Recreation (DPR) and the scientific institution where the fossils are deposited. When

DPR receives the report, inventory, and verification of acceptance of the specimens by the scientific institution, mitigation will be complete.

TCR-1: Ground-disturbing activities within the non-fill portions of the project area (Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site) shall be monitored by a qualified archaeological monitor. The archaeological monitor shall have the authority to temporarily halt construction operations within 50 feet of an archaeological resource to determine if significant or potentially significant resources will be adversely affected by continuing construction operations. The archaeological monitor shall use flagging tape, rope, or some other means, as necessary, to delineate the area of the find within which construction shall halt and the procedures outlined below shall apply. Construction shall not take place within the delineated find area until the County consults on appropriate treatment. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations. Any work in other areas of the project area, which involves earth-moving activity in previously undisturbed native soils, should be monitored by at a minimum, workers that have received cultural resource training pursuant to a cultural resources management plan and worker education and awareness program.

If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

If the professional archaeologist determines that the find does not represent a cultural resource, then work may resume immediately and no agency notifications are required.

If the qualified professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify the County of Los Angeles. If the find is considered eligible for the California Register of Historical Resources (CRHR) and impacts to the resource cannot be avoided, then Project Archaeologist will notify the County and will recommend appropriate mitigation measures in compliance with the California Environmental Quality Act (CEQA) and federal regulations, if applicable (up to and including possible data recovery). The agencies shall consult on a finding of eligibility and implement appropriate treatment measures. No construction can occur within the flagged-off area until the professional archaeologist determines that either the site is not significant or that the treatment measures, as determined through

consultation between the professional archaeologist and the County, have been completed to their satisfaction.

If the find represents a Native American or potentially Native American or tribal cultural resource that does not include human remains, then the County shall further notify the Kizh Nation. The agencies shall consult with the tribe on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be eligible for inclusion in the CRHR. Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not eligible for the CRHR; or 2) that the treatment measures have been completed to the satisfaction of the consulting parties.

If the find includes human remains, or remains that are potentially human, then the professional archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (per AB 2641). The archaeologist shall notify the Los Angeles County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (Section 5097.98 of the Public Resources Code), which may or may not be a representative of the Kizh Nation. The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the County (AB 2641). Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

TCR-2: Ground-disturbing activities within the non-fill portions of the project area (Entry Plaza, Maintenance Yard, Nike Hill, and the Flare Site) shall be monitored by one tribal monitor representing the Kizh Nation. The tribal monitor shall have the authority to temporarily halt construction operations within 50 feet of a TCR or a potential TCR to determine if significant or potentially significant resources will be adversely affected by continuing construction operations. The tribal monitor shall use flagging

tape, rope, or some other means, as necessary, to delineate the area of the find within which construction shall halt and the procedures in TCR-1 shall apply. Construction shall not take place within the delineated find area until the County consults on appropriate treatment. Tribal monitors may suggest options for treatment of finds for consideration. Tribal monitors must obtain permission from the County to harvest native plants in a sustainable manner within the project area that are deemed important to the Kizh Nation. The County shall have ultimate authority over the treatment of new finds while complying with all rules and regulations.

3.5.6 Residual Impacts After Mitigation

After implementation of the above mitigation measures, the Proposed Project would result in less than significant impacts to cultural and paleontological resources.

3.6 GEOLOGY AND SOILS

This section describes the environmental setting for geology and soils, including the regulatory setting and existing site conditions, the impacts the geology and soil conditions would have on the Proposed Project at the program level, and the mitigation measures that would reduce these impacts. For the purpose of this section, the terms soil and rock refer to unconsolidated and consolidated earth materials, respectively, regardless of depth. Geologic resources can include mineral deposits, important landforms, and tectonic features. These resources can present hazards or obstacles to new development, and may also have scientific, economic, and recreational value. In the case of the proposed Puente Hills Landfill Park, slope stability features, landfill deck settling and the effects local and regional faults are potentially important geologic processes issues. The PHLPMP addresses geology and soils issues through phasing of the park components, which includes the first phases of development in older landfill areas that have settled and relegates development of newer landfill areas to the future, when these areas have completed the settling process. A geotechnical feasibility evaluation was completed for the Proposed Project (Ninyo & Moore 2016). The technical report is provided as Appendix E.

3.6.1 Environmental Setting

3.6.1.1 Geologic Setting

Regional Setting

The project site is located at the northwestern end of the Puente Hills, which are bounded on the north and northwest by the floodplain of the San Gabriel River, on the east and northeast by the San Jose Creek floodplain, and on the south by a series of alluvial fans. The Puente Hills are at the northern end of the Peninsular Ranges geomorphic province of California, which, together with the San Jose Hills, form the northern end of the Santa Ana Mountains.

Regional uplift, folding, and faulting during the last one million years (late Pleistocene and Holocene epochs) has formed the landscape at and surrounding the project site. As the rocks were uplifted, they were eroded into sediment, which was redeposited on the surface by the forces of wind, water, and gravity. These sediments are known collectively as basin sediments or flood plain deposits. Offsite, these sediments are quite deep and primarily water-borne (Geomatrix 2005).

The Puente Hills are underlain by several thousand feet of marine sedimentary and volcanic rocks deposited from the Cretaceous to Tertiary periods (145 to 2.6 million years ago). These sediments were deposited on metamorphic basement rock of upper Mesozoic age (252 to 66 million years ago). The main formation that underlies the western Puente Hills area is the Fernando Formation, which is of early Pleistocene to Pleistocene age (2.5 million years to 11,700 years ago), and consists of marine to nonmarine, weakly indurated, clastic sediments. The Fernando Formation is divided into an upper Pico member and a lower Repetto member. The Pico claystone member

underlies the project site. The Pico claystone consists of micaceous (mica-containing) silty claystone or siltstone with sphere-shaped fractures and vague bedding. Some silty sandstone is interbedded within the siltstone (Earth Tech 2000).

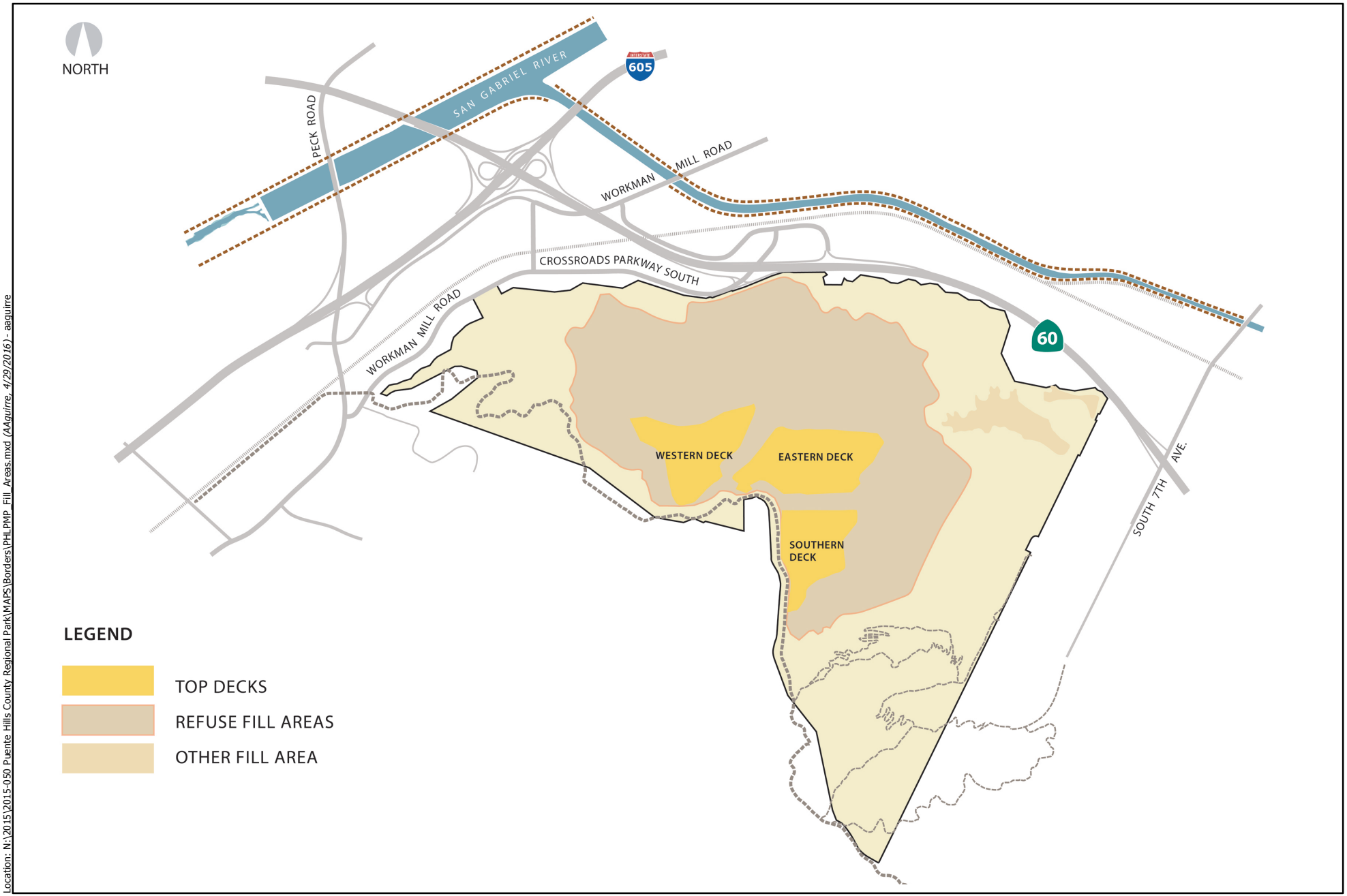
Site Specific Setting

The project site has been extensively modified through previous use as a solid waste landfill. Prior to landfill use, slopes were typically rounded and gently to moderately sloping except where cut by steep-walled canyons. Landslides were common features of these slopes and included large ancient slope features and younger slumps and debris flows (County Sanitation Districts of Los Angeles County 2001, Geomatrix 2005). Solid waste fill capping comprises 602 acres of the 1,365 acre site. The highest point in the Project site is Nike Hill, located on the southern portion of the landfill, at about 1,160 feet above mean sea level (amsl). Much of the project site has been terraced by past landfill operations. The landfill side slopes rise approximately 2 feet horizontal to 1 foot vertical (2:1), with drainage maintenance benches at approximately 40-vertical-foot intervals; each bench typically supports a concrete swale that captures runoff that is carried to corrugated metal or high density polyethylene down drain pipes that lead to either an energy dissipater at the base of the landfill or a drainage channel adjacent to the internal road. From these two sources, the water flows to one of 11 debris basins located at the lower elevations of the landfill to remove debris and sediment before being released into the Los Angeles County Department of Public Works (LACDPW) storm drain system (County Sanitation Districts of Los Angeles County 2001; PACE 2016).

The fill area is generally divided into the western, eastern, and southern fill areas for management purposes (Figure 3.6-1). Active settlement of the landfill surface is ongoing as the fill beneath decomposes. The rate of settlement will be greater in some areas than others, causing differential settlement, which is typical for landfills. The majority of the settlement is expected to occur in the first 30 years after closure, but some settlement occurs beyond that. Mission Canyon Landfill and Palos Verdes Landfill, which were closed over 30 years ago by the Sanitation Districts, are still experiencing settlement on parts of the landfill.

Unlike landfills that are built on flat terrain, Puente Hills Landfill is a canyon fill. The canyon areas are filled with refuse, allowing the height of the refuse to be considerable. At closure, the depth of refuse in some locations was as much as 500 to 600 feet below the landfill surface, making it one of the largest and deepest landfills in the country. This also means that the landfill surface will experience significant settlement as the hundreds of feet of underlying refuse decomposes and settles.

Approximately 13 acres of the Western Deck has settled the most due to soil stockpiling which has accelerated settlement. It is anticipated that these 13 acres will settle a maximum of 10 feet over the next 30 years. The areas that had the most recent fill include Eastern and Southern Landfill Decks. The top decks of these fill areas may settle 120 feet or more in the next 30 years. Figure 3.6-2 depicts the estimated amount of settling that is anticipated to occur in the next 30 years (LACDPR 2016; Withers & Sandgren 2015).



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Fill_Areas.mxd (AAguirre, 4/29/2016) - aaguirre

Map Date: 4/29/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.6-1. Puente Hills Landfill Fill Areas

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Settlement_Projections.mxd *(AAguirre, 4/29/2016)* - aaguirre

Map Date: 4/29/2016
Source: Withers and Sandgren 2016

Figure 3.6-2. Puente Hills Landfill Settlement Projections (in feet)

2015-050 Puente Hills Landfill Park Master Plan

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

THIS PAGE INTENTIONALLY LEFT BLANK

3.6.1.2 Faulting and Seismicity

As with most of southern California, the Proposed Project area is subject to geologic and seismic hazards. Southern California, specifically the San Gabriel Valley, is located within a seismically active region at the junction of the Transverse Ranges and the Peninsular Ranges. These physiographic regions experience repeated seismic activity associated with the lateral movement of the North American and Pacific tectonic plates. In Los Angeles County, there are over 50 active faults and potentially active fault segments, an undetermined number of buried faults, and at least four blind thrust faults, all of which are capable of producing damaging earthquakes (County of Los Angeles 2012b). There are no faults on the project site.

The San Andreas Fault is approximately 30 miles north of the project site. The San Andreas Fault has a Maximum Probable Earthquake (MPE) of 7.4 magnitude on the Richter scale (M). An MPE is defined as the maximum earthquake that is likely to occur during a 100 year interval. Because of its length and ability to cause ground shaking for extended periods of time, the San Andreas Fault system is considered a major potential seismic hazard for the project site. Other faults that are considered to be a seismic hazard for the project site are the Whittier and the Elsinore faults. The Whittier Fault is located approximately 2 miles south of the project site and has a M6.0 MPE. The Elsinore Fault is located about 10 miles south of the project site and has an M6.6 MPE (County Sanitation Districts of Los Angeles County 2001). There are no Alquist-Priolo Earthquake Hazard Zones mapped near the Proposed Project in the El Monte Quadrangle (California Department of Conservation [CDC] 1991).

Vertical amplification of ground shaking is not considered to be a hazard at the project site, because the area is underlain be bedrock that would have an attenuating, rather than an amplifying, effect on ground shaking. In the fill areas, alluvial material that would have the potential for amplification has been removed as part of liner installation. Seismic deformational analysis performed for the landfill when it was in operation predicted no amplification of ground response or vertical acceleration. This prediction was supported by the lack of observable damage or changes to any onsite structures after the 1987 Whittier Earthquake (County Sanitation Districts of Los Angeles County 2001).

3.6.1.3 Secondary Seismic Hazards

Secondary seismic hazards include several types of ground failure that can occur as a result of the severe ground shaking. These hazards can include liquefaction and landslides.

Liquefaction

Liquefaction occurs during earthquakes when ground shaking causes water-saturated soils to become fluid and loose strength, much like quicksand. Potential hazards due to liquefaction include loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements and differential settlements. Liquefaction is often responsible for damage to bridges, buildings, buried pipes, and underground storage tanks. Liquefaction at the project site is not considered to be a

hazard. The most likely strata to become saturated is alluvium, most of which has been removed as part of constructing the landfill facilities. Therefore, liquefaction is not considered to be a significant risk at the project site (County Sanitation Districts of Los Angeles County 2001). The portion of the project site located beyond the landfill waste limits is underlain by bedrock, which is not susceptible to liquefaction (Ninyo & Moore 2016).

Landslides

A landslide is the movement of rock, debris, or soil down a slope. Landslides can be caused by ground shaking or heavy precipitation and tend to occur in weak soil and rock on sloping terrain. Slope instability can exist in naturally-occurring ground slopes (cliffs, hillsides, canyon walls), in natural slopes that have been altered by man (cut slopes), and in manmade slopes made of soil or solid waste. The landfill fill areas have been stabilized as part of the landfill operation and closure process, and landslide hazards are not anticipated (County Sanitation Districts of Los Angeles County 2001; Withers & Sandgren 2015).

Hillsides on the non-fill areas of the project site are composed of siltstone, claystone and sandstone, which are subject to seismically-induced landsliding (Ninyo & Moore 2016). A stability analysis was conducted in 2014 for the native cut slopes on the western portion of Nike Hill (AMEC 2014). The purpose of the report was to evaluate whether the existing native cut slopes were stable under existing conditions and, if they were not stable, to evaluate and select an appropriate measure to stabilize them. The summit of the east-west trending ridge of Nike Hill was extensively graded in the 1950s to create a Nike anti-aircraft missile radar installation. In the late 1970s and early 1980s, the north-facing slopes of the ridge were graded to provide fill for the landfill operations. Currently, the western slopes of Nike Hill are native cut slopes that extend vertically about 100 feet or more above an area of stockpiled soil material to the north. The crest of the ridge has several microwave relay towers, a reclaimed water tank, and recreational facilities for horseback riding and picnicking. The Nike Hill western slopes area was the final landfill area developed before site closure in October 2013. The 2003 Conditional Use Permit allowed placement of refuse in the main canyon area, north of the Nike Slopes, and allowed filling on both the eastern and western bedrock cut slopes of Nike Hill. The eastern portion was stabilized, lined, and backfilled with refuse. However, due to a reduction in the quantity of refuse received by the landfill in the last several years of operation, the allowable air space in both the eastern and western portions was not filled to capacity before the landfill closed. Consequently, the Sanitation Districts made adjustments to the Final Fill Plan for the Nike Slopes area, resulting in lowering the top deck of refuse in the eastern portion and completely eliminating the lined area on the western slope. At landfill closure, the slopes were considered marginally stable to unstable and may be subject to landslides (AMEC 2014). The 2014 stability analysis conducted as part of landfill closure and maintenance activities (AMEC 2014) recommended the placement of soil buttresses to stabilize the western Nike slopes. As part of its landfill closure and maintenance activities, the Sanitation Districts plans to install a soil buttress that will extend the entire length of the western Nike Slopes, approximately 1,500 feet in length, which is expected to be completed in 2017 (AMEC 2014).

3.6.1.4 Soils

The majority of the project site is closed landfill covered by a final monolithic cover composed of a five-foot-thick layer of cover soil from on-site soils consisting of siltstone and claystone materials excavated during landfill expansion activities. Such soils were selected to minimize potential for water percolation and intrusion into underlying refuse fill material to avoid adverse water quality impacts. Thus, the 130 acres of landfill decks are underlain by soils that are somewhat impervious and which result in ponding of rainwater and/or need for surface stormwater collection facilities. The final cover meets Title 27 requirements including isolating the waste from precipitation and irrigation water and affords sufficient protection against water quality impairment. The final cover was approved by the RWQCB and CalRecycle (formerly the California Integrated Waste Management Board) and is maintained by the Sanitation Districts as part of the ongoing maintenance and monitoring requirements for the closed landfill (AES 2011).

Approximately 300,000 cubic yards of soil is stockpiled on 27 acres of the western area for use by the Sanitation Districts to maintain the final cover. Soils in the nonfill areas area Hanford silt loam and Altamont clay loam. The Hanford soil series consists of very deep, well-drained soils that formed in moderately coarse-textured alluvium dominantly from granite. The Altamont soil series consists of deep, well-drained soils that formed in material weathered from fine-grained sandstone and shale (ECORP 2015a). Title 27 requires that no ponding water is allowed on the landfill cover. Drainage structure systems have been constructed throughout the entire site to ensure proper drainage. Stormwater and irrigation water is currently captured in an extensive series of channels, surface and subsurface culverts and pipelines, energy dissipaters, and debris basins. There are 11 debris basins located in the lower portions of the landfill.

3.6.2 Regulatory Setting

3.6.2.1 Federal

International Building Code

The International Building Code (IBC) is the national model building code. California has incorporated the 2012 IBC into the California Building Code (CBC), which currently applies to all structures being constructed in California (ICC 2015). The national model codes are incorporated by reference into the building codes of local municipalities, such as the CBC and the County's Building Code.

3.6.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (AP Act) was created in 1972 in response to the San Fernando earthquake to mitigate the hazards of surface faulting to manmade structures. The California Geological Survey's Special Publication 42 includes the provisions of the Act and an index to maps of Earthquake Fault-Rupture Zones, as well as current revisions to these documents (CDC 2007a).

Earthquake Fault-Rupture Zones have been delineated to prevent the construction of urban development across the trace of known active faults. The boundaries of these regulatory fault zones are approximately 500 feet from major active faults and 200 to 300 feet from well-defined minor faults, referred to as Alquist-Priolo Earthquake Hazard Zones. The State Geologist establishes regulatory zones around the surface traces of active faults in order to issue appropriate maps (CDC 2007b).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code §§2690–2699.6) directs the State of California Department of Conservation, California Geological Survey to identify and map areas subject to earthquake hazards such as liquefaction, earthquake-induced landslides, and amplified ground shaking. The Seismic Hazards Mapping Act was passed shortly after the 1989 Loma Prieta Earthquake, and is intended to minimize the loss of life and property through identification, evaluation and mitigation of seismic hazards (CDC 2007c).

Seismic Zone Hazard Maps identify Zones of Required Investigation, which are areas with potential for seismic hazards. These maps help cities and counties in their land use planning and building permit processes (CDC 2007c).

California Waste Management Unit Construction Standards

California Code of Regulations Title 27, Sections 20310 et seq. provide construction standards for waste management units, facilities, and disposal sites. Landfills, including environmental control systems and slope designs, must be designed to withstand the MPE without damage to the foundation or to the structures that control leachate, surface drainage or erosion, or gas (27 CCR §20370).

California Building Code

California Code of Regulations, Title 24, also known as the California Building Standards Code (CBSC), serves as the basis for design and construction of buildings in California. California's building codes are published in their entirety every three years. Intervening code adoption cycles occur halfway (every eighteen months) into each triennial period (CBSC 2016).

3.6.2.3 Local

County of Los Angeles General Plan

The Safety Element of the General Plan addresses environmental hazards, including seismic and geotechnical hazards. The Safety Element identifies Alquist-Priolo Earthquake Hazard Zones within the County, as well as known active faults that are not within Alquist-Priolo zones. Goals and policies relevant to seismic and geotechnical hazards include:

Goal S 1: *An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.*

Policy S 1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones

Policy S 1.2: Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.

Policy S 1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.

Policy S 1.4: Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

County of Los Angeles Building Code

Title 26 of the Los Angeles Code of Ordinances, also known as, the County of Los Angeles Building Code (County Building Code) incorporates the IBC and CBSC described above (County of Los Angeles n.d.). Specific chapters and sections of the County Building Code regulate construction in areas with potential for seismic hazards to occur. These regulations are described below:

- Chapter 1, Section 110.2, Geotechnical Hazards, restricts building and grading activities in areas where geotechnical hazards may be activated or increased as a result of a proposed project.
- Chapter 1, Section 111, Engineering Geology and Soils Engineering, requires an Engineering Geology Report, a Soils Engineering Report, or both reports as decided by the Building Official. These reports would contain findings regarding the safety of the building site against geotechnical hazards.
- Chapter 16, Structural Design, describes the building requirements for construction of structures built on a hillside.
- Chapter 17, Structural Tests and Inspections, allows the Building Official to observe and/or test the structural integrity of certain building components when specified seismic conditions are met.

County of Los Angeles Grading Guidelines

The LACDPW, Building and Safety Division has adopted grading guidelines to provide information to homeowners, contractors, and engineers about the preparation and process of obtaining a grading permit. The guidelines require that a grading and drainage plan be designed to eliminate inundation, overflow, erosion hazards, and geotechnical hazards (LACDPW 2008).

3.6.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have significant effect on geology and soils if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist or based on other substantial evidence of a known active fault trace. Refer to Division of Mines and Geology Special Publication 42;
- Strong seismic ground shaking;
- Seismic-related ground failure, including liquefaction or lateral spreading;
- Landslides;

- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

The County's significance thresholds also include the following thresholds related to geology and soils:

- Would the project have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?
- Would the project conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, § 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element?

During scoping and Master Plan development, it was determined that the Proposed Project would not require alternative wastewater treatment systems. This issue will not be discussed further in this PEIR. Compliance with the Hillside Management Area Ordinance is discussed in Section 3.10, Land Use, of this PEIR.

3.6.4 Environmental Impacts

Threshold:	*Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace; strong seismic ground shaking; seismic-related ground failure, including liquefaction and lateral spreading; and/or landslides?*

Phases I and II

As with most of southern California, the project site is located in a seismically active region. In general, the park improvements would be subject to ground shaking during a seismic event. There are no active faults underlying the Proposed Project and the

Proposed Project does not lie within an Alquist-Priolo zone; however there are active faults in the vicinity. The closest faults are the Whittier Fault (2 miles south), the Elsinore Fault (10 miles south) and the San Andreas Fault (30 miles north). If movement occurred along any of these faults, the Proposed Project could be subject to strong ground shaking.

Phases I and II include construction or installation of park amenities; there is no housing proposed. However, park-related structures (e.g., the Visitor Center, Maintenance Office, and Trail Lift) could be subject to strong ground shaking or surface rupturing. There is no realistic way in which the seismic shaking hazard can be avoided; however, design and placement of structures in accordance with current County Building Code standards would reduce the effects of ground shaking.

The Proposed Project would be constructed partially on landfill fill, which may settle up to 120 feet in the next 30 years. Uneven settlement is expected, which could affect project features that include structures and foundations, footings, and irrigation and utility systems. The PHLPMP has phased the park development to focus on construction on each area as settlement is complete. Park infrastructure, such as irrigation systems and utility lines, would be constructed using flexible cables or piping or, where this is not possible, rigid lines would be located on non-fill areas. Even so, the park amenities that contain structural components such as buildings and the trail lift would require project-specific evaluations by structural and geotechnical engineers to ensure their feasibility and proper design, particularly in light of the unknown future conditions after settlement has completed. Impacts from strong ground shaking would be less than significant with incorporation of Mitigation Measure G-1.

Liquefaction is not considered to be a hazard for the Proposed Project because of the depth to groundwater and the low moisture content of the solid waste fill and monolithic final cover. The nonfill areas do not contain soils with a high liquefaction potential. Therefore, no impact from liquefaction is expected.

The former landfill area is composed of terraced decks that have up to 2:1 slopes. The majority of the park improvements would be constructed on the landfill top decks, which are largely flat. Some amenities would be constructed on Nike Hill and at the Entry Plaza, which are not located on fill areas. An approved project to stabilize the Nike Hill slopes using a soil buttress is expected to be completed in 2017. This project is not part of the Proposed Project, but is part of the landfill closure and maintenance requirements (AMEC 2014). However, landfill settling over time may affect the stability of slopes for future projects. Impacts would be less than significant with incorporation of Mitigation Measure G-1.

An engineering design report (PACE 2016) and geotechnical feasibility evaluation (Ninyo & Moore 2016)have been developed for the Phase I projects to ensure that park features would be constructed to be consistent with County requirements for safety and stability, while still ensuring that park activities would not interfere with landfill maintenance and operations.

Loop Road and Trail

A loop road would be constructed in Phase I to allow access to the upper deck parking areas for park visitors and to allow for emergency vehicle access to all public areas on the site. The majority of the road would use the existing paved road that encircles the Eastern and Western Decks, which is 34 feet wide with one lane in either direction. A multiuse trail would be constructed on the outside edge of the road. The existing road width must be maintained because methane pipe collection systems and drainage systems are located adjacent to the paved road. The 34-foot paved alignment would be fully utilized with two 10- to 12-foot-wide vehicle lanes, a 10-foot trail, and shoulders and drainage. The existing road is constantly inspected for damage due to settlement over fill locations and is repaired as necessary. As described in Section 2.4, the Joint Powers Agreement (JPA) will be amended and restated by the Sanitation Districts and the County to incorporate developments from the Landfill Park Master Planning process and to include more detailed agreements about specific areas on the site. The JPA states that the County will be responsible for future inspection and maintenance of all park amenities, including the loop road and trail, such that potential impacts due to settling would be less than significant.

Entry Plaza

The north-facing slope that descends from the area of the Entry Plaza exhibits some signs of slope creep, but does not show signs of significant slope instability at the time of the 2016 site reconnaissance (Ninyo & Moore 2016). Phase I of the Proposed Project includes road realignment, parking, park guard house, and landscaping. Phase II includes expanded parking, ADA pedestrian and bicycle entry access, decorative fencing and gating at the park entry, and wayfinding signage. Use of these facilities may be affected by landsliding from the north-facing slope. Mitigation Measure G-1 would reduce impacts to a less than significant level.

Trail Lift Towers

The trail lift towers are proposed during Phase II, and would be constructed on non-fill areas. There are relatively long spans between the trail lift tower supports of up to approximately 2,500 feet, which would span across landfill waste deposits between each major tower structure. Because the trail lift towers are proposed on non-fill areas, they are subject to impacts from instability of natural slopes, which could affect the tower foundations (Ninyo & Moore 2016). With Mitigation Measure G-1, impacts would be less than significant.

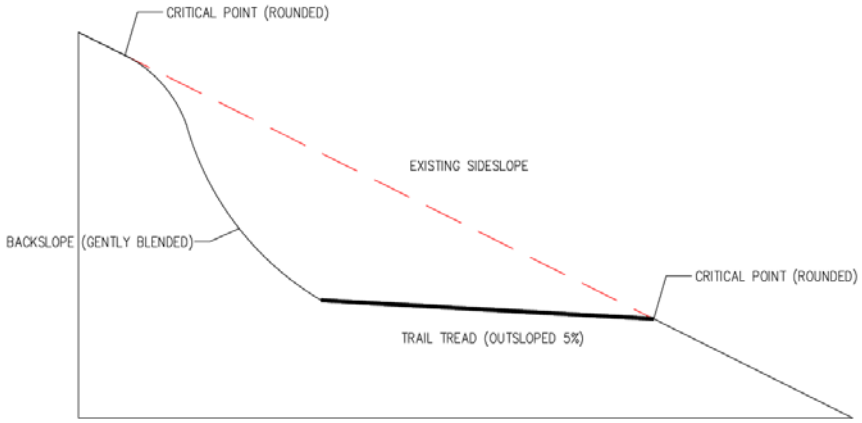
Proposed M&O Area and Loop Road Access to Western Deck

The existing M&O yard is currently used by the Sanitation Districts for the construction of the Nike Hill soil buttress. The site will continue to be used for support of required landfill maintenance and operation activities. Park users would have access to restroom and parking facilities in this area, which would be constructed during Phase I. The elevation increase from the M&O yard and the Western Deck is approximately 150 feet, and the alignment for the portion of the loop road, which would be constructed during Phase I, would be located within the buttress fill area. The proposed road has been designed to accommodate the maximum 12 percent slope allowed for fire access and to minimize the amount of cut-and-fill by matching the existing topography to the extent

possible. The road alignment would comply with LACPW Standard 1080-1 for an inverted Portland cement concrete shoulder street section and would include a curb and gutter along both edges to convey stormwater to either existing drainage features or the proposed water retention basin to the west of the M&O yard. The portions of the road that are on the fill area would be subject to settlement over the lifetime of the project. The JPA includes inspection and maintenance provisions to ensure future maintenance of the loop road such that potential impacts due to settling would be less than significant. Preliminary assessment of the impacts to the buttress from construction of the road indicated that the grading for the Loop Road would not have a significant effect on the stability of the slope (Ninyo & Moore 2016). However, Mitigation Measure G-1 would ensure analysis of the detailed road design; impacts to the buttress would be less than significant with this mitigation measure.

Multi Use Trail from M&O Area to Western Deck

A new trail is proposed in Phase I that would reroute the Schabarum Trail from adjacent property onto County-owned land. The steep terrain of the western slope and the limited open area due to the presence of the proposed road alignment and the existing active Sanitation Districts area require the construction of the proposed trail using a full bench technique (see illustration below). A full bench is constructed by cutting the full width of the trail tread into the hillside and casting the excavated soil as far back from the trail as possible. Construction of the trail using this technique would maximize slope stability and minimize maintenance requirements for the trail. A less than significant impact would occur.



ADA Trail from Parking Lot C (Western Deck) to Nike Hill

An ADA-compliant trail would be constructed from Parking Lot C on the Western Deck to the Nike Hill Overlook during Phase I, rising from an elevation of 1,030 feet amsl to 1,155 feet amsl. To maintain the maximum allowable 5 percent slope for ADA compliance, the trail would be fully benched into the hillside (see illustration above). Construction of the trail using this technique would maximize slope stability and minimize maintenance requirements for the trail. A less than significant impact would occur.

Nike Hill Structures

With Phases I and II, structures would be constructed on Nike Hill, including a plaza and scenic overlook and a trail lift structure to include a café, restroom, and office. Nike Hill is a non-fill area of the project site, and is subject to slope stability issues, especially if the buttress currently stabilizing the western slope of Nike Hill is compromised. Preliminary analysis of the proposed structures concluded that these proposed structures would not have a significant effect on the slope stability of Nike Hill, including the western buttress. However, Mitigation Measure G-1 would ensure that a project-specific analysis of slope stability is conducted at the time of project design. With this mitigation measure, impacts would be less than significant.

Future Phases

As the landfill settles, future phases of the PHLPMP would be constructed. In Phase III (years 21 to 30), full development of all three top decks would be able to be completed because the extreme elevational changes of the top decks due to landfill settling are expected to slow considerably. The Eastern and Southern Decks would be fully developed including a dog park, hiking trails, trailhead parking, picnic areas, interpretive areas, and a bike rental area. Structures that may be affected by geologic hazards include the additional public restrooms, zip line from Nike Hill to Parking Lot B in the M&O area, slides from the multi-use trail to Parking Lot C and the arboretum stair climbs from the Entry Plaza to the Western Deck. Future phases include the land bridge connecting the Eastern and Southern Decks, the stair climb bridge and overlook from the Schabarum/Skyline Trail to the park loop road/multi use loop trail, the stair climb from the Eastern Deck to the Flare Site, the Flare Café, and expansion of park uses on the side slopes. The Flare Site is located on a non-fill area, and structures at the site may be affected by potential landsliding at the north-facing natural slope. The proposed Rose Hills Memorial Park access road would also be constructed in future phases. All of these elements are subject to effects of strong ground shaking, including landslides, and settling from buried landfill fill. Future risks due to seismic activity and settling would be similar to those described for Phases I and II, and would be mitigated to a level that is less-than-significant with the incorporation of Mitigation Measure G-1.

Threshold:	*Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

Phases I and II

The nonfill areas are comprised of Hanford silt loam and Altamont clay loam. Hanford soils contain between 6 and 8 percent clay, while Altamont soils contain between 35 and 60 percent clay. The landfill final cover was constructed of native soil that was excavated during landfill operations and contains clay that can expand and contract, potentially affecting the stability of park structures. Implementation of Mitigation Measure G-1 would ensure that risks to park structures would be less than significant.

Future Phases

Stability of structures proposed for future phases would be affected by the shrink-swell of clay soils both on nonfill areas and on the landfill cover. Impacts from clay soils would be similar to those described for Phases I and II. Mitigation Measure G-1 would reduce impacts to a less-than-significant level.

Threshold: Would the project result in substantial soil erosion or the loss of topsoil?

Phases I and II

During Phases I and II, the Entry Plaza would be constructed along with the loop road and parking, various structures, a multi-use trail, landscaping, and other park improvements (signage, park furniture, railings, etc.). Development would occur at the entry area; portions of the Western, Eastern and Southern Decks; Nike Hill; and at the park loop road.

Soil erosion can occur through natural processes such as water and wind, and through man's activities, such as farming and other soil disturbing activities. Disturbance of surface soils could take place during the construction of the park components or during public use of the park amenities. Impacts from the construction and use of the Proposed Project are discussed below.

Construction-Related Impacts

Disturbance of soil, vegetation, and/or hardscapes during construction would expose bare earth and can cause unstable conditions, resulting in soils that are easily disturbed by wind and water. Additionally, construction activities that take place on steep slopes in areas that are underlain by unstable geology or sensitive soils are more susceptible to erosion impacts. These areas include the slopes leading to the top decks and Nike Hill. During construction, Best Management Practices (BMPs), included as part of the Proposed Project's Storm Water Pollution and Prevention Plan (SWPPP) that would be prepared for the Proposed Project, would be in place.

Operational Impacts

Use of the park amenities created by the Proposed Project can lead to the potential for soil erosion impacts. Impacts from usage can include soil compaction and erosion, loss of organic litter, and loss of ground cover. On completion of Project construction, the majority of the site surfaces accessible to the public would be stabilized by landscaping or hardscaping. The top deck groundcover plant mix is a low-water mix to minimize water impacts to the landfill final cover. Because these surfaces would be stabilized, they would not be subject to substantial soil erosion or loss of topsoil. The proposed new loop road would contain its own channelized stormwater conveyance that would connect to a proposed debris basin located west of the M&O area. This basin would allow suspended sediment and debris to settle before the water continues through the existing drainage network. Ultimately, the water would be drained to an existing debris basin located to the west of the existing Gas to Energy facility where it would be used to recharge the existing 650,000-gallon reclaimed water tank located southwest of the Gas to Energy facility. Impacts would be less than significant.

Future Phases

Construction and operational impacts to soils from future phases are expected to be similar as those described for Phases I and II. Soil erosion would occur during construction of park amenities in all future phases, but are anticipated to be less than significant with the implementation of BMPs included as part of the Proposed Project's SWPPP. During operation, soil erosion would be minimized by landscaping and by expansion of the existing substantial drainage system.

3.6.5 Mitigation Measures

G-1: A qualified geotechnical firm shall conduct site-specific geotechnical investigations during the design of each project component. Activities related to the geotechnical investigation shall be coordinated with the Sanitation Districts to avoid conflicts with landfill operations and maintenance activities. The geotechnical firm shall review the site and grading plans for each project as the PHLPMP is implemented and to determine the specific geotechnical hazards for each project. Geotechnical investigations shall 1) evaluate the subsurface conditions at the site; 2) provide site-specific data regarding potential geologic hazards and geotechnical constraints; and 3) provide information pertaining to the engineering characteristics of earth materials with regard to project improvements and building and tower foundation design 4) provide recommendations for earthwork, foundations, pavements and other pertinent geotechnical design considerations. The detailed geotechnical evaluation may include the following, as applicable:

- Large-diameter bucket auger borings to evaluate geologic conditions for slope stability at the Entry Plaza, Trail Lift Tower locations, and Flare Site, and to evaluate geotechnical engineering properties for tower foundation design;
- Backhoe test pits to evaluate the presence of landfill waste materials in the area of the new structures where they are near the boundary of the waste limits;
- Slope stability analyses to evaluate the stability of the adjacent graded and natural slopes near proposed structural improvements, including the evaluation of possible effects to the western Nike Hill slope buttress; and
- Geotechnical engineering analyses to develop pile foundation parameters for buildings and trail lift towers.

3.6.6 Residual Impacts After Mitigation

With the implementation of the mitigation measures described in this section, residual impacts would be less than significant.

3.7 GREENHOUSE GAS

This section of the PEIR assesses the potential impacts associated with greenhouse gas (GHG) emissions resulting from construction and operation of the Proposed Project. This section also describes the existing and regulatory setting in relationship to GHG emissions, as well as identifies mitigation measures to reduce GHG emissions impacts. A global climate change impact analysis report was completed for the Proposed Project (Kunzman 2016a). The technical report is provided in Appendix B and summarized below.

3.7.1 Environmental Setting

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHGs), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent GHGs contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent GHG, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the GHGs and their global warming potential.

3.7.1.1 Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Although it is a GHG in the atmosphere, water vapor is not considered a pollutant as it helps maintain the Earth's livable climate. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put

the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

3.7.1.2 Carbon Dioxide (CO_2)

The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s. Each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least two degrees Celsius or 3.6 degrees Fahrenheit.

3.7.1.3 Methane (CH_4)

CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO_2. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO_2, N_2O, and CFCs. CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

3.7.1.4 Nitrous Oxide (N_2O)

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is also commonly used as an aerosol spray propellant, (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars).

3.7.1.5 Chlorofluorocarbons (CFCs)

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that

they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

3.7.1.6 Hydrofluorocarbons (HFCs)

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

3.7.1.7 Perfluorocarbons (PFCs)

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

3.7.1.8 Sulfur Hexafluoride (SF_6)

SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

3.7.1.9 Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

3.7.1.10 Global Warming Potential

GHGs have varying global warming potential (GWP). The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the

emission of a unit mass of gas relative to the reference gas, CO_2. One teragram of carbon dioxide equivalent (Tg CO_2e) is essentially the emissions of the gas multiplied by the global warming potential. One teragram is equal to one million metric tons. The carbon dioxide equivalent (CO_2e) is a good way to assess emissions because it gives weight to the global warming potential of the gas. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 3.7-1. As shown in Table 3.7-1, the global warming potential of GHGs ranges from 1 to 22,800.

Table 3.7-1. Global Warming Potentials and Atmospheric Lifetimes[1]

GAS	ATMOSPHERIC LIFETIME	GLOBAL WARMING POTENTIAL2 (100 YEAR HORIZON)
Carbon Dioxide (CO_2)	—[3]	1
Methane (CH_4)	12	28-36
Nitrous Oxide (NO)	114	298
Hydrofluorocarbons (HFCs)	1-270	12-14,800
Perfluorocarbons (PFCs)	2,600-50,000	7,390-12,200
Nitrogen Trifluoride (NF_3)	740	17,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

[1]Source: http://www3.epa.gov/climatechange/ghgemissions/gases.html
[2]Compared to the same quantity of CO_2 emissions.
[3]Carbon dioxide's lifetime is poorly defined because the gas is not destroyed over time, but instead moves among different parts of the ocean–atmosphere–land system. Some of the excess carbon dioxide will be absorbed quickly (for example, by the ocean surface), but some will remain in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments.

3.7.2 Regulatory Setting

3.7.2.1 International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

3.7.2.2 Federal

In Massachusetts v. Environmental Protection Agency (EPA) (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate GHGs, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other GHGs as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

On March 19, 2015, the White House announced that President Obama would issue an Executive Order that would cut the Federal Government's GHG emissions 40 percent over the next decade from 2008 levels -- saving taxpayers up to $18 billion in avoided energy costs—and increase the share of electricity the Federal Government consumes from renewable sources to 30 percent. Complementing this effort, several major Federal suppliers are announcing commitments to cut their own GHG emissions. In 2016, the Administration is hosting a roundtable that will bring some of these large Federal suppliers together to discuss the benefits of their GHG reduction targets or to make their first-ever corporate commitments to disclose emissions and set new reduction goals.

Together, the combined results of the Federal Government actions and new supplier commitments will reduce GHG emissions by 26 million metric tons by 2025 from 2008 levels, the equivalent of taking nearly 5.5 million cars off the road for a year. To encourage continued progress across the Federal supply chain, the Administration is releasing a new scorecard to publicly track self-reported emissions disclosure and progress for all major Federal suppliers, who together represent more than $187 billion in Federal spending and account for more than 40 percent of all Federal contract dollars.

Since the Federal Government is the single largest consumer of energy in the Nation, Federal emissions reductions and progress across the supply chain will have broad impacts. The new commitments announced in 2016 support the United States'

international commitment to cut net GHG emissions 26 to 28 percent below 2005 levels by 2025, which President Obama first announced in November 2014 as part of an historic agreement with China. Additionally, the goals build on the strong progress made by Federal agencies during the first six years of the Administration under President Obama's 2009 Executive Order on Federal Leadership on Environmental, Energy and Economic Performance, including reducing Federal GHG emissions by 17 percent — which helped Federal agencies avoid $1.8 billion in cumulative energy costs — and increasing the share of renewable energy consumption to 9 percent.[1]

3.7.2.3 State

The California Air Resources Board (CARB) proposed interim statewide CEQA thresholds for GHG emissions and released *Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*, on October 24, 2008. The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed

[1] Source: https://www.whitehouse.gov/the-press-office/2015/03/19/fact-sheet-reducing-greenhouse-gas-emissions-federal-government-and-acro.

to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which would be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$). The 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 $MMTCO_2e$ and the reduction of 42 $MMTCO_2e$, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO_2 in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations, and other sources that became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption on May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, Association of Irritated Residents v. California Air Resources Board, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document,* June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan FED revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

The *First Update to the Climate Change Scoping Plan* was released in May 2014. Within that update, the CARB discusses the role local governments' play in successful implementation of AB32 and states that local governments have "set municipal and community-wide GHG reduction targets of 15 percent below then-current levels by 2020, to coincide with the statewide limit."

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by the CPUC and California Energy Commission (CEC).

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the LCFS. The LCFS is anticipated to reduce GHG emissions by about 16 $MMTCO_2e$ per year by 2020. The LCFS is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the LCFS will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at 10 percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles, are also considered as low carbon fuels for the LCFS.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by

July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the State CEQA Guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State’s Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or alternate planning strategy for consistency with its assigned targets.

The project site is located within the Southern California Association of Governments (SCAG) jurisdiction, which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bill 939 and Senate Bill 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling, or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board (now CalRecycle) to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The California Energy Commission adopted 2008 Standards on April 23, 2008 and the Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 Standards have been approved and are effective July 1, 2014.

California Code of Regulations (CCR) Title 24, Part 11

All buildings for which an application for a building permit is submitted on or after January 1, 2014 must follow the 2013 standards. The 2013 commercial standards are estimated to be 30 percent more efficient than the 2008 standards; residential standards are 25 percent more efficient. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

California Green Building Standards

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, non-residential buildings over 10,000 square feet.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide

a minimum 50 percent diversion requirement. The Code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

3.7.2.4 Regional

In order to assist local agencies with direction on GHG emissions, the South Coast Air Quality Management District (SCAQMD) organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual thresholds of 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) for industrial uses.

Rules 2700 and 2701

The SCAQMD adopted Rules 2700 and 2701 on December 5, 2008, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2700 establishes definitions for the various terms used in Regulation XXVII – Global Climate Change. Rule 2701 provides specific protocols for private parties to follow to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan to reduce GHG emissions. Upon approval of the Plan, the Executive Officer is required to issue a certified receipt of the GHG emission reductions within 90 days.

Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority is be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

Rule 3002

The SCAQMD amended Rule 3002 on November 5, 2010 to include that facilities that emit greater than 100,000 tons per year of CO_2e are required to apply for a Title V

permit by July 1, 2011. A Title V permit is for facilities that are considered major sources of emissions.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the South Coast Air Basin. Instead, this is controlled through local jurisdictions in accordance with CEQA. In order to assist local jurisdictions with air quality compliance issues the *CEQA Air Quality Handbook (SCAQMD CEQA Handbook)*, prepared by the SCAQMD, 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs of the Air Quality Management Plan (AQMP). The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that the SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the South Coast Air Basin, and adverse impacts will be minimized.

3.7.2.5 Local

County of Los Angeles General Plan, Air Quality Element

The Air Quality Element of the County of Los Angeles General Plan summarizes GHG issues in the Basin and establishes goals and policies to improve GHG emissions. Relevant goals and policies in the Air Quality Element include:

Goal AQ 3: Implementation of plans and programs to address the impacts of climate change.

- Policy AQ 3.1: Facilitate the implementation and maintenance of the Community Climate Action Plan to ensure that the County reaches its climate change and greenhouse gas emission reduction goals.
- Policy AQ 3.2: Reduce energy consumption in County operations by 20 percent by 2015.
- Policy AQ 3.3: Reduce water consumption in County operations.
- Policy AQ 3.4 Participate in local, regional and state programs to reduce greenhouse gas emissions.
- Policy AQ 3.5: Encourage energy conservation in new development and municipal operations.
- Policy AQ 3.6: Support rooftop solar facilities on new and existing buildings.
- Policy AQ 3.7: Support and expand urban forest programs within the unincorporated areas.
- Policy AQ 3.8: Develop, implement, and maintain countywide climate change adaptation strategies to ensure that the community and public services are resilient to climate change impacts.

Unincorporated Los Angeles County Community Climate Action Plan 2020

The County completed the Unincorporated Los Angeles County Community Climate Action Plan 2020 (CCAP) in August 2015 and adopted the CCAP in October 2015. The CCAP includes a GHG reduction target of at least 11 percent below 2010 levels by 2020, consistent with AB 32. The CCAP also identifies 26 local actions as part of a comprehensive GHG emissions reduction program to reduce emissions from both existing and new development within the County.

In November 2013, in response to the mandates set forth in California Green Building Standards Code (CALGreen), the County Board of Supervisors adopted the Los Angeles County Green Building Standards Code (Title 31). The purpose of the code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact, or positive environmental impact, and encouraging sustainable construction practices in the following categories:

1) Planning and design;
2) Energy efficiency;
3) Water efficiency and conservation;
4) Material conservation and resource efficiency; and
5) Environmental air quality.

The provisions of the County Green Building Standards Code are applied to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure in the County.

3.7.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have a significant greenhouse gas impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

3.7.4 Environmental Impacts

Threshold:	*Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Phases I and II

The global climate change impact analysis (Kunzman 2016a) is limited to the full buildout of the Proposed Project (following the construction and during operation of all of the phases simultaneously). The analysis does not provide a breakdown of Phases I and II only; however, GHG emissions for Phases I and II would be similar to the full

buildout condition of the Proposed Project. Therefore, the analysis below for Phases I and II are based on the worst-case scenario (full buildout).

Table 3.7-2 shows that the Proposed Project (following the operation of all of the phases simultaneously) would generate unmitigated GHG emissions of 5,123.58 $MTCO_2e$ per year. The majority of emissions are sourced from construction of the Proposed Project and from mobile sources from the patrons visiting the park. According to the SCAQMD thresholds of significance, a cumulative global climate change impact would potentially occur if the GHG emissions created from the on-going operations would exceed the SCAQMD draft screening threshold of 3,000 $MTCO_2e$ per year for GHG emissions for all uses. Therefore, the final Proposed Project would result in significant impacts related to GHG emissions.

Table 3.7-2. Opening Year (2035) Unmitigated Project-Related Greenhouse Gas Emissions[1]

FINAL PARK CONCEPT (PROJECT)						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	BIO-CO2	NONBIO-CO2	CO2	CH_4	N_2O	CO_2E
Area Sources2	0.00	0.01	0.01	0.00	0.00	0.01
Energy Usag3	0.00	20.15	20.15	0.00	0.00	20.23
Mobile Sources4	0.00	2,602.07	2,602.07	0.07	0.00	2,603.53
Solid Waste5	2.01	0.00	2.01	0.12	0.00	4.51
Water6	0.00	436.39	436.39	0.02	0.00	438.10
Construction7	0.00	2,055.26	2,055.26	0.09	0.00	2,057.21
Total Emissions	2.01	5,113.87	5,115.88	0.30	0.00	**5,123.58**
SCAQMD Draft Screening Threshold						**3,000**
Exceeds Threshold?						Yes

[1]Source: CalEEMod Version 2013.2.2
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

Mitigation for significant impacts associated with GHG emissions are presented in Section 3.7.5 below. Year 2020 mitigated Project-related emissions are shown in Table 3.7-3 and still exceed 3,000 metric tons of CO_2e per year by 1,863.07 $MTCO_2e$. There is no feasible mitigation measure that would effectively reduce emissions from mobile and construction sources to less than significant levels. Therefore, impacts from GHGs are considered to be significant and unavoidable for the Proposed Project.

Table 3.7-3. Year 2020 Mitigated Project-Related Greenhouse Gas Emissions[1]

FINAL PARK CONCEPT (PROJECT)						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	$BIOCO_2$	NONBIO- CO_2	CO_2	CH_4	N_2O	CO_2E
Area Sources[2]	0.00	0.01	0.01	0.00	0.00	0.01
Energy Usage[3]	0.00	20.15	20.15	0.00	0.01	20.23
Mobile Sources[4]	0.00	2,432.10	2,432.10	0.09	0.00	2,434.03
Solid Waste[5]	0.50	0.00	0.50	0.03	0.00	1.13
Water[6]	0.00	349.11	349.11	0.02	0.00	350.48
Construction[7]	0.00	2,055.26	2,055.26	0.09	0.00	2,057.21
Total Emissions	0.50	4,856.63	4,857.13	0.23	0.01	**4,863.07**
Percent Reduction Requirement from LA County GHG CAP						11%
Project's Percent reduction from Baseline						17%
Meets Reduction Requirement?						Yes

[1] Source: CalEEMod Version 2013.2.2 year 2020 Mitigated emissions
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

In addition to the mitigation presented in Section 3.7.5 below, the Proposed Project is also subject to the requirements of the California Green Building Standards Code (with code section in parentheses) as described below.

- Water Efficiency and Conservation [Indoor Water Use (4.303.1)]. Fixtures and fixture fittings reducing the overall use of potable water within the building by at least 20 percent shall be provided. The 20 percent reduction shall be demonstrated by one of the following methods:
  - Prescriptive Method: Showerheads (≤ 2.0 gpm @ 80 psi); Residential Lavatory Faucets (≤ 1.5 gpm @ 60 psi); Non-residential Lavatory Faucets (≤ .4 gpm @ 60 psi); Kitchen Faucets (≤ 1.8 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); and urinals (≤ 0.5 gal/flush).
  - Performance Method: Provide a calculation demonstrating a 20-percent reduction of indoor potable water using the baseline values set forth in Table 4.303.1. The calculation will be limited to the total water usage of showerheads, lavatory faucets, water closets, and urinals within the dwelling.
- **Water Efficiency and Conservation [Outdoor Water Use (4.304.1)]**. Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

- Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' watering needs as weather or soil conditions change.

- Weather-based controllers without integral rain sensors or communication systems that account for rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).

- **Construction Waste Reduction of at least 50 percent (4.408.1)**. Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions:
  - Excavated soil and land-clearing debris.
  - Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the job-site.
  - The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

- **Materials Pollution Control (4.504.1 – 4.504.6)**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard.
- **Installer and Special Inspector Qualifications (702.1-702.2).** Mandatory special installer inspector qualifications for installation and inspection of energy systems (e.g., heat furnace, air conditioner, mechanical equipment).

Future Phases

The analysis above for Phases I and II are based on the worst-case scenario (full buildout), which includes Future Phases of the Proposed Project. As presented in Table 3.7-2, Future Phases of the Proposed Project would generate GHG emissions of 5,123.58 $MTCO_2e$ per year. According to the SCAQMD thresholds of significance, the Proposed Project would result in significant impacts related to GHG emissions.

Mitigation for significant impacts associated with GHG emissions are presented in Section 3.7.5 below. Year 2020 mitigated Project-related emissions are shown in Table 3.7-3 above and still exceed 3,000 metric tons of CO_2e per year by 1,863.07 $MTCO_2e$. There is no feasible mitigation measure that would effectively reduce emissions from mobile and construction sources to less than significant levels. Therefore, impacts from GHGs are considered to be significant and unavoidable for the Proposed Project.

Threshold:	*Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Phases I and II

As previously stated, the County's CCAP includes a GHG reduction target of at least 11 percent below 2010 levels by 2020, consistent with AB 32. The CCAP also identifies 26

local actions as part of a comprehensive GHG emissions reduction program to reduce emissions from both existing and new development within the County.

Year 2010 unmitigated emissions for the Proposed Project (worst-case; full buildout) are shown in Table 3.7-4, and Year 2020 mitigated emissions for the Proposed Project (worst-case; full buildout) are shown in Table 3.7-3. As shown in Table 3.7-3, the Proposed Project's Year 2020 mitigated emissions provide a reduction of 17 percent from 2010 baseline Proposed Project emissions (refer to Section 3.7.5 below for mitigation measure to be applied to the Proposed Project). Therefore, with incorporation of mitigation, the Proposed Project would meet the requirements of the CCAP, and the Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG emissions.

Table 3.7-4. Baseline (2010) Project-Related Greenhouse Gas Emissions[1]

FINAL PARK CONCEPT (PROJECT)						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	BIO-CO2	NONBIO- CO2	CO2	CH4	N2O	CO2E
Area Sources[2]	0.00	0.01	0.01	0.00	0.00	0.01
Energy Usage[3]	0.00	20.15	20.15	0.00	0.01	20.23
Mobile Sources[4]	0.00	3,337.55	3,337.55	0.22	0.00	3,342.16
Solid Waste[5]	2.01	0.00	2.01	0.12	0.00	4.51
Water[6]	0.00	436.39	436.39	0.02	0.00	438.10
Construction[7]	0.00	2,055.26	2,055.26	0.09	0.00	2,057.21
Total Emissions	2.01	5,849.36	5,851.37	0.45	0.01	**5,862.21**

[1] Source: CalEEMod Version 2013.2.2 year 2010 unmitigated emissions
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

Future Phases

The analysis above for Phases I and II are based on the worst-case scenario (full buildout), which includes Future Phases of the Proposed Project. As presented in Table 3.7-2, Future Phases of the Proposed Project would generate GHG emissions of 5,123.58 $MTCO_2e$ per year. According to the SCAQMD thresholds of significance, the Proposed Project would result in significant impacts related to GHG emissions.

Year 2035 unmitigated emissions for the Proposed Project (worst-case; full buildout) are shown in Table 3.7-2, and Year 2020 mitigated emissions for the Proposed Project (worst-case full buildout) are shown in Table 3.7-3. As shown in Table 3.7-3, the Proposed Project's Year 2020 mitigated emissions provide a reduction of 17 percent from 2010 baseline Proposed Project emissions (refer to Section 3.7.5 below for mitigation measure to be applied to the Proposed Project). Therefore, with incorporation of mitigation, the Proposed Project would meet the requirements of the CCAP, and the

Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG.

3.7.5 Mitigation Measures

Phases I and II, as well as Future Phases, of the Proposed Project would be required to implement the following mitigation measures to reduce GHG emissions:

GHG-1: The Proposed Project will include trails/sidewalks within the project boundary that will connect to roads leading off-site.

GHG-2: All building structures will be required to meet or exceed 2013 Title 24, Part 6 Building Energy Efficiency Standards and meet Green Building Code Standards.

GHG-3: All faucets, toilets, and showers to be installed in the proposed structures will be required to utilize low-flow fixtures to reduce indoor water demand by at least 20 percent per CalGreen Standards.

GHG-4: ENERGY STAR-compliant appliances will be installed where appliances are required on-site.

GHG-5: The Proposed Project will include recycling programs that will reduce waste to landfills by a minimum of 50 percent (up to 75 percent by 2020 per AB 341).

3.7.6 Residual Impacts After Mitigation

Although the Proposed Project would be required to implement the above mitigation measures, GHG-related impacts would remain significant. There is no feasible mitigation measure that would effectively reduce emissions from mobile and construction sources to less than significant levels. Therefore, GHG-related impacts are considered to be significant and unavoidable for the Proposed Project.

THIS PAGE INTENTIONALLY LEFT BLANK

3.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the environmental and regulatory settings for hazards and hazardous materials including existing site conditions, hazards and hazardous materials impacts at the program level that would result from the Proposed Project, and mitigation measures that would reduce these impacts. Definitions of hazardous materials and hazardous waste are provided below. This section also provides analysis of certain hazards, including wildfire, and provides a brief discussion of emergency response. Emergency access to the site is discussed more thoroughly in Section 3.14, Transportation; impacts to public services including fire and police are discussed more thoroughly in Section 3.12, Public Services.

Hazardous Material. Hazardous material is defined as any material that poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment because of its quantity, concentration, or physical or chemical characteristics. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (California Health and Safety Code, Section 25501). A number of properties may cause a substance to be considered hazardous, including toxicity, ignitibility, corrosivity, or reactivity.

Hazardous Waste. A waste or combination of waste which, because of its quantity, concentration, or physical, chemical, or infection characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitation-reversible illness; or pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of or otherwise managed (California Health and Safety Code, Section 25141). California waste identification and classification regulations are found in Title 22 of the CCR.

3.8.1 Environmental Setting

A Hazardous Materials Assessment was prepared for the project site during the Master Plan process (Ninyo & Moore 2015). This section summarizes the findings of this report.

3.8.1.1 Puente Hills Landfill

Landfill History and Summary of Environmental Protection Systems

The San Jose Development Company began landfill operations at the Puente Hills Landfill in 1957. The Sanitation Districts acquired the Puente Hills Landfill in 1970. In May 1981, an additional 151 acres was purchased on the northern portion of the property. The Main Canyon began receiving waste in 1957. Canyon 9 began receiving waste in 1990, and the eastern canyons began receiving waste in 1995. The landfill was a Class III landfill, which is a municipal landfill that is not allowed to receive any

hazardous wastes. A load inspection program was in effect at the landfill to ensure that hazardous materials and wastes were diverted to the appropriate facility. In addition to hazardous wastes, other types of wastes that could be recycled or reused were diverted to conserve landfill space such as asphalt, treated ash, green waste, metallic waste such as household appliances, and electronics. The Puente Hills Landfill ceased accepting waste from the public on October 31, 2013. Closure activities involving final cover construction, drainage facilities, landscape and irrigation systems, environmental systems, and structure removal have been completed. Major ongoing landfill closure maintenance activities are ongoing and are described in more detail in Section 2.4.

Materials Recovery Facility (MRF). Although the landfill is closed, post-closure landfill activities include the ongoing MRF which is an eight-acre site encompassing a portion of the entrance station area. The MRF will remain in operation at this location in the foreseeable future. The purpose of the MRF is to provide waste diversion and transfer capacity for the County. This facility helps the County meet the 50 percent diversion rate required under California law while providing for cost-effective transfer of municipal solid waste to landfills, currently by truck and eventually by rail. The MRF does not accept hazardous materials or wastes, and has a load inspection program to ensure these wastes are not received at the facility. During the first quarter of 2015, the MRF received an average of 566 loads per day (Withers and Sandgren 2015).

Water Quality Protection. The Sanitation Districts has installed groundwater quality protection systems at the landfill. The closed landfill is covered by a final monolithic cover composed of a five-foot-thick layer of soil from on-site soils consisting of siltstone and claystone materials excavated during landfill expansion activities. The final cover meets Title 27 requirements including isolating the waste from precipitation and irrigation water and affords sufficient protection against water quality impairment. The final cover was approved by the RWQCB and CalRecycle (formerly the California Integrated Waste Management Board) and is maintained by the Sanitation Districts as part of the ongoing maintenance and monitoring requirements for the closed landfill (AES 2011). The landfill also has a groundwater protection system consisting of five cement-bentonite surface barriers and associated groundwater extraction systems as well as two composite liner systems. Groundwater extraction wells have been installed up-gradient of each barrier. The passive barriers and active extraction wells are groundwater containment features that minimize the off-site migration of groundwater. Groundwater monitoring wells have also been installed down-gradient of each barrier to monitor groundwater quality. Groundwater monitoring is performed by the Sanitation Districts and is independently reviewed and regulated by the RWQCB. Low levels of volatile organic compounds (VOCs) were detected in the Main Canyon area groundwater in the early 1990s. Two extensive hydrogeologic investigations conducted from 1994 to 1998 indicated low levels of VOCs from landfill gas contact. In 1999, the RWQCB approved a Corrective Action Plan for the Main Canyon to address the detected VOCs in groundwater. In 2006, the Corrective Action Plan was extended to the entire landfill. Trend analyses conducted to date have shown that VOCs in groundwater are stabilizing or decreasing. Water quality data have provided evidence of natural attenuation of VOCs over time (Ninyo & Moore 2015).

Surface water drainage facilities are used to handle, divert, and control stormwater runoff at the closed landfill. These facilities include top deck conveyance channels, engineered benches, down drains, culverts and storm drain connection pipelines, open channels, energy dissipaters, and debris basins. These structures eventually discharge into the LACDPW flood control and storm drain system. All drainage structures are designed for the hydraulic design capacity of the off-site receiving structures.

Landfill Gas Systems. Landfill gas is contained by low gas permeability liners that line the bottom and walls of the landfill. About 1,500 landfill gas collection wells at depths of 60 to 100 feet collect gas from the perimeter and slopes of the landfill. Horizontal trenches 100 to 260 feet apart made of 15- to 18-inch-diameter pipes collect gas that is drawn through the openings between the pipes into header pipes. Subsurface header pipes approximately 30 feet below the top decks are placed every 150 to 200 feet to collect gas. As the gas extracts from the waste and enters the cooler landfill gas collection system, the water vapor in the gas condenses. Landfill gas condensate is collected, treated, and discharged to the sewer system from the Canyon 9 Liquid Collection and Removal System (LCRS) and the Eastern Canyons LCRS. About 60 megawatts (MW) of electricity are created onsite by combusting the gas in the Puente Hills Gas to Energy facilities and the remaining gas is burned in existing flares. Landfill gas environmental monitoring is conducted at the site in accordance with applicable regulations. One sample is collected from each major header pipeline entering the landfill gas disposal facility and analyzed for major gas constituents (methane, nitrogen, oxygen, and carbon dioxide), heating value, toxic air contaminants, and reduce sulfur species.

Inspection and Maintenance Programs

Surface Water Drainage System. Sanitation Districts personnel annually perform a physical inspection of each facility, describe any areas where repairs to the drainage facilities are required, and determine corrective measures to remedy deficiencies. Routine maintenance activities are generally performed during the summer prior to the onset of wet weather and, if necessary, following major storm events. Debris basins are inspected annually during dry weather and once following each major storm. Any needed repairs and maintenance is implemented prior to the next storm. During dry weather, debris is removed from the basins (Sanitation Districts 2011).

Groundwater Monitoring. Groundwater monitoring programs at the landfill follow the Waste Discharge Requirements issued by the RWQCB. The landfill is currently under a Corrective Action Plan to address areas with known releases to meet applicable state and federal requirements. The Corrective Action Plan evaluates compliance by monitoring water quality parameters at various groundwater monitoring wells throughout the landfill. Water quality monitoring results are summarized, analyzed and reported to the RWQCB on a semiannual basis. An annual water quality monitoring report is submitted to the RWQCB that summarizes water quality data for the most recent five-year monitoring period (Sanitation Districts 2011).

Landfill Gas System. In accordance with SCAQMD requirements, the Sanitation Districts conducts quarterly monitoring of ambient air, surface gas, landfill gas, perimeter probes, combustion efficiency, component leak checking, and wellhead

monitoring. Whenever monitoring identifies an exceedance in allowable pollutant concentration levels, a series of remedial actions is initiated for remediation of the emission. There is also a general inspection and maintenance program for routine inspection of all gas wells, wellhead connections, gas trench connections, valves, pitot tubes, flow meters, and header lines. The RWQCB requires samples of LCRS liquids from the Canyon 9 and Eastern Canyons in October of each year. Results of LCRS monitoring are reported quarterly to the RWQCB (Sanitation Districts 2011).

Existing Emergency Response Plans

The Sanitation Districts has developed and implemented several emergency response plans following regulatory requirements for specific activities related to the Puente Hills Landfill post-closure activities. These include an Emergency Action/Fire Prevention Plan, a Spill Prevention Control and Countermeasures Plan (SPCC), a Hazardous Materials Business Plan, and a SWPPP, which contains a Liquid Discharge Emergency Response Plan for release of landfill liquids to surface water. These plans are described in more detail below.

Emergency Action/Fire Protection Plan. A site-specific Emergency Action/Fire Protection Plan is in place for landfill maintenance and monitoring activities to minimize injuries, loss of life, and/or loss of property during emergencies. The plan outlines incident command systems and assigns emergency management roles to on-site personnel including the designation of an Emergency Coordinator. Contingencies for fires or explosions related to the gas collection system are included in this plan. The plan covers personal protective equipment, emergency egress, and hazard communications (Sanitation Districts 2011).

Storm Water Pollution Prevention Plan (SWPPP). In accordance with National Pollution Discharge Elimination System general permit, the site maintains an Industrial SWPPP for maintenance and monitoring activities the landfill, which contains a Liquid Discharge Emergency Response Plan for release of landfill liquids to surface water. These liquids, including landfill gas condensate, liquid from liner systems, and extracted groundwater, are associated with the extensive environmental control systems at the site (Sanitation Districts 2011).

Spill Prevention, Control and Countermeasure Plan (SPCC Plan). The SPCC Plan was developed as a BMP and is designed to meet the general requirements of 40 CFR Section 112. The SPCC Plan contains a Liquid Emergency Response Plan for the release of any petroleum containing liquids to surface water. These liquids include, but are not limited to, hydraulic fluids, transmission oil, grease, gasoline, diesel fuel, and used/waste oil (Sanitation Districts 2011).

Hazardous Materials Business Plan. A Hazardous Materials Business Plan for the site has been developed which describes the types, quantities, and locations of hazardous materials that are stored/used on-site. Such hazardous materials include lubricants and fuels. It also contains emergency response procedures (Sanitation Districts 2011).

3.8.1.2 Fire Hazard Severity Zones

The project site is located within a Very High Fire Hazard Severity Zone as shown in the Los Angeles County General Plan (Los Angeles County 2015a). The California Department of Forestry and Fire Protection (CAL FIRE) maps areas of significant fire hazards throughout California. These Fire Hazard Severity Zones are mapped based on fuels, terrain, weather, and other relevant factors. Fire Hazard Severity Zones identify fire hazard, not fire risk. Hazard is based on the physical conditions that give a likelihood that an area will burn over a 30- to 50-year period without considering modifications such as fuel reduction efforts. Fire Hazard Severity Zone maps are intended to be used for implementing wildland-urban interface building standards for new construction; natural hazard real estate disclosure at time of sale; 100-foot defensible space clearance requirements around buildings; property development standards such as road widths, water supply and signage; and consideration in city and county general plans (CAL FIRE 2007). New construction within Very High Fire Hazard Severity Zones are required to use ignition resistant methods and materials and to follow the County's Fuel Modification Plan Guidelines.

3.8.2 Regulatory Setting

3.8.2.1 Federal

Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) was established to ensure that wastes are managed in a manner that protects human health and the environment, to reduce or eliminate the amount of waste generated, and to conserve energy and natural resources through waste recycling and recovery. RCRA gives the Environmental Protection Agency (EPA) the authority to control hazardous waste from generation, transportation, treatment, storage, to disposal. RCRA also set forth a framework for the management of nonhazardous solid wastes and enables the EPA to address environmental problems that result from underground tanks storing petroleum and other hazardous substances. In 1984 the Hazardous and Solid Waste Amendments (HSWA) significantly expanded and reinforced RCRA's protective framework. The HSWA created the Land Disposal Restrictions (LDR) program, established the RCRA Corrective Action requirements, specified permitting deadlines for hazardous waste facilities, regulated businesses that generated even small amounts of hazardous waste, and required a nationwide look at the conditions of solid waste landfills. RCRA Subtitle D regulates nonhazardous solid waste. Regulations established under Subtitle D ban open dumping of waste and set minimum federal criteria for the operation of municipal waste and industrial waste landfills, including design criteria, location restrictions, financial assurance, corrective action (cleanup), and closure requirements. States play a lead role in implementing these regulations and may set more stringent requirements (EPA 2016a).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA)

CERCLA provides a federal "Superfund" to clean up uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants or contaminants into the environment. CERCLA provides a broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA also gives the EPA power to seek out responsible parties for any release and assure their cooperation in the cleanup, including recovering costs. This law established prohibitions and requirements concerning closed and abandoned hazardous wastes sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund for cleanup when no responsible party could be identified. In 1986, SARA amended CERCLA making several important changes and additions. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning hazardous waste sites, required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations, provided new enforcement authorities and settlement tools, increased state involvement in every phase of the Superfund program, increase the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation, and increases the size of the trust fund (EPA 2016b).

Toxic Substances Control Act (TSCA)

TSCA provides EPA with the authority to require reporting, recordkeeping, and testing requirements and restrictions related to chemical substances. TSCA addresses the production, importation, use and disposal of specific chemicals, including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint (EPA 2016c).

3.8.2.2 State

Landfill Operation, Design, Permitting, and Closure Requirements

Title 27 of the CCR contains the state requirements for landfill operation, design, permitting, and closure. The main regulatory body for landfills is CalRecycle. Closed landfills must have an approved Closure Plan and Post-Closure Maintenance Plan that meets all of the requirements of Title 27. These plans must contain the performance standards and minimum substantive requirements to ensure the landfill is properly closed and maintained to protect public health, safety, and the environment; contain cost estimates prepared by a registered civil engineer or certified engineering geologist; and provide documentation that adequate funding is available for the disposal site's closure and post-closure maintenance period (CalRecycle 2016).

Regulatory Definition for Hazardous Materials and Hazardous Wastes

As defined in Title 22 of the CCR, Division 4.5, Chapter 11, Article 3, hazardous materials are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed,

or otherwise managed. Hazardous materials are commonly used in commercial, agricultural and industrial applications, as well as residential uses to a limited extent.

Hazardous wastes are any hazardous materials that are discarded, abandoned, or are to be recycled. If improperly handled, hazardous materials and wastes can result in public health hazards if released to the soil or groundwater or through airborne releases in vapors, fumes, or dust.

California Department of Toxic Substances Control (DTSC)

In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal EPA). Cal EPA's DTSC and the RWQCB signed a Memorandum of Agreement in March 2005 aimed to avoid duplication of efforts among the agencies involved in the regulatory oversight of investigation and cleanup of hazardous wastes. Under the Memorandum of Agreement, either DTSC or the RWQCB is assigned to be the oversight agency at the beginning of an investigation and cleanup process.

3.8.2.3 Local

Los Angeles County Building Code

Methane Standards. The County of Los Angeles Department of Public Works (DPW) regulates the construction of structures within 1,000 feet of a methane producing site or within 300 feet of an oil or gas well. The Los Angeles County Building Code, Title 26 Sections 110.3 and 110.4 provide the standards for construction in these areas. The code provides requirement to ensure minimization of intrusion and accumulation of explosive landfill gases and provisions to prevent damage to structures and underground utilities due to uneven settlement. Construction of any structure within 1,000 feet of a methane producing site or within 300 feet of an oil or gas well is prohibited unless the fill is isolated by an approved natural or manmade protection system or designed according to the recommendations contained in a report prepared by a California Registered Civil Engineer, and submitted to DPW for review and approval (LACDPW 2015).

Very High Fire Hazard Severity Zone Standards. The Los Angeles County Building Code provides requirements for structures constructed in Very High Fire Hazard Severity Zones. Specifications for roofing, venting, exterior wall and eave construction, windows and doors, decking and accessory structures are provided to minimize fire hazard (LACDPW 2011). All new construction, remodeling, and subdivision/developments within areas designated as Fire Hazard Severity Zones require a Fuel Modification Plan. The objective of the Fuel Modification Plan is to create defensible space to allow firefighters to defend structures in the event of wildfire. Fuel Modification Plans consist of vegetation thinning, landscape planting, and installation of hardscape to create defensible space and such plans must follow the County's Fuel Modification Plan Guidelines and be approved by the County of Los Angeles Fire Department (County of Los Angeles Fire Department 2011).

County of Los Angeles Hazardous Materials Programs

The County of Los Angeles Fire Department is the responsible department that enforces and regulates hazardous materials in the County. This department is responsible for administering the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release and Prevention Program (CalARP), the Aboveground Storage Tank Program, and the Underground Storage Tank Program. The Fire Department also permits and inspects businesses that handle, treat, transport, and dispose of hazardous wastes and provides 24-hour emergency response to hazardous materials incidents.

County of Los Angeles General Plan

The County of Los Angeles General Plan includes a Safety Element that assesses threats to public health and safety from a variety of hazards and includes goals and policies to reduce these threats. Pertinent goals and policies include:

Goal S 3: *An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.*

Policies relevant to Proposed Project:

Policy S 3.1: Discourage high density and intensity development in Very High Fire Hazard Safety Zones.

Policy S 3.4: Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials, vegetation management, fuel modification and other fire hazard reduction programs.

Policy S 3.5: Encourage the use of low-volume and well-maintained vegetation that is compatible with the area's natural vegetative habitats.

Policy S 3.6: Encourage adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in Fire Hazard Safety Zones.

Policy S 3.7: Site and design developments located within Fire Hazard Safety Zones, such as in areas located near ridgelines and on hilltops, in a sensitive manner to reduce the wildfire risk.

3.8.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have a significant effect on the hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving conflicts between landfill maintenance activities or systems and park activities or systems;
- Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury, or death involving fires, because the project is located:
    - Within a Very High Fire Hazard Severity Zone (Zone 4)?
    - Within a high fire hazard area with inadequate access?
    - Within an area with inadequate water and pressure to meet fire flow standards? and/or
    - Within proximity to land uses that have the potential for dangerous fire hazard?
- Constitute a potentially dangerous fire hazard.

The project site is not within an airport land use plan, within two miles of a public use airport, or in the vicinity of a private airstrip. In addition, there are no sensitive land uses within one-quarter mile of the project site. No impacts would occur. These issues are not discussed further in this PEIR.

3.8.4 Environmental Impacts

Threshold:	*Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Phases I and II

Construction of the Proposed Project would require the use of some hazardous materials, such as diesel fuel. The transport of hazardous materials is regulated by the state and the transport of such materials to project site would be in compliance with all state regulations. These materials would only be present during construction and would be removed upon completion. A less than significant impact would occur.

During operation, facility maintenance activities would likely require the use hazardous materials such as paints, fertilizers, and pesticides. These hazardous materials would be stored in the County maintenance yard and would be used in limited quantities during maintenance activities. County park maintenance personnel are trained in use and storage of hazardous materials. Compliance with existing hazardous material regulations would result in less than significant impacts related to the routine transport, use, or disposal of hazardous materials during maintenance activities.

After the park has opened to the public, the MRF would continue to operate. As discussed above, the MRF does not accept hazardous wastes or materials and has a load

checking program that ensures that hazardous wastes and materials are not included in the loads accepted at the MRF. Additionally, MRF unloading, separation/recovery, and loading facilities are separated from park facilities and would not be accessible to the public. It is not anticipated that operation of the park and the MRF at the same time would create a significant hazard from the routine use, transport, or disposal of hazardous materials and no impact would occur.

Future Phases

Future phases would include the construction of additional park amenities and the Rose Hill Memorial Park access road. Construction of these facilities would involve heavy equipment that would use some hazardous materials such as diesel fuel. As with Phases I and II, all equipment would be maintained and operated in accordance with all state regulations and would be removed after construction is completed. A less than significant impact would occur. During operation, the new facilities would have similar maintenance requirements for paints, fertilizers, and pesticides as with Phases I and II. The County would continue to comply with applicable hazardous material use and storage regulations. Impacts from future phases would be similar to Phases I and II and would be less than significant.

Threshold:	*Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Phases I and II

Landfill Gas. With the exception of the Entry Plaza and Nike Hill constituents, the majority of the park amenities in Phases I and II would be constructed on the closed landfill. Of the gases produced in landfills, ammonia, sulfides, methane, and carbon dioxide are of most concern. Ammonia and hydrogen sulfide are responsible for most of the odors at landfills. If methane gas infiltrates any enclosed structure, it can build up to dangerous levels. Methane is not toxic, but concentrations of methane in the air above certain levels can constitute an explosion hazard. Methane and carbon dioxide can also collect in nearby buildings and displace oxygen. A landfill gas collection and recovery system is present on the project site, which would minimize the potential for gas infiltration into structures. Routine structures monitoring and compliance with regulatory guidelines further minimize this potential. Impacts would be less than significant with Mitigation Measure HAZ-1.

VOCs in Groundwater. Groundwater beneath the landfill is impacted with VOCs due to historic landfill operations. Water quality protection systems are installed at the landfill, consisting of five cement-bentonite subsurface barriers and associated groundwater extraction systems, as well as two composite liner systems. Groundwater is not expected to be encountered during construction as the expected depth to groundwater ranges from 16 to 82 feet below ground surface. Additionally, a five-foot monolithic final cover is over the fill areas of the project site. However, if groundwater were encountered during construction in the nonfill areas, there is the potential for worker

exposure to contaminants in the groundwater. Impacts would be less than significant with Mitigation Measure HAZ-2.

Contaminated Soil. Although contaminated soil has not been identified on the site, the Hazardous Materials Assessment identified a potential for workers to be exposed to soil contamination during project construction ground-disturbing activities. Impacts would be less than significant with Mitigation Measure HAZ-3.

Future Phases

Impacts from Future Phases would be similar to those described for Phases I and II and would be less than significant with Mitigation Measures HAZ-1, HAZ-2 and HAZ-3.

Threshold:	*Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving conflicts between landfill maintenance activities or systems and park activities or systems?*

Phases I and II

During Phases I and II, park infrastructure would be constructed including the main park loop road and adjacent multipurpose trail. Improvements would be made to the Entry Plaza to separate MRF traffic and park traffic, and to provide a shared agency office building/Visitor Center. Development of the Western Deck, a portion of the Eastern Deck and Nike Hill would also occur. As these park amenities are being constructed and after they are opened to the public, MRF activities would occur and maintenance and monitoring of the closed landfill will also continue. The monolithic clay cap does not contain hazards and no hazards were identified on the non-fill areas of the project area (Ninyo & Moore 2015). Construction of the park amenities and operation of the park is not anticipated to expose workers or the general public to contaminants resulting from soil disturbance.

Landfill Settling. Landfill settling could result in uneven terrain or cracked paving on the parking areas, loop road, and trails. Landfill settling could also affect structures with foundations, such as the proposed buildings and trail lift. The PHLPMP has phased the park construction to develop the nonfill and older fill portions of the landfill in the first two phases. Additionally, as discussed in Section 3.6, Geology and Soils, geotechnical studies would be prepared for each project during the design process (Mitigation Measure G-1) and the amended JPA between the Sanitation Districts and DPR would specify a monitoring and maintenance schedule to identify hazards from settling, exclude the public as appropriate, and repair park amenities. Impacts would be less than significant with the implementation of Mitigation Measure G-1 (see Section 3.6, Geology and Soils).

Unauthorized Access to Non-Public Areas. The Sanitation Districts are required to conduct inspection, monitoring, and maintenance activities at the closed landfill. These activities could require the Sanitation Districts to access any area of the landfill property at any time. Should access to the public park areas of the site be required, the area would be temporarily closed to the public using a system of temporary custom railings

that would be designed to block public access and direct and contain the public to those areas and trails that would be available to them to use. Temporary signage would also be used as needed.

Access to the MRF would be separated from access to the park through the design of the Entry Plaza. A roundabout or intersection and signage would separate park traffic from MRF trucks.

Additionally, landfill environmental systems, such as landfill gas piping and stormwater drainage facilities, are located throughout the landfill including adjacent to the park loop road. The MRF is also located on the landfill property. These areas would be off-limits to the public; however, there is a potential hazard should park users gain unauthorized entry to nonpublic areas of the site. These hazards include vandalism to landfill environmental systems and structures and hazards resulting from the operation of heavy equipment. The PHLPMP contains several methods to minimize unauthorized access to nonpublic areas of the landfill:

- Installation of gates at landfill maintenance roads and other nonpublic areas
- A railing system that would be placed and moved as needed on an ongoing basis
- Guard railings along segments of the park loop road and multi-use trail
- Plantings and buffering throughout the park
- Extensive signage system
- Visitor Center information brochure on safety and educational presentation by Park staff
- Park shuttle service that will allow the opportunity for park staff to inform the public while being shuttled to the site
- Bag search conducted as necessary depending on the programmed or concessionaire event(s)
- The trail lift that contains the public and transports them from the Entry Plaza to the top viewing platform
- Park ranger(s) directing use and enforcing park rules around methane and other landfill environmental systems
- Park gates closed at dark
- Security lighting only at buildings and M&O Yard

The design features included in the PHLPMP would minimize the hazards related to unauthorized access to nonpublic areas of the landfill and a less than significant impact would occur.

Landfill Gas Release. An uncontrolled landfill gas release could expose on-site employees and park users to increased explosion and fire risks. In sufficient quantities and under certain conditions, landfill gas, which contains methane, can be flammable or explosive. As discussed above, the closed landfill has a landfill gas collection system to prevent landfill gas from accumulating on-site and migrating off-site. The collection system consists of trenches and wells that collect the gas from the solid waste. The gas is combusted for electricity generation or flared off. The Sanitation Districts has a comprehensive monitoring and maintenance system to ensure that accidental releases of landfill gas are avoided. Collection system piping, wells, and trenches are monitored regularly to check for leaks. Ambient air sampling is conducted to monitor surface gas

emissions. Additionally, the system has been designed to withstand the maximum probable earthquake (MPE without damage to the foundation or to the structures that control leachate, surface drainage or erosion, or gas (27 CCR §20370). An MPE is defined as the maximum earthquake that is likely to occur during a 100 year interval. In the unlikely event that an emergency release occurs, the Sanitation Districts has developed an Emergency Action/Fire Protection Plan for potential emergencies such as fire, explosion, accidents, and earthquakes. Contingencies for fires or explosions related to the gas collection system are included in this plan. As part of the JPA between the Sanitation Districts and the DPR, a similar emergency action plan would be developed for the park use that would include the roles of park staff, evacuation routes, and communication protocols in the event of an emergency. Impacts related to emergency access on the shared loop road are discussed in Section 3.14, Transportation/Traffic. A less than significant impact would occur.

The monolithic clay cover needs to be maintained at certain moisture; too much water can cause cracking and gas escape. The Master Plan includes recommendations for a plant palette, soil amendment, fertilizer, and irrigation schedule to maintain the integrity of the landfill cap. No impact is anticipated.

Future Phases

During future phases, park infrastructure would be constructed on new portions of the landfill as settling slows. As these park amenities are being constructed and after they are opened to the public, MRF activities as well as maintenance and monitoring of the closed landfill will continue. The same project design features would minimize hazards related to the public's use of the proposed park and the Sanitation Districts inspection, maintenance and monitoring requirements. A less than significant impact would occur.

Threshold:	*Would the project be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?*

Phases I and II

The Puente Hills Landfill is listed on several databases searched during the Hazardous Materials Assessment (Ninyo & Moore 2015), but is not listed on the list of hazardous materials compiled pursuant to Government Code Section 65962.5; thus no impact would occur. The landfill is listed as a hazardous waste generator on the RCRA Generators List. Inclusion on this list is for permitting purposes and is not indicative of a release. The landfill was listed as a large quantity generator of several chemicals typically used in landfill operations and maintenance including corrosives, solvents, and pesticides. Violations were not found. The landfill was also listed on the State EnviroStor database related to the groundwater monitoring system's detection of VOCs in the groundwater in the early 1990s (see Section 3.8.2.1 for additional information). The site is also listed on the State's Solid Waste Landfill Site database and other landfill databases as a closed landfill. The MRF is listed on the Leaking Underground Storage Tank database; this leaking tank was removed and the case was closed in 2014. None of

these listings were identified as recognized environmental concerns (Ninyo & Moore 2015). Potential impacts from landfill hazardous materials related to construction and operation of park amenities are described in Section 3.8.4.2 and 3.8.4.3.

Future Phases

Impacts would be the same as described for Phases I and II.

Threshold:	*Would the project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?*

Phases I and II

As described above, the Sanitation Districts has developed and implemented several emergency response plans following regulatory requirements for specific activities related to the Puente Hills Landfill post-closure activities. These include an Emergency Action/Fire Prevention Plan, SPCC Plan, Hazardous Materials Business Plan, and SWPPP, which contains a Liquid Discharge Emergency Response Plan for release of landfill liquids to surface water. Ongoing post-closure maintenance of the landfill, including compliance with these emergency plans, is integral to the PHLPMP, and would be enforced with a JPA between the Sanitation Districts and DPR. The Proposed Project would have its own SWPPP in place. A less than significant impact would occur.

Emergency access for future park uses is described and analyzed in Section 3.14, Transportation/Traffic.

Future Phases

Impacts for Future Phases would be similar to those described for Phases I and II. The construction of an access road for Rose Hills Memorial Park and the use of that access road for funeral processions would potentially interfere with emergency evacuation. This issue is discussed in Section 3.14, Transportation/Traffic.

Threshold:	*Would the project expose people or structures to a significant risk of loss, injury, or death involving fires?*

Phases I and II

The project site is located within a Very High Fire Hazard Severity Zone as shown in the Los Angeles County General Plan (Los Angeles County 2015a). There would be an incremental increase in exposure of people and structures to fire risk due to the development of the site and increased human presence from park users. The number of park visitors would ebb and flow with the time of the week and with the scheduling of special events. New construction within Very High Fire Hazard Severity Zones are required to use ignition resistant materials as described in the CBC and to follow the County's Fuel Modification Plan Guidelines. Compliance with these regulations and requirements would improve the site's defensible space, reduce the likelihood of the loss of structures to fire, and would reduce the risk of injury or death from fire. Impacts would be less than significant.

Future Phases

Impacts for Future Phases would be similar to Phases I and II and would be less than significant.

Threshold:	*Would the project constitute a potentially dangerous fire hazard?*

Phases I and II

The park amenities would include circulation and parking, trails, landscaping, play areas, and a Visitor Center and offices. Park amenities would not constitute a potentially dangerous fire hazard. The conversion of the landfill into a park use would increase the human presence at the site, especially during peak park use times and special events. Park design features such as limiting parking to paved areas, limiting park users to public areas only, and compliance with fuel modification guidelines would reduce the potential for fire hazards. A less than significant impact would occur.

Future Phases

Future phases would add similar amenities as those described for Phases I and II. Similarly, they would not constitute a potentially dangerous fire hazard. A less than significant impact would occur.

3.8.5 Mitigation Measures

HAZ-1: During the design process for any new building or structure, the County shall prepare a report in accordance with the most recent version of the Los Angeles County Department of Public Works (DPW) Landfill Gas Protection Policy. At a minimum, the report shall detail the measures recommended to minimize possible landfill gas intrusion and prevent explosive concentrations of decomposition gases within or under enclosed portions of the building or structure. This report shall be prepared by a California Registered Civil Engineer. At the time of final inspection the civil engineer shall furnish a signed statement attesting that the building or structure has been constructed in accordance with the civil engineer's recommendation. Methane detectors and monitoring equipment shall be installed in structures as required by the most recent version of DPW Landfill Gas Protection Policy and the site-specific report. Monitoring and reporting shall occur by DPR at the frequency recommended the most recent version of DPW Landfill Gas Protection Policy and the site-specific report.

HAZ-2: If groundwater is encountered during construction, all construction activities in the vicinity shall immediately cease until a construction dewatering discharge permit can be obtained from the Los Angeles Regional Water Quality Control Board.

HAZ-3: Prior to construction of each phase, a Soil Management Plan and site-specific health and safety plan, detailing worker safety, vapor monitoring, soil testing, and soil removal shall be prepared for the project.

3.8.6 Residual Impacts After Mitigation

Impacts would be less than significant after mitigation.

3.9 HYDROLOGY AND WATER QUALITY

This section describes the environmental setting for hydrology and water quality, including existing site conditions and the regulatory setting, the impacts on hydrology and water quality at the project and program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts. Hydrology and water resources within the project area include surface water and groundwater. The physical, chemical, and biological characteristics of these water sources are key to their suitability for a particular purpose or use, such as for drinking water, for recreation, or to support a healthy ecosystem. Information in this section is based on hydrology and water quality information obtained from the *Grading, Drainage, and Utility Plan Report* prepared by PACE (2015) (Appendix F) and from the *Continued Operation of the Landfill Volume 1: Draft Environmental Impact Report* (Sanitation Districts 2001).

The Initial Study prepared for the Proposed Project determined that the 100-year flood hazard would not be an issue for the project site due to the absence of a FEMA delineated flood hazard. This issue is not discussed further in this section.

3.9.1 Environmental Setting

The project site is located in the Puente Hills within the San Gabriel River Watershed. This watershed is drained by the San Gabriel River, which at its closest point to the project site is located approximately one mile to the northwest. Stormwater runoff collected from the surface of the landfill enters the San Gabriel River south of the Whittier Narrows Dam via a large reinforced concrete storm drain, and north of SR-60 via the San Jose Creek Flood Control Channel. The Puente Hills Landfill is located in a Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Zone C (Sanitation Districts 2001). Zone C is designated for areas absent of a substantial flood hazard. There are no floodways or floodplain within the project site.

3.9.1.1 Groundwater

The project site is located on the western end of the Puente Hills. The Puente Hills are bounded to the north by flood plain deposits (including San Jose Creek and the San Gabriel Groundwater Basin); to the west by the Whittier Narrows area and the San Gabriel River areas; and to the southwest by the Central Basin. The landfill is underlain by non-water bearing geologic units. Potable water supplied to the landfill comes from the San Gabriel Groundwater Basin.

The rocks or geologic units of the western Puente Hills area, which include the landfill, are considered non-water bearing by the Department of Water Resources (DWR) because they do not contain or store groundwater in economically recoverable quantities. Natural groundwater found in the western Puente Hills contains high levels of minerals (as measured by total dissolved solids) and metals. Because of the poor natural water quality and limited quantities, this groundwater is not considered to be a suitable drinking water supply. These characteristics make the groundwater found at the Puente Hills Landfill very different from that in the adjacent groundwater basins. The Puente Hills are a major barrier to groundwater flow and separate the San Gabriel Groundwater

Basin from the Central Basin. The low permeability material of Avocado Heights, located north of the landfill, provides a natural barrier for any on-site groundwater at the landfill to flow into the San Gabriel Groundwater Basin to the north (Sanitation Districts 2011).

The San Gabriel Groundwater Basin lies beneath approximately 170 square miles of the San Gabriel Valley and is the primary drinking water source for more than one million people in the County of Los Angeles. It consists of very permeable sands and gravel originating from the San Gabriel Mountains and is capable of transmitting groundwater at high rates. Recharge to the San Gabriel Groundwater Basin occurs by percolation of rainfall and stream flow, principally from the San Gabriel River, Rio Hondo, and San Jose Creek. Artificial recharge also takes place in the San Gabriel Groundwater Basin. San Gabriel Groundwater Basin discharge occurs by groundwater pumping and outflow at the Whittier Narrows area at the southwest corner of the basin. Through the Whittier Narrows area and San Gabriel River the groundwater from the San Gabriel Groundwater Basin drains into the Central Basin (Sanitation Districts 2001).

To protect groundwater quality near the Puente Hills Landfill and to impede landfill-affected groundwater from migrating off-site, the Sanitation Districts have installed composite liner systems and subsurface barrier systems at the landfill. In addition, an extensive network of monitoring wells and piezometers surround the site and are monitored to detect any potential impacts (Sanitation Districts 2001).

3.9.1.2 San Gabriel River Watershed

The San Gabriel River Watershed is located in eastern Los Angeles County. The San Gabriel River drains approximately 689 square miles, which includes the eastern San Gabriel Mountains and portions of the Chino, San Jose, and Puente Hills. The San Gabriel River headwaters originate in the San Gabriel Mountains, located approximately 12 miles north of the project site.

The watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. Much of the watershed of the West Fork and East Fork of the river is set aside as a wilderness area; other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams, which include Cogswell Dam, San Gabriel Dam, and Morris Dam. Further downstream, toward the middle of the watershed, are large spreading grounds utilized for groundwater recharge. The middle of the watershed also contains flood control dams, which include the Santa Fe Dam and the Whittier Narrows Dam, located approximately four miles west of the project site.

The watershed is hydraulically connected to the Los Angeles River through the Rio Hondo (a tributary to the Los Angeles River) and the Whittier Narrows Reservoir (normally only during high storm flows). The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the county before becoming a soft bottom channel once again near the ocean in the City of Long Beach. Large electrical power poles line the river along the channelized portion; nurseries, small stable areas, and storage facilities are located in these areas. The major tributaries to the San Gabriel River are Walnut Creek, San Jose Creek, and Coyote Creek (SWRCB 2016a).

Local Drainage

The project site generally drains to the north and east into San Jose Creek and to the west directly into the lower reaches of the San Gabriel River. Drainage is conveyed into San Jose Creek via a series of concrete storm drains which carry water north beneath adjacent development, SR-60, and the Union Pacific railroad into the creek. San Jose Creek in this region transitions from an open concrete channel into a rip rap-lined channel with a natural earthen bottom that supports mature riparian woodland of cottonwoods and willows for 1.5 miles upstream of its confluence with the San Gabriel River. Open water appears to be present in this channel much of the year due to discharges from the San Jose Creek Water Reclamation Plant and urban runoff. The San Gabriel River in this region transitions from an open channel with concrete-lined banks that also supports mature riparian woodland of cottonwoods and willows for one mile downstream of its confluence with San Jose Creek. There, it broadens into the Whittier Narrows Recreation Area and Whittier Narrows Reservoir, which both support important riparian woodland and open floodplain scrub habitats. Open water appears to be present in these natural areas much of the year. The San Gabriel River in the immediate area downstream from the Whittier Narrows area continues as a rip rap-lined channel with a natural earthen bottom and areas of riparian habitat, while the Whittier Narrows Reservoir drains into a concrete-lined channel of Rio Hondo Creek.

3.9.1.3 Existing Site Drainage

The landfill has an extensive surface water drainage system to help manage stormwater runoff during the landfill's closure process. The landfill's drainage system is designed to avoid pooling of water on the landfill decks and percolation into fill, to convey water down slope to minimize erosion, and to discharge stormwater into adjacent public storm drains. Precipitation on the top decks and slopes of the landfill flows into engineered flow lines and v-shaped ditches, which line all access roads and benches on landfill slopes and convey water to larger downdrain pipes made of corrugated metal or high density polyethylene pipe built on the side slopes. To prevent ponding, the top decks are constructed at grades of about three percent. Crossing each V-ditch benches are conveyance pipes that collect water from the low points of the V-ditches. V-ditch benches are constructed to be about a ten percent cross slope and are built every 40 vertical feet on the landfill slopes making the length of the slopes approximately 100 feet. Water in the downdrain pipes flows to either an energy dissipater at the base of the landfill or a roadside drainage channel. From these two sources, the water flows to a debris basin to remove debris and sediment before travelling to the Los Angeles County Department of Public Works (DPW) flood control and storm drains which eventually lead to the San Gabriel River (W&S 2015).

3.9.1.4 Water Quality

Water quality management is an important issue at the project site due to its past use as a landfill in addition to the presence of sensitive receiving waters within San Jose Creek and the San Gabriel River that support important natural resources. The Sanitation Districts operates extensive environmental controls to protect water quality from potential contaminants that can originate from the landfill as it ages. To protect water quality, the Sanitation Districts manages and monitors surface runoff water.

As previously stated in section 3.9.1.2, runoff water is controlled through grading of the landfill and conveyed through an extensive drainage system of v-ditches and pipes. Runoff water is then directed to 11 debris basins to remove debris and sediment before flowing offsite into San Jose Creek and the San Gabriel River. Groundwater quality is managed through the use of composite liner and subsurface barrier systems. Composite liner systems prevent the potential migration of liquid from the solid waste (leachate) and the migration of landfill gas into the soil layers beneath the fill. The composite liner system consists of (from bottom to top) an underdrain, a clay liner, a synthetic liner, a liquids collection and removal system, a geotextile filter, and a protective soil layer. In addition, an extensive network of monitoring wells and piezometers surround the landfill and are monitored semiannually to detect any potential impacts offsite. Groundwater extraction wells are also installed immediately up gradient of the barriers to automatically remove any water that could accumulate behind the barriers. Any water pumped from behind the barriers is discharged into the sewer system pursuant to Industrial Waste Discharge Permits (Sanitation Districts 2001).

3.9.2 Regulatory Setting

3.9.2.1 Federal

Clean Water Act

The U.S. Environmental Protection Agency (USEPA) is the federal agency responsible for water quality management. The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution. As amended in 1972, the law became commonly known as the Clean Water Act (CWA). The CWA establishes the basic structure for regulating discharges of pollutants in the waters of the United States and regulating quality standards for surface waters.

Section 401. Section 401 of the federal CWA requires that any applicant for a federal permit or license that may result in a discharge to waters of the U.S. must obtain certification for the State. The certification declares that the discharge will comply with applicable provisions of the Act, including water quality standards requirements. Most projects receiving a U.S. Army Corps of Engineers (USACE) nationwide permit also need individual Section 401 certification.

Section 402. The National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharges pollutants into waters of the U.S. The State of California is authorized to administer various aspects of the NPDES permit under Section 402 of the CWA. The General Construction Permit treats any construction activity over one acre as an industrial activity, requiring a permit under the State's General NPDES permit. The State Water Resource Control Board (SWRCB), through the Regional Water Quality Control Board (RWQCB) Los Angeles Region, administers these permits.

Section 404. In 1972, Section 404 of the federal CWA established a program to regulate the discharge of dredged or fill material into waters of the United States. The CWA defines waters of the U.S. to include tributaries to navigable waters, interstate

wetlands, wetlands which could affect interstate or foreign commerce, and wetlands adjacent to other waters of the United States.

The program is jointly administered by the USACE and the USEPA. The USACE is responsible for the day-to-day administration and permit review and EPA provides program oversight. The fundamental rationale of the program is that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to aquatic resources or if significant degradation would occur to the nation's waters. Permit review and issuance follows a sequence process that encourages avoidance of impacts, followed by minimizing impacts and, finally, requiring mitigation for unavoidable impacts to the aquatic environment. The sequence is described in the guidelines at Section 404(b)(1) of the CWA.

Proposed activities are regulated through a permit review process. An individual permit is required for potentially significant impacts. Individual permits are reviewed by the USACE, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the Section 404(b)(1) guidelines. However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or State basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met.

Spill Prevention, Control, and Countermeasure

The goal of EPA's Spill Prevention, Control, and Countermeasure (SPCC) rule is to prevent oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil. The regulation requires facilities to develop and implement SPCC Plans and establishes procedures, methods, and equipment requirements. The Sanitation District has an SPCC plan in place for landfill closure operations.

3.9.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the basic water quality control law for California. Under Porter-Cologne, the SWRCB issues joint federal NPDES Storm Water permits and state Waste Discharge Requirements (WDRs) to operators of municipal separate storm sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the stormwater discharges from these operations. The State is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine RWQCBs, carries out the regulation, protection, and administration of water quality in each region. The project site is located within the jurisdiction of the Los Angeles RWQCB. The closed Puente Hills Landfill operates currently in compliance with NPDES permit for industrial activities.

Water Quality Control Plan – Los Angeles Region

The Water Quality Control Plan for the Los Angeles Region (Basin Plan) is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan designates beneficial uses for surface and ground waters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's anti-degradation policy, and describes implementation programs to protect all waters in the region (LARWQCB 1994).

The Basin Plan also includes programs of implementation for water quality objectives, including various regulatory programs such as total maximum daily loads (TMDLs), WDRs, NPDES permits, conditional waivers of WDRs, discharge prohibitions, and remediation programs, among others. The Basin Plan fulfills statutory requirements for water quality planning in California Water Code (CWC) sections 13240 through 13242 and the federal Clean Water Act (CWA) section 303(c).

Sustainable Groundwater Management

The DWR has developed a Strategic Plan for its Sustainable Groundwater Management (SGM) Program. DWR's SGM Program will implement the new and expanded responsibilities identified in the 2014 Sustainable Groundwater Management Act (SGMA). Some of these expanded responsibilities include: (1) developing regulations to revise groundwater basin boundaries; (2) adopting regulations for evaluating and implementing Groundwater Sustainability Plans (GSPs) and coordination agreements; (3) identifying basins subject to critical conditions of overdraft; (4) identifying water available for groundwater replenishment; and (5) publishing best management practices for the sustainable management of groundwater (DWR 2016).

Fish and Game Code Section 1602

The California Department of Fish and Wildlife (CDFW) requires notification before beginning an activity that will substantially modify a river, stream, or lake. If CDFW determines that the activity could substantially adversely affect an existing fish and wildlife resource, a Lake or Streambed Alteration Agreement is required. Because this is primarily an issue related to habitat this requirement is discussed in Section 3.4, Biological Resources.

Landfill Operation, Design, Permitting, and Closure Requirements

Title 27 of the CCR contains the state requirements for landfill operation, design, permitting, and closure. The main regulatory body for landfills is CalRecycle. Closed landfills must have an approved Closure Plan and Post-Closure Maintenance Plan that meets all of the requirements of Title 27. These plans must contain the performance standards and minimum substantive requirements to ensure the landfill is properly closed and maintained to protect public health, safety, and the environment; contain cost estimates prepared by a registered civil engineer or certified engineering geologist; and provide documentation that adequate funding is available for the disposal site's closure and post-closure maintenance period (CalRecycle 2016).

3.9.2.3 Local

Los Angeles County General Plan

The County of Los Angeles General Plan sets forth policies to guide the management of water resources in its Conservation and Natural Resources Element (Chapter 9). This element lists various policy statements that reflect County goals as they pertain to water resources. Goals and policies include:

Goal C/NR 5: Protected and useable local surface water resources.

- Policy C/NR 5.1: Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limits to straightening and channelizing natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at regional, neighborhood, and parcel-level scales.
- Policy C/NR 5.2: Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
- Policy C/NR 5.6: Minimize point and non-point source water pollution.
- Policy C/NR 5.7: Actively support the design of new and retrofit of existing infrastructure to accommodate watershed protection goals, such as roadway, railway, bridge, and other—particularly—tributary street and greenway interface points with channelized waterways.

Goal C/NR 6: Protected and usable local groundwater resources.

- Policy C/NR 6.1: Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
- Policy C/NR 6.3: Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at regional, neighborhood, infrastructure, and parcel-level scales.
- Policy C/NR 6.5: Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils.

Goal C/NR 7: Protected and healthy watersheds.

- Policy C/NR 7.1: Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.
- Policy C/NR 7.2: Support the preservation, restoration and strategic acquisition of available land for open space to preserve watershed uplands, natural streams, drainage paths, wetlands, and

rivers, which are necessary for the healthy function of watersheds.

Policy C/NR 7.3: Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans, ecosystem restoration projects, and other related natural resource conservation aims, and support the implementation of existing efforts, including Watershed Management Programs and Enhanced Watershed Management Programs.

Policy C/NR 7.4: Promote the development of multi-use regional facilities for stormwater quality improvement, groundwater recharge, detention/attenuation, flood management, retaining non-stormwater runoff, and other compatible uses.

Low Impact Development (LID) Standards Manual

The County has prepared the 2014 Low Impact Development Standards Manual (LID Standards Manual) to comply with the requirements of the NPDES Municipal Separate Storm Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), henceforth referred to in this document as the 2012 MS4 Permit. The LID Standards Manual provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges (County of Los Angeles 2014).

City of Industry General Plan

The City of Industry's General Plan outlines goals and policies pertaining to water resources in its Resource Management Element. These goals look to form a reliable system that enables the City to efficiently and cost-effectively manage its water resources. The policies that apply to the Proposed Project include Policies RM-1 thru RM-8 which require updates to water infrastructure periodically, encourage the use of recycled water, promote Best Management Practices (BMPs) to conserve water resources, require compliance with RWQCB and Los Angeles County MS4 Permit regulations, and seek efficient ways of implementing NPDES permit requirements (City of Industry 2014).

3.9.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have significant effect on the hydrology and water environment if it would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-

existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- Add water features or create conditions in which standing water can accumulate that could increase habitat for mosquitoes and other vectors that transmit diseases such as the West Nile virus and result in increased pesticide use;
- Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality;
- Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84);
- Result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance;
- Use on-site wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course);
- Otherwise substantially degrade water quality; or
- Place structures in areas subject to inundation by seiche, tsunami, or mudflow.

3.9.4 Environmental Impacts

Threshold:	*Would the project violate any water quality standards or waste discharge requirements?*

Phases I and II

Construction. Overall hydrology and water quality impacts associated with project implementation are related to earthmoving (grading) associated with construction. Earthmoving construction activities would increase the potential for erosion and sedimentation downgradient from the project site (e.g., Nike Hill, Entry Plaza, landfill decks, M&O Yard, trail lift towers) and could potentially damage existing surface and subsurface drainage systems.

In addition, new development on the project site would increase impervious surface coverage and would increase surface runoff above existing conditions. Of these, earthmoving activities pose the greatest risk for adverse impacts to local hydrology and water quality.

During construction, water quality impacts could occur without proper controls. Soil loosened during grading, spills of fluids or fuels from vehicles and equipment or miscellaneous construction materials and debris, if mobilized and transported offsite in overland flow, could degrade surface and groundwater quality. In the event of heavy rainfall, flow from construction areas could flow off-site, potentially degrading water quality.

The Proposed Project would be subject to NPDES regulations and be required to obtain a General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit). The General Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would list BMPs to prevent construction pollutants and products from violating any water quality standard or waste discharge requirement. DPR would be responsible for the preparation and implementation of a SWPPP for the Proposed Project.

Impacts associated with construction would be ongoing for the duration of Phases I and II (20 years) and would be less than significant.

Operation. Proposed Project operation attendance is projected to be approximately 32,000 park visitors per month. Recreation uses and estimated attendance numbers are described in Table 3.9-1.

Table 3.9-1. Estimated Monthly Attendance for Proposed Recreation Uses at Puente Hills Landfill Park

Recreation Uses	Proposed Project Attendance*
Running loops with mile markers	3,500
Exercise terrace	5,000
Stair climbs	5,600
Play areas	1,500
Picnic areas	2,100
Performance space	2,000-5,000
Bike rental	700
Dog park (and agility training area)	2,500
Slides	1,500
Zip line	2,800
Flare tower climb	1,500
Temporary art installation	500
Total estimated monthly attendance	**32,200**

*Please note that these visitation estimates are for full build out of the Proposed Project.

Operational impacts to water quality are anticipated to be less than construction impacts. Operation of the Proposed Project would result in a lower level of ground disturbances compared to construction. During operation, the increase of pedestrian, mountain bike, and equestrian traffic within trails may incrementally increase erosion. However, the DPR would monitor trails within the park for issue areas and make repairs as needed. Furthermore, landscaping planted during Phase I and II would further reduce the erosion potential of areas that are currently unvegetated.

The Proposed Project would construct new drainage facilities that would minimize water quality impacts from the proposed development. The construction of the park loop road, specifically the newly paved portion road near the southern boundary of the project site in the buttress area, would generate stormwater runoff that would be diverted through a gutter into a proposed detention basin (Basin T). Basin T would allow suspended sediment and debris to settle before the water continues further north through a subterranean drain pipe, then connecting into the existing drainage network and eventually into an existing debris basin (Basin A). Basin A is located west of the Gas-to-Energy Facility (PACE 2016). The addition of Basin T would address potential water quality issues resulting from the Proposed Project. Water quality impacts during operation would be less than significant.

Park operations would also include the potential for festival events that could generate 2,000 to 5,000 festival attendees. Up to 100 portable toilets or six trailer mobile vaulted restrooms (20 stalls each) would be provided for events with 5,000 attendees.

Future Phases

Future Phases would continue the full development of the top decks. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Three easement alternatives are being evaluated. Generally all three easements follow the eastern two-way road and differ in the alignment across the Southern Deck. The three alignments across the Southern Deck would not result in different water quality impacts. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill become available for development.

Construction and operation impacts from Future Phases would be similar to the impacts described for Phases I and II. As construction continues, the Proposed Project would continue to be subject to NPDES regulations and would continue to implement a SWPPP protecting water quality. Operational impacts would be similar in nature as described for Phases I and II. The drainage study completed for the Proposed Project found that the existing detention basins within the landfill would see negligible changes in volumes and peak flows due to the minimal impervious area added within the park by the Proposed Project (PACE 2016). Therefore, the only proposed drainage facilities to be constructed by the Proposed Project would be constructed during Phase I. As stated in the discussion above for Phases I and II, a new debris basin (Basin T) would be constructed to capture stormwater runoff generated by the construction of the park loop road, specifically runoff generated from areas that are not currently paved near the M&O Yard and the base of Nike Hill.

It is anticipated that the number of park visitors would rise as park development occurs with the implementation of Future Phases (please see Table 3.9-1). With an increase in park visitors, impacts such as increased erosion from the use of trails can occur. However, future projects would be designed to minimize water quality impacts. The DPR would also continue monitoring recreational facilities to ensure that the increase in park visitors does not result in water quality impacts. Therefore, water quality impacts from Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

Phases I and II

The Proposed Project would mostly use native and drought-tolerant natural plants, which would have minimal watering requirements. It is estimated that the Proposed Project would require approximately 182 million gallons of reclaimed water per year at full buildout. It is anticipated that the existing recycled water distribution system would be expanded and raised with booster pumping to supply irrigation water to the top deck plantings and other non-potable uses. The top decks are currently irrigated as mandated by the analysis and approval of the final cover design. Plants included in the landscaping of the top decks would be picked based on their ability to establish and survive on the final cover based on the cover's soil composition and approved irrigation.

Furthermore, to address the increase demand of reclaimed water from the Proposed Project, stormwater runoff would be captured and reused. The water captured in Basin T (proposed) would be conveyed into Basin A (existing). After the water has settled, it would be filtered and used to recharge the 650,000-gallon tank that is located to the southwest of the Gas-to-Energy Facility. The proposed recharge system would reduce the demand of reclaimed water needed from the San Jose Creek Water Reclamation Plant (PACE 2016). A new potable water pipeline would also be provided to the top decks for proposed restrooms and drinking water fountains. It is anticipated that the Proposed Project would require approximately 500 gallons of potable water per day for restroom and water fountains (PACE 2016). The Proposed Project would not result in the depletion of groundwater. Impacts would be less than significant.

The project site does not provide significant groundwater recharge due to its past use as a landfill. Fill areas contain barrier systems to prevent groundwater recharge to minimize the potential for leachate contamination of groundwater. Surface flows would be directed to the landfill's drainage system. Improvements to the existing drainage system would be completed to accept additional runoff and pollutants that would result from the Proposed Project while meeting Sanitation Districts' regulatory requirements for the management of the landfill's closure. Improvements to the drainage system would include the construction of a gutter drain to convey stormwater runoff from the proposed park loop road, a new debris basin (Basin T), and a new connection to the existing drainage facilities conveying stormwater into Basin A. Impacts to groundwater recharge would be less than significant.

Future Phases

Future Phases would continue with the full development of the top decks. As additional restroom and landscaping are added water needs of the Proposed Project would increase. However, only a minimal increase in the need for potable water is anticipated

due to the low amount of restrooms or other potable need facilities (i.e. café) at full buildout. Furthermore, reclaimed water for landscaping irrigation would continue to be available. Impacts to groundwater for Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?*

Phases I and II

The Sanitation Districts is under regulatory requirements to manage the closure of the landfill to protect public health and the environment. As such, grading of the landfill has been designed to effectively manage stormwater runoff and to avoid ponding for the protection of water quality. The Proposed Project's finish grading and landscaping would be subject to review and approval by the Sanitation Districts to ensure that regulatory requirements regarding landfill closure are met. The Proposed Project would not substantially alter the grade of the top decks. The top decks must be maintained at a minimum three percent slope to shed surface water and prevent ponding. The only area requiring significant amounts of grading would be the buttress area. The buttress area is located between the M&O Yard and Nike Hill. Approximately 300,000 cubic yards of soil will be added to this location to stabilize Nike Hill, which was over-excavated in anticipation of receiving landfill waste. The grading and stabilization of the buttress area will be completed by the Sanitation Districts and is not part of the Proposed Project. Stormwater runoff from this road segment will be conveyed through a curb gutter system into a new debris basin (Basin T) to be located just west of the M&O Yard.

The Proposed Project's grading plan and drainage systems would be designed to comply with the landfill's regulatory requirements regarding the protection of water quality. The Proposed Project drainage system would be designed to prevent erosion and siltation on- and off-site. Furthermore, the Proposed Project would implement a SWPPP, including BMPs during and after construction. These BMPs would help minimize or eliminate potential sources of polluted runoff including erosion and/or siltation. Impacts would be less than significant.

Future Phases

Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Three easement alternatives are being evaluated. Generally, all three easements follow the eastern two-way road and differ in the alignment across the Southern Deck Alternative 1 would follow the southern boundary of the Southern Deck. Alternative 2 would generally be located along the middle of the Southern Deck. Alternative 3 would be located in between the Eastern and Southern Decks. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill are available for development.

Drainage modifications completed by Future Phases would continue to be subject to review by the Sanitation Districts. The Sanitation Districts is required to manage drainage patterns of the closed landfill to minimize erosion of the landfill cap and slopes. Grading and drainage systems for Future Phases would be designed to comply with the Sanitation Districts' need to manage drainage patterns at the closed landfill. The drainage study completed for the Proposed Project found that the existing detention basins within the landfill would see negligible changes in volumes and peak flows due to the minimal impervious area added within the park by the Proposed Project (PACE 2016). Therefore, the only proposed drainage facilities to be constructed by the Proposed Project would be constructed during Phase I. This includes Basin T and associated conveyance facilities as described in the response to Section 3.9.4.1. Impacts to drainage and erosion for Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?*

Phases I and II

The Proposed Project is not anticipated to substantially alter the existing drainage pattern of the project site due to the Sanitation Districts' need to precisely manage stormwater runoff from the landfill. As stated in the Section 3.9.4.3, final grade of the landfill has been designed to avoid ponding and to direct runoff to the landfill's extensive drainage system. The Proposed Project's grading plan and drainage systems would be designed by a registered civil engineer to comply with the landfill's regulatory requirements regarding the protection of water quality and to safely retain, detain, and or convey stormwater runoff. Capacity and water quality improvements to the landfill's stormwater system would be completed, as needed, to accept additional stormwater capacity demands created by the proposed regional park. However, it should be noted that the existing stormwater control facilities at the landfill have been designed to handle a 100-year 24-hour storm, as required by regulations governing waste management facilities (Sanitation Districts 2001). The Proposed Project would construct new drainage facilities to handle the additional stormwater runoff that would be generated by the park loop road, specifically the newly paved portion of the road near the southern boundary of the project site in the buttress area. Improvements include a gutter drain to convey water into a new debris basin (Basin T). Basin T would be connected to an existing debris basin (Basin A). The drainage study completed for the Proposed Project found that the existing detention basins within the landfill would see negligible changes in volumes and peak flows due to the minimal impervious area added within the park by the Proposed Project (PACE 2016). Therefore, no other improvements other than Basin T and associated drainage facilities would be constructed. As such, flooding impacts due to changes to drainage patterns of the project site caused by the Proposed Project are anticipated to be less than significant.

Future Phases

Drainage modifications completed by Future Phases would continue to be subject to review by the Sanitation Districts. The Sanitation Districts is required to manage drainage patterns of the closed landfill to minimize erosion of the landfill cap and slopes. As the development within the landfill increases new drainage systems would be constructed. The landfill's existing drainage system would also be modified to address any deficiencies in capacity and minimize flooding on- and off-site. It should be noted that there would be slight variations in the amount of runoff generated by the three proposed Rose Hills Memorial Park roadway easements. Alternative 1 would create a longer paved road, thereby resulting in a slight increase in the amount of impervious surface over Alternatives 2 and 3. New drainage systems and improvements to the landfill's existing drainage system would be designed to safely convey stormwater through the landfill. Drainage impacts from Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project add water features or create conditions in which standing water can accumulate that could increase habitat for mosquitoes and other vectors that transmit diseases such as the West Nile virus and result in increased pesticide use?*

Phases I and II

The Proposed Project would not include a water feature that could potentially increase habitat for mosquitoes and other vectors. No impact would occur.

Future Phases

The Future Phases would not include water features. No impact would occur.

Threshold:	*Would the project create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

Phases I and II

Implementation of Phases I and II would include the construction of a new drainage system to safely collect stormwater runoff from the project areas. Stormwater runoff usually increases with the introduction of non-permeable surfaces. Development included in Phases I and II would retain permeable surfaces for the majority of the project areas to be developed in these two phases. However, the construction of structures and access infrastructure in areas with existing permeable surfaces would result in an increase of stormwater runoff. Stormwater runoff that is collected from the project areas would be conveyed to the landfill's existing drainage system. The Proposed Project would improve the landfill's existing drainage system, if warranted due to capacity or water quality constraints. The existing stormwater control facilities at the landfill have been designed to handle a 100-year 24-hour storm (Sanitation Districts 2001). The Proposed Project would improve the landfill's drainage system to

accommodate additional stormwater runoff generated by the Proposed Project. Impacts would be less than significant.

Ongoing operation activities would include the use of hazardous materials such as fertilizer, herbicide, and pesticides. The accidental release of such material could potentially be a source of polluted runoff. However, the use of such products during park operations is not expected to be large enough that an accidental spill would result in a significant source of polluted runoff. Impacts would be less than significant.

Future Phases

As the development within the landfill increases, new drainage systems would be constructed. The landfill's existing drainage system would also be modified to address any deficiencies in capacity or water quality. Since the drainage system is based on gravity and the landfill will settle at different rates, drainage characteristics would continue to be studied in later phases of the Proposed Project. If drainage is no longer effective in an area, additional drains would be added or the area would be regraded to at least a three percent grade to avoid unplanned ponding.

It should be noted that there would be slight variations in the amount of runoff for the three proposed Rose Hills Memorial Park roadway easements. Alternative 1 would create a longer paved road, thereby resulting in a slight increase in the amount of impervious surface over Alternatives 2 and 3 which would result in greater runoff volumes. New drainage systems and improvements to the landfill's existing drainage system would be designed to accommodate the projected runoff volumes that would be generated by the Proposed Project. Future Phases impacts to stormwater drainage system, in regards to capacity and water quality, would be similar to Phases I and II. Impacts would be less than significant.

Threshold:	*Would the project generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality?*

Phases I and II

Please see the response under the water quality standards threshold at the beginning of this section. Impacts would be less than significant.

Future Phases

Impacts for Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84)?*

Phases I and II

Low impact development (LID) is a decentralized approach to stormwater management that works to mimic the natural hydrology of a project site by retaining precipitation on-site to the maximum extent practicable. LID strategies are designed to protect surface and groundwater quality, maintain the integrity of ecosystems, and preserve the physical integrity of receiving waters by managing stormwater runoff at or close to the source (County of Los Angeles 2014).

The Proposed Project would incorporate LID strategies to the extent practicable. However, given the past use of the project site as a landfill, the majority of the stormwater that originates at the landfill must be conveyed off-site to minimize ponding and groundwater infiltration. Ponding and groundwater infiltration must be minimized at the landfill due to the potential for groundwater contamination by leachate.

Therefore, LID principles cannot be fully implemented within the landfill. However, the Proposed Project would develop non-fill areas, including the Entry Plaza, M&O areas, and Nike Hill. LID principles may be implemented on non-fill areas as the potential for groundwater contamination is less compared to fill areas. Where possible, stormwater would be retained on-site and used for landscaping irrigation. As such, the Proposed Project would comply with the LID ordinance to the extent possible. Impacts would be less than significant.

Future Phases

Future Phases would incorporate LID strategies to the extent practicable. Impacts for Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance?*

Phases I and II

There are no SWRCB designated Areas of Special Biological Significance in the project vicinity (SWRCB 2016b). No impact would occur.

Future Phases

The impact analysis for Phases I and II is applicable to Future Phases. No impact would occur.

Threshold:	*Would the project use on-site wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)?*

Phases I and II

Wastewater would be generated on-site from restrooms and would be conveyed through new sewer line connections to the municipal sewer system. No wastewater treatment systems are included in the Proposed Project. No impact would occur.

Future Phases

The impact analysis for Phases I and II is applicable to Future Phases. No impact would occur.

Threshold:	*Would the project otherwise substantially degrade water quality?*

Please see the response under the water quality standards threshold at the beginning of this section. Impacts would be less than significant.

Future Phases

Impacts for Future Phases would be similar to Phases I and II, and would be less than significant.

Threshold:	*Would the project place structures in areas subject to inundation by seiche, tsunami, or mudflow?*

Phases I and II

The project site is located within the closed Puente Hills Landfill which varies topographically. The project site is not within the vicinity of a lake and is located over 25 miles from the Pacific Ocean. As such, the project site is not subject to seiches or tsunamis.

Due to topographical variation of the project site, mudflows can occur during or immediately following storm events. However, as noted in Section *2.2 Ongoing Landfill Inspection, Maintenance, and Monitoring Activities* of this PEIR, the landfill has extensive environmental controls in place. This includes a surface water drainage system designed to capture stormwater and convey it to stormwater facilities. The drainage system was designed to prevent infiltration into the landfill and prevent erosion of the landfills cap. Furthermore, the Sanitation Districts conducts monitoring of all the environmental controls to ensure they are operating as designed. Therefore, due to the environmental controls in place and the landfill's engineered slopes and cap, mudflow is a low concern for the project site. Impacts would be less than significant.

Future Phases

Future Phases would continue with the full development of the top decks. Mudflow impacts for Future Phases would be similar to Phases I and II. Impacts would be less than significant.

3.9.5 Mitigation Measures

The Proposed Project would not result in any significant hydrology or water quality impacts; no mitigation measures are required. Standard park operating procedures, including BMPs, would be implemented as part of the Proposed Project.

3.9.6 Residual Impacts After Mitigation

Any residual hydrology and water quality impacts would be less than significant.

THIS PAGE INTENTIONALLY LEFT BLANK

3.10 LAND USE AND PLANNING

This section describes the environmental and regularity setting for land use and planning, including applicable plans, policies, regulations, and/or laws, existing land use designations, land use impacts at the project and program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

The Puente Hills Landfill Park Master Plan Initial Study determined that the Proposed Project would not divide an established community and that it would be compatible with applicable County plans. These issues are not discussed further in this section.

3.10.1 Environmental Setting

The project site is situated in the San Gabriel Valley in eastern Los Angeles County. The San Gabriel Valley is characterized by a built out/urbanized valley surrounded by the San Gabriel Mountains to the north, the Chino Hills and San Jose Hills to the east, the Puente Hills to the south, and the San Rafael Hills to the west. The project site is located within the Puente Hills in the southern portion of the San Gabriel Valley.

The Proposed Project would be located within the boundaries of the Puente Hills Landfill (landfill), which is owned by the Sanitation Districts of Los Angeles County (Sanitation Districts). The landfill is approximately 1,365 acres in size and has been closed since 2013. The landfill is located southeast of the intersection of SR-60 and I-605 in unincorporated Los Angeles County (please see Figures 2-1 and 2-2). Although the landfill site is not located in the City of Industry, the address of the landfill front entry is 13130 Crossroads Parkway South, City of Industry, CA 91746. Full vehicular access to the site is currently available via a single driveway from Crossroads Parkway South.

3.10.1.1 Land Use and Zoning Designations

The landfill is designated Public and Semi-Public in the County's General Plan Land Use Element (Los Angeles County 2015). The eastern half of the landfill is located within the Hacienda Heights Community Plan and is designated as Open Space - Parks and Recreation (OS-PR). The western half of the landfill is located within the Workman Mill Zoned District and is zoned Heavy Agricultural (A-2-5) with a small portion zoned Light Agricultural (A-1-5). The eastern half of the landfill is located within the Hacienda Heights Zoned District and is zoned Open Space (O-S). County of Los Angeles land uses and zoning designations are shown on Figure 3.10-1. The front entry of the landfill is located within the City of Industry. This area is designated as Employment on the City of Industry General Plan Land Use Map (City of Industry 2014).

3.10.1.2 Existing Land Uses

The site is bordered by a mix of land uses, with highly developed urban land uses generally bordering the site to the north, east and west and lower intensity development and open spaces uses to the south (Table 3.10-2). Key adjacent land uses include single family residential neighborhoods with the community Hacienda Heights that border the site to the east, the 1,400 acre Rose Hills Memorial Park and lands managed by the Puente Hills Habitat Preservation Authority to the south, along with the Rio Hondo

Community College Campus. The Project site itself supports a varied mix of land uses ranging from natural landscaped and native habitat open space areas to heavy industrial uses (Table 3.10-1).

Table 3.10-1. Existing Land Uses on Project Site

Use/Area	Description (refer to Figure 2-3)
Natural habitats	Canyons 6-10, coastal sage and chaparral habitats
Planted non-native woodland	Mature non-native woodland with eucalyptus (approximately 35 to 50 feet in height)
Restored native habitat	Canyons 2, 4, and 5
Landfill Decks	117 acres of Top Decks - Western, Eastern, and Southern Decks
Circulation and infrastructure	Approximately 10 miles of paved and unpaved roads, drainage, and landfill gas collection system (pipelines)
Structures	Buildings associated with landfill closure operations and maintenance, the MRF, gas to energy facility, and decommissioned flare facility

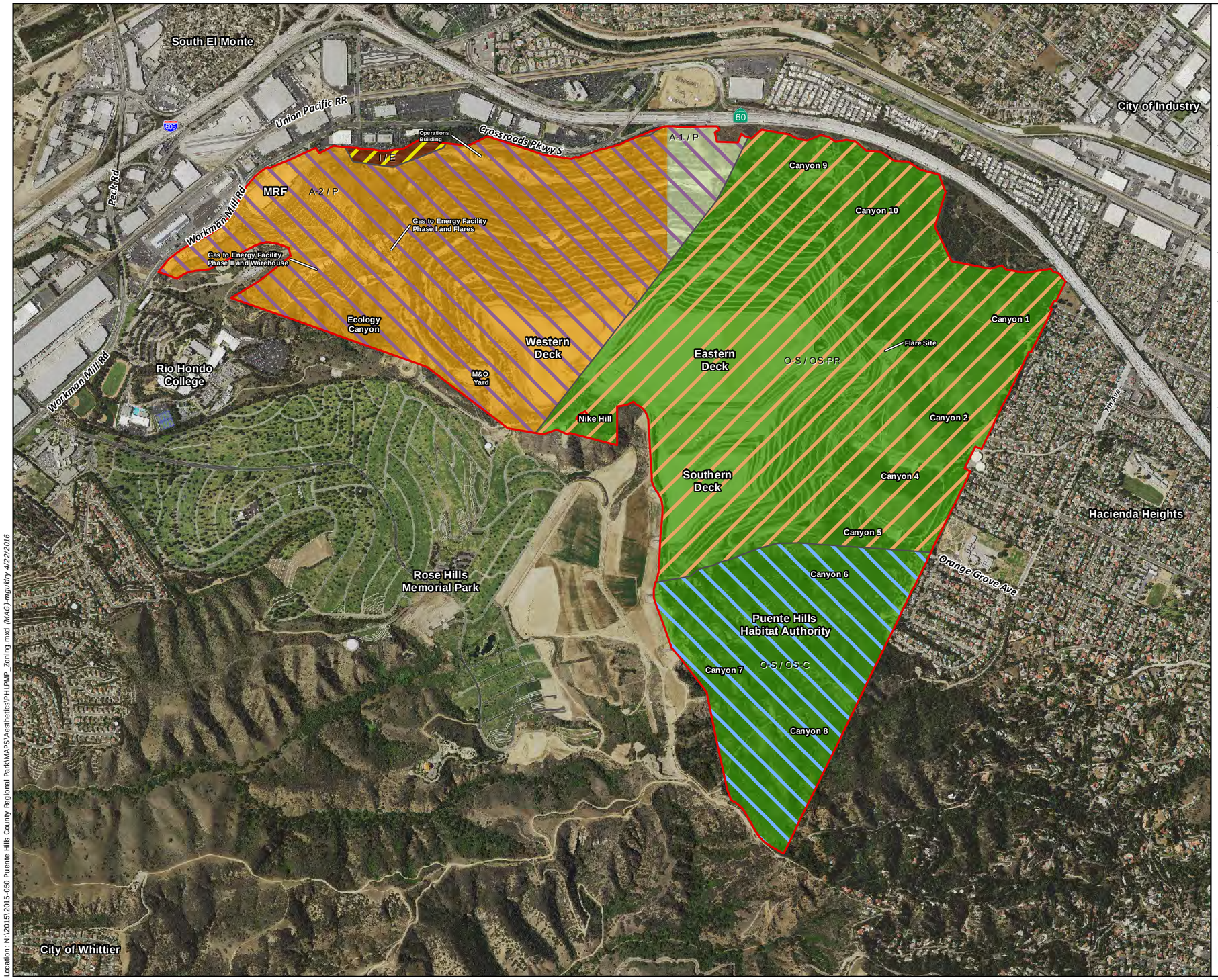
Table 3.10-2. Surrounding Land Uses

Area*	Land Use
North	Office and Light Industrial Uses, SR-60
East	Residential and Open Space/Preserve
South	Residential, Open Space/Preserve (Puente Hills Habitat Preservation Authority [Habitat Authority]), Cemetery (Rose Hills Memorial Park), and Electrical Infrastructure (SCE electrical transmission line ROW)
West	Office and Light Industrial Uses, Cemetery (Rose Hills Memorial Park), Community College (Rio Hondo College), and Electrical Infrastructure (SCE electrical transmission line ROW)

* = Area in relation to the project site.

For a detailed description of existing land uses of the landfill and surrounding areas, please see Section 2.1.1 of this Draft PEIR.

Figure 3.10-1
Puente Hills Landfill Land Use and Zoning Designations



Puente Hills Landfill Boundary

County of Los Angeles Zoning Designation

- A-1 - Light Agricultural
- A-2 - Heavy Agricultural
- O-S - Open Space

City of Industry Zoning Designation

- I - Industrial

County of Los Angeles Land Use Community Plan

- P - Public and Semi-Public
- OS-PR - Parks and Recreation
- OS-C - Conservation

City of Industry General Plan Land Use

- E - Employment

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Aesthetics\PHLPMP_Zoning.mxd (MAG) mguidry 4/22/2016

2015-050 Puente Hills Landfill Park Master Plan

Scale in Feet
0 1,500 3,000

Photo Source: NAIP 2014

Map Date: 4/22/2016

THIS PAGE INTENTIONALLY LEFT BLANK

3.10.1.3 Existing Land Use Agreements

Sanitation Districts

In 1983 the Sanitation Districts was granted Conditional Use Permit (CUP) No. 2235-(1) which allowed for the continued operation and expansion of the Puente Hills Landfill. The CUP No. 2235-(1) required the Sanitation Districts to enter into an irrevocable agreement with the County of Los Angeles (or alternate public agency) to designate the "fill" portions of the site as open space in perpetuity. The County of Los Angeles and Sanitation Districts entered into a Joint Powers Agreement (JPA) on April 28, 1987; this JPA will be amended as part of the PHLPMP process. Subsequent land use approvals including CUP 92-250-(4) and CUP 02-027-(4) for continued landfill operations further clarified provisions related to the park, including that “the specific type of recreational use (i.e., trails, nature center, soccer fields, golf course) would be the subject of a dedicated master planning process.”

Rose Hills Memorial Park

Rose Hills Memorial Park has a long history of interaction with Sanitation Districts regarding the land use relationship between Rose Hills Memorial park and landfill. Per CUP 92-250-(4) from August 1994, a permanent 50-foot setback along the common boundary of the eastern canyons of the landfill was established and is landscaped, irrigated, and kept in good repair by the Sanitation Districts. The CUP resulted in an Amended Setback and Easement Agreement between the Sanitation Districts and Rose Hills Memorial Park, which addresses issues such as noise abatement, limits of operations, shared water storage reservoir, and other technical concerns regarding the operations of the landfill. The agreement also defines a draft roadway easement (Exhibit I) for ingress and egress by Rose Hills Memorial Park through the landfill area in perpetuity. The permanent alignment of the future roadway easement would be subject to the master planning process for the future park (Sanitation Districts 1999). The proposed Rose Hills Memorial Park access road would be restricted to use during daylight hours using the Crossroads Parkway South entrance. The CUP did not specify the location of the easement, but did require that Rose Hills Memorial Park be responsible for maintenance of access improvements within this easement. Please refer to Sections 2.4 and 2.7.2.2.5 and Figure 2-8 regarding access options.

3.10.2 Regulatory Setting

Development in the project area is subject to the policies and guidelines contained within several planning policy documents. Land use and planning policy documents that are relevant to the project area are described in detail below.

3.10.2.1 Federal

No federal plans, policies, regulations, and/or laws related to land use are applicable to the Proposed Project.

3.10.2.2 State

No state plans, policies, regulations, and/or laws related to land use are applicable to the Proposed Project.

3.10.2.3 Regional

The Southern California Association of Governments (SCAG) is the federally designated Metropolitan Planning Organization (MPO) and the State-designated Regional Transportation Planning Agency and Council of Governments for southern California. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura). SCAG develops long-range regional transportation plans, including sustainable communities' strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations, and portions of the South Coast Air Quality Management District's plans (SCAG 2016).

SCAG has developed several regional plans for the southern California region, which include the Regional Transportation Plan (RTP) and the Regional Comprehensive Plan (RCP).

SCAG's Regional Transportation Plan

SCAG's Regional Council adopted the 2016-2040 RTP/ Sustainable Communities Strategy on April 7, 2016. The RTP is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP integrates land use and transportation planning so that the region can grow smartly and sustainably (SCAG 2016). Major initiatives of the RTP applicable to the Proposed Project include:

- Expanding the regional transit system to give people more alternatives to driving alone;
- Promoting walking, biking, and other forms of active transportation;
- Improving air quality and reducing greenhouse gases; and
- Preserving natural lands.

SCAG Regional Comprehensive Plan

The RCP is a major advisory plan prepared by SCAG that addresses important regional issues like housing, traffic/transportation, water, and air quality. The RCP serves as an advisory document to local agencies in the southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The RCP includes nine chapters, each based on specific areas of planning or resource management.

The RCP presents a vision of how southern California can balance resource conservation, economic vitality, and quality of life. The RCP identifies voluntary best practices to approach growth and infrastructure challenges in an integrated and comprehensive way. It also includes goals and outcomes to measure progress toward a more sustainable region (SCAG 2008).

3.10.2.4 Local

The majority of the project site is located within unincorporated Los Angeles County; however, the main access to the project site is located within the City of Industry.

Los Angeles County General Plan

The County of Los Angeles General Plan includes a Land Use Element, a Conservation and Natural Resources Element and a Parks and Recreation Element (County of Los Angeles 2015). The Land Use Element guides the long-term land use plan for the County. Goals from this element that are applicable to the Proposed Project are:

Goal LU 4: Infill development and redevelopment that strengthens and enhances communities.

- Policy LU 4.1: Encourage infill development in urban and suburban areas on vacant, underutilized, and/or brownfield sites.
- Policy LU 4.2: Encourage the adaptive reuse of underutilized structures and the revitalization of older, economically distressed neighborhoods.

Goal LU 5: Vibrant, livable, and healthy communities with a mix of land uses, services, and amenities.

- Policy LU 5.7: Direct resources to areas that lack amenities, such as transit, clean air, grocery stores, bikeways, parks, and other components of a healthy community.

Goal LU 9: Land use patterns and community infrastructure that promote health and wellness.

- Policy LU 9.1: Promote community health for all neighborhoods.
- Policy LU 9.2: Encourage patterns of development that promote physical activity.

The Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. Goals from this element that are applicable to the Proposed Project include:

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County.

- Policy C/NR 1.2: Protect and conserve natural resources, natural areas, and available open spaces.
- Policy C/NR 1.4: Create, support and protect an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the southwestern extent of the Mojave Desert to Puente Hills and Chino Hills.
- Policy C/NR 1.5: Provide and improve access to dedicated open space and natural areas for all users that considers sensitive biological resources.
- Policy C/NR 1.6: Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds,

habitat types and/or offer linkages that enhance wildlife movements and genetic diversity.

Goal C/NR 2: Effective collaboration in open space resource preservation.

Policy C/NR 2.2: Encourage the development of multi-benefit dedicated open spaces.

Policy C/NR 2.3: Improve understanding and appreciation for natural areas through preservation programs, stewardship, and educational facilities.

The Parks and Recreation Element provides policy direction for the maintenance and expansion of the County's parks and recreation system. Goals from this element that are applicable to the Proposed Project include:

Goal P/R 1: Enhanced active and passive park and recreation opportunities for all users.

Policy P/R 1.1: Provide opportunities for public participation in designing and planning parks and recreation programs.

Policy P/R 1.2: Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.

Policy P/R 1.3: Consider emerging trends in parks and recreation when planning for new parks and recreation programs.

Policy P/R 1.8: Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities.

Policy P/R 1.10: Ensure a balance of passive and recreational activities in the development of new park facilities.

Policy P/R 1.11: Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.

Goal P/R 2: Enhanced multi-agency collaboration to leverage resources.

Policy P/R 2.1: Develop joint-use agreements with other public agencies to expand recreation services.

Policy P/R 2.2: Establish new revenue generating mechanisms to leverage County resources to enhance existing recreational facilities and programs.

Policy P/R 2.5: Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, the County, state, and federal agencies, private groups, schools, private landowners, and other organizations.

Policy P/R 2.6: Participate in joint powers authorities (JPAs) to develop multi-benefit parks as well as regional recreational facilities.

Goal P/R 3: Acquisition and development of additional parkland.

Policy P/R 3.1: Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.

Policy P/R 3.3: Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.

Policy P/R 3.4: Expand the supply of regional parks by acquiring land that would: 1) provide a buffer from potential threats that would diminish the quality of the recreational experience; 2) protect watersheds; and 3) offer linkages that enhance wildlife movements and biodiversity.

Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.

Policy P/R 4.1: Create multi-use trails to accommodate all users.

Policy P/R 4.2: Develop staging areas and trail heads at strategic locations to accommodate multi-use trail users.

Policy P/R 4.3: Develop a network of feeder trails into regional trails.

Policy P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.

Policy P/R 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.

Goal P/R 5: Protection of historical and natural resources on County park properties.

Policy P/R 5.1: Preserve historic resources on County park properties, including buildings, collections, landscapes, bridges, and other physical features.

Policy P/R 5.2: Expand the collection of historical resources under the jurisdiction of the County, where appropriate.

Policy P/R 5.3: Protect and conserve natural resources on County park properties, including natural areas, sanctuaries, and open space preserves.

Policy P/R 5.5: Preserve and develop facilities that serve as educational resources that improve community understanding of and appreciation for natural areas, including watersheds.

Policy P/R 5.6: Promote the use of County parks and recreational facilities for educational purposes, including a variety of classes and after school programs.

Policy P/R 5.7: Integrate a range of cultural arts programs into existing activities, and partner with multicultural vendors and organizations.

Goal P/R 6: A sustainable parks and recreation system.

Policy P/R 6.1:	Support the use of recycled water for landscape irrigation in County parks.
Policy P/R 6.2:	Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks.
Policy P/R 6.4:	Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.

Los Angeles County Hillside Management Areas

The Hillside Management Area Ordinance (L.A. County Code Title 22, § 22.56.217) ensures that development preserves and enhances the physical integrity and scenic value of Hillside Management Areas (HMAs). HMAs are defined as areas with 25 percent or greater natural slopes. The Hillside Design Guidelines (Guidelines) are required for development in HMAs, unless exempted under the HMA Ordinance's provisions. In hillside areas with less than 25 percent slope, use of the Guidelines is optional but encouraged.

The Guidelines include specific and measurable design techniques that can be applied to residential, commercial, industrial, and other types of projects. Some design techniques may be more appropriate or feasible than others, depending on the type of project, location, size, complexity, site constraints, and other design techniques incorporated into the project. The Guidelines are divided into five major design categories containing a variety of sensitive hillside design measures. The five major categories are:

1. Site Planning
2. Grading and Facilities
3. Road Circulation
4. Building Design
5. Landscaping

City of Industry General Plan

The City of Industry General Plan Resource Management Element includes a goal to promote open space areas that are well maintained, serve the target population, and function as a citywide amenity. It also strives, through regional efforts, to upgrade the resource and recreational value of the San Gabriel River (General Plan Goals RM3-1 through RM3-5) (City of Industry 2014).

3.10.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have significant effect on the Land Use and Planning environment if it would:

- Be inconsistent with the County zoning ordinance as applicable to the subject property; or
- Conflict with Hillside Management criteria, Significant Ecological Areas conformance criteria, or other planned beneficial land uses, particularly public facilities criteria.
- Cause land use incompatibilities with existing or planned uses

3.10.4 Environmental Impacts

Threshold:	*Would the project be inconsistent with the County zoning ordinance as applicable to the subject property?*

Phases I and II

County Land Use Designation and Zoning Ordinance

Figure 3.10-1 shows the land use and zoning designations of the landfill. As shown in Figure 3.10-1, the western half of the landfill has a land use designation of Public and Semi-Public (P) and is zoned Heavy Agricultural (A-2-5), with a small portion zoned Light Agricultural (A-1-5) (Workman Mill Zoned District). The eastern half of the landfill has a land use designation Parks and Recreation (OS-PR) and is zoned Open Space (O-S) (Hacienda Heights Zoned District).

Recreational uses are allowed within Public and Semi-Public and Parks and Recreation land use designations. Recreational uses are also a permitted use under Heavy Agricultural and Open Space zones (L.A. County Code Title 22, § 22.24.120 and 22.40.410). Riding and hiking trails, excluding trails for motor vehicles, are an allowed use subject to the Director of Regional Planning's review and approval under Light Agricultural zones (L.A. County Code Title 22, § 22.24.090). As shown on Figure 3.10-1, only a small area of the landfill east of the main entrance is zoned Light Agricultural. The only project components that would be located in this area are sections of the multi-use trail, one-way loop road, and selective use two-way road. The Proposed Project would comply with the review and approval requirements listed in Title 22, § 22.24.090 of the Los Angeles County Code. Therefore, the Proposed Project would be consistent with the County's General Plan land use designation and zoning ordinance. The Proposed Project would be consistent with the County of Los Angeles applicable General Plan policies listed in Section 3.10.2.4. No impact would occur.

Future Phases

Future Phases would continue the full development of the top decks and the Flare Site. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement.

Three future easement alternatives are being evaluated. Generally, all three easements follow the eastern two-way road and differ in the alignment across the Southern Deck. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill become available for development.

County Zoning Ordinance

Future Phases of the Proposed Project would continue the recreational use of the site and are expected to be consistent with the County Zoning Ordinance. As such, no impact would occur.

Threshold:	*Would the project Conflict with Hillside Management criteria, Significant Ecological Areas conformance criteria, or other planned beneficial land uses, particularly public facilities criteria?*

Phases I and II

Hillside Management Criteria

The Proposed Project would be consistent with the following major design categories as specified in the Hillside Design Guidelines (Guidelines):

1. Site Planning

1.2. Locate at least 50 percent of the development footprint on the flattest portions of the site.

The Proposed Project would focus development on the top decks.

1.3. Utilize all previously graded or disturbed areas on the site for new development to the greatest extent possible, before developing new areas, so that new development within undisturbed areas is reduced.

The majority of the development implemented by the Proposed Project would be located on previously disturbed areas.

1.10. Preserve the most prominent and unique slopes, hilltops and ridgelines on the site for recreational uses within dedicated (or common) open space areas.

Ridgelines on the project site would be preserved. Nike Hill would serve as an important focal point of the project's design offering a scenic vista point to the public.

1.12. Preserve contiguous undisturbed open space throughout the site, utilizing segments of land that are at least 150 feet wide.

1.13. Utilize at least 25 percent of the overall project's disturbed (improved) open space for recreational purposes.

1.14. Locate and design improved open space as a buffer (recommended at least 50 feet wide) between undisturbed open space and development.

1.15. Create scenic vista points at prominent locations such as hilltops and ridgelines, providing amenities at the points and making them accessible to the public. When provided, this shall count as improved open space.

1.16. Provide private (connector) trails or pedestrian paseos that link together all of the project's open space areas (one acre or larger) and connect to any onsite or offsite public trails.

The Proposed Project would be consistent with Guidelines 1.12 through 1.16. The Proposed Project is an open space project that would develop a regional park. The park would include onsite trails that would connect to regional trails (Skyline-Schabarum Trail) and provide vista points (Nike Hill).

2. Grading and Facilities

Grading of the project site would be minimal due to constraints from developing a park at a closed landfill. The Sanitation Districts manages the landfill's final cover grade to comply with landfill closure regulatory requirements.

2.10. Use earth-tone colors and materials for exposed hardscape surfaces such as block walls, retaining walls, drainage terraces and storm gutters.

Earthen colors would be used for structures.

3. Road Circulation

3.2. Locate and design new roadways to follow the existing natural slope contours, avoiding mass landform alteration and excessive grading.

The Proposed Project would primarily use existing landfill roads. A new road segment would be integrated into the Sanitation Districts new buttress construction connecting an existing landfill road to the Western Deck.

4. Building Design

4.2. Utilize terraced (split-level) or "cantilevered" building designs wherever feasible on 25 percent or greater slopes.

The Proposed Project would build a cantilevered scenic overlook at Nike Hill.

5. Landscaping

5.1. Retain and incorporate 50 percent or more of existing on-site trees and woodlands (particularly native and drought-tolerant species, and oak woodlands) into the overall project landscaping plan.

The Proposed Project would not affect the landscaping maintained by the Sanitation Districts, including the existing arboretum on the north facing slopes of the landfill.

5.2. Landscape all graded slopes and improved open spaces in an attractive manner that accomplishes at least two or more of the following beyond a State or County-required minimum (whichever is more restrictive): (a) restores habitat; (b) conserves water or improves water quality; (c) provides shade for pedestrians and bicyclists; (d) enhances slope stability (must landscape all slopes ≥ 5 feet high); (e) increases fire protection; and (f) provides recreational opportunities.

5.4. Utilize native and drought-tolerant trees, shrubs and ground cover over all exposed graded areas.

5.5. Landscape at least 50 percent of all graded slopes and improved open spaces at a minimum ratio of one new shrub per 100 square feet of total graded slopes and improved open space area and one new tree per 800 square feet of total graded slopes and improved open space area.

5.7. Use a wide variety of local and non-invasive plant species within the project's improved open space areas, matching or exceeding the variety found onsite and listed in the project's plant surveys and biota reports.

5.8. Plant new native and drought-tolerant trees and shrubs of a sufficient interval, size and height to screen hardscape surfaces and unadorned features such as block walls, infrastructure, and exposed and prominently located building facades.

5.9. Use plant materials and irrigation systems that, combined, conserve water 20 percent or more beyond State and County requirements.

The Proposed Project would be consistent with Guidelines 5.2, 5.4, 5.5, and 5.7 through 5.9. The Proposed Project would use native and drought tolerant plants to the extent feasible. Plants selected for planting would come from the approved plant list developed by the Sanitation Districts and approved for use at the closed landfill.

The Proposed Project would be designed and constructed in compliance with the Hillside Management Area Ordinance (L.A. County Code Title 22, § 22.56.217). No impact would occur.

Significant Ecological Areas

The Significant Ecological Area (SEA) program, part of the County General Plan Conservation and Natural Resources Element, designates areas where the County deems it important to facilitate balance between development and resource conservation. One adopted SEA (Rio Hondo Wildlife Sanctuary SEA) and one conceptual SEA (Conceptual SEA for the Hacienda Heights Community) are located within the landfill property. The Rio Hondo Wildlife Sanctuary SEA, also known as Ecology Canyon, is a 24-acre area in the western corner of the landfill property, and is designated as native habitat. The Rio Hondo Wildlife Sanctuary SEA is used by Rio Hondo College staff and students for biological studies. This area is located west of the Western Deck. The Conceptual SEA for the Hacienda Heights Community is located within the landfill property. The Conceptual SEA is completely contained within the native preservation area within Canyons 6, 7, and 8 (refer to Figure 2-3) managed by the Puente Hills Habitat Preservation Authority (Habitat Authority). This area is located southeast of the Southern Deck. Several trails exist within the Conceptual SEA, which include the Ahwigna Trail, Coyote Trail, Native Oak Trail, and the Schabarum/Skyline Trail. The Proposed Project is not proposing any recreational facilities within the Rio Hondo Wildlife Sanctuary (Ecology Canyon) or within the Conceptual SEA (Habitat Authority).

Existing recreational facilities near Ecology Canyon include the Schabarum/Skyline Trail, which is located along the ridge on the north and east sides of the canyon. Proposed facilities in the vicinity of Ecology Canyon include a multi-use trail that is located parallel to the western one-way loop road. The multi-use trail would eventually connect to the Schabarum/Skyline Trail via a bridge that would be constructed in Phase IV (please see discussion in Future Phases section). A bike skills area would also be developed on the Western Deck during Phase I. This bike skills area would be approximately 1,200 feet east of Ecology Canyon.

Recreational uses such as hiking and wildlife watching are compatible by definition with the long-term sustainability of biological resources within SEAs (County of Los Angeles 2015). The Proposed Project would include passive and active recreational facilities. Active recreational facilities (i.e., bike skills, zip lines, slides) would not be located immediately adjacent to Ecology Canyon or the Conceptual SEA. Therefore, these facilities are not expected to cause conflicts with the SEAs.

The Sanitation Districts' Maintenance and Operation (M&O) Yard is located approximately 800 feet to the southeast of Ecology Canyon. A ridge separates the M&O Yard from Ecology Canyon blocking potential noise and light impacts. The Proposed Project would construct an approximately 1,650-square-foot building to serve as the shared maintenance and operations space for the regional park and Sanitation Districts operations. The continued use of this area as a M&O yard would be compatible with Ecology Canyon. Impacts would be less than significant.

Planned Beneficial Land Uses

Impacts to adjacent land uses (i.e. Habitat Authority) may occur from the potential increased use of adjacent recreational trails. It is anticipated that some park visitors would leave the regional park via the Schabarum/Skyline Trail and potentially use other trails in the area. However, the Proposed Project was designed to be a destination park

with a wide range of amenities, including stair climbs, trail lift, zip lines, and bike skills areas, to meet the diverse needs of park users. The proposed park would itself become the destination for park users. Therefore, it is anticipated that the majority of park users would stay there. Impacts would be less than significant.

Future Phases

Future Phases would continue with the full development of the top decks and the Flare Site. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill are available for development.

Hillside Management Criteria

The Proposed Project would continue the recreational use of the site and are expected to comply with the Hillside Management Area Ordinance. No impact would occur.

Significant Ecological Areas

As previously discussed, the Proposed Project does not propose any facilities within the Conceptual SEA, located south of the Southern Deck. The Southern Deck is more removed from the central hub of the park, offering quiet solitude, and access to the Schabarum-Skyline Trail. Proposed improvements to the Southern Deck include temporary art installations, grassland patches, picnic areas, an equestrian staging area, and a native plant nursery. The picnic and equestrian staging areas would be located at the northern end of the Southern Deck away from the Conceptual SEA. The uses closest to the Conceptual SEA would be the temporary art installations and grassland patches. These two uses would generate foot traffic from people visiting the art installations and enjoying the grassland areas. These passive recreation activities are anticipated to be consistent with the Conceptual SEA.

Potential consistency impacts may occur from the proposed Rose Hills Memorial Park easement and the Conceptual SEA. Alternative 1 of the Rose Hills Memorial Park easement would be the closest to the Conceptual SEA. No direct impacts to the Conceptual SEA from the proposed Rose Hills Memorial Park easement are expected because the Proposed Project does not propose any development within the boundaries of this SEA. However, indirect impacts to biological resources in the project area and adjacent areas, including the Conceptual SEA, are anticipated. Please see Sections 3.4.4.1 and 3.4.4.4 for a detailed discussion on indirect impacts from implementation of the Proposed Project. Alternative 1 of the proposed Rose Hills roadway easement would degrade wildlife movement due to the loss or substantial alteration of the existing native vegetation, noise due to initial road construction, and ongoing vehicular traffic if it were to occur, would constitute an adverse and significant impact. Mitigation Measures B-1 through B-13 in Section 3.4.5 would be implemented to reduce this impact to a less than significant level. Impacts from Alternatives 2 and 3 of the proposed Rose Hills roadway easement would be similar to Phases I and II as they are contained to the road between the Eastern and Southern Decks and within a portion of the Southern Deck.

Planned Beneficial Land Uses

Potential conflicts may occur from implementation of the Proposed Project and activation and use of the proposed Rose Hills Memorial Park easement. Three alternative alignments for the proposed Rose Hills Memorial Park easement are being evaluated. Generally, they follow the same route and differ in how they cross the Southern Deck. Alternative 1 would be located along the southern boundary of the deck. Alternative 2 would cross the Southern Deck generally in the middle portion of the deck. Alternative 3 would be located between the Eastern and Southern Decks.

Activation and use of the Rose Hills Memorial Park access easement through the park and recreational areas planned to receive heavy public use on the Southern Deck would cause land use incompatibilities.

Alternative 1 would be located at the southern edge of the Southern Deck avoiding recreational uses within the deck. With this alternative, the potential conflict between park users within the Southern Deck and funeral processions would not occur. Impacts would be less than significant.

Alternatives 2 and 3 of the Rose Hills Memorial Park access easement would traverse areas planned to receive heavy public recreational use. Average daily traffic from Rose Hills would potentially cause land use conflicts with park users due to increased traffic crossing heavily used recreational facilities, and increased noise and emissions of an estimated 1,200 daily vehicles crossing developed Southern Deck parklands. Such traffic would also interrupt use of the backbone Schabarum-Skyline Trail and may create periodic hazards for equestrian users, especially those who may not be anticipating encountering traffic in close proximity to a largely rural trail. Further, funeral processions of 20 to 60 or more cars crossing developed park land at slow processional speeds two to three times daily or more on weekends would disrupt recreation activities and may present a hazards to park visitors, substantially interfering with public use and enjoyment of these areas. This conflict of uses within the Southern Deck would create potentially significant impacts to the land use at the park and the public use and enjoyment of such facilities. Impacts from the proposed Rose Hills Memorial Park easement would be mitigated to a less than significant level through the implementation of mitigation measures listed in the air, hazards (safety), noise, and traffic sections this Draft PEIR (Sections 3.3, 3.8, 3.11, and 3.14) .

3.10.5 Mitigation Measures

The Proposed Project would not result in any significant land use impacts. Impacts from conflict of uses resulting from the proposed Rose Hills Memorial Park easement would be mitigated to a less than significant level with measures listed in Sections 3.3, 3.8, 3.11, and 3.14 (air, hazards, noise, and traffic) of this Draft PEIR.

3.10.6 Residual Impacts After Mitigation

Any residual land use impacts would be less than significant.

THIS PAGE INTENTIONALLY LEFT BLANK

3.11 NOISE

This section of the PEIR assesses the potential noise impacts resulting from construction and operation of the Proposed Project. This section also describes the existing setting and regulatory setting in relationship to noise, as well as identifies mitigation measures that may be necessary to reduce noise impacts. A noise impact analysis report was completed for the Proposed Project (Kunzman 2016b). The technical report is provided in Appendix G and summarized below.

3.11.1 Environmental Setting

3.11.1.1 Noise Descriptors

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in extreme circumstances, hearing impairment.

The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA.

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and human-made features. Sound from point sources, such as air conditioning condensers, radiates uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease.

Average noise levels over a period of minutes or hours are usually expressed as dBALeq, or the equivalent noise level for that period of time. For example, $Leq_{(3)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (Ldn). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding 5 dBA to sound levels in the evening (7:00 P.M. to 10:00 P.M.), and by adding 10 dBA to sound levels at night (10:00 P.M. to 7:00 A.M.). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. Ldn is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Traffic Noise Analysis Protocol for New Highway and Reconstruction Projects (Caltrans 2009).

3.11.1.2 Vibration Descriptors

The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Raleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

Construction operations generally include a wide range of activities that can generate groundborne vibration. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet. Heavy trucks can also generate groundborne vibrations, which can vary depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, or the differential settlement of pavement all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement conditions.

Typically, particle velocity or acceleration (measured in gravities) is used to describe vibration. Table 3.11-1 shows the peak particle velocities (PPV) of some common

construction equipment and Table 3.11-2 shows typical human reactions to various levels of PPV as well as the effect of PPV on buildings.

Table 3.11-1. Vibration Source Levels for Construction Equipment[1]

EQUIPMENT	PEAK PARTICLE VELOCITY (INCHES/SECOND) AT 25 FEET	APPROXIMATE VIBRATION LEVEL LV (DVB) AT 25 FEET
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
.11-Small bulldozer	0.003	58

[1]Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

Table 3.11-2. Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration[1]

VIBRATION LEVEL PEAK PARTICLE VELOCITY (PPV)	HUMAN REACTION	EFFECT ON BUILDINGS
0.006–0.019 in/sec	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08 in/sec	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10 in/sec	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings

VIBRATION LEVEL PEAK PARTICLE VELOCITY (PPV)	HUMAN REACTION	EFFECT ON BUILDINGS
0.20 in/sec	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6 in/sec	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

[1]Source: Caltrans, 2002

3.11.1.3 Existing Noise Environment

Existing Land Uses and Sensitive Receptors

The project site is largely bordered by developed urban uses. Surrounding land uses include office and light industrial uses to the west and north; residential and open space/preserve properties to the east and south; and Rose Hills Memorial Park, Rio Hondo College, and a Southern California Edison (SCE) electrical transmission line right-of-way (ROW) to the south and west. SR-60 borders the site to the northeast. Multi-use trails constructed and maintained by the Los Angeles County Department of Parks and Recreation (DPR) adjoin and cross the site connecting east to west over the former landfill.

The northern boundary of the project site is bordered by SR-60, which carries an estimated 200,000 vehicles per day (Caltrans 2014). North of SR-60 lies the Wildwood Mobile Home Park, commercial centers (e.g., Fry's Electronics), light industrial uses, and both channelized and relatively natural segments of San Jose Creek.

To the east, the project site is bordered by a 3,400-foot-wide open space corridor that links the site to native habitats in the Hacienda Hills. The eastern boundary of the project site is bordered by the unincorporated community of Hacienda Heights, which includes a single-family residential neighborhood, Orange Grove Middle School, and Orange Grove Park.

To the south and southwest, the project site is bordered by a mix of uses, including a 230-acre preserve area managed by the Puente Hills Habitat Authority, a cemetery use (Rose Hills Memorial Park), and an SCE right-of-way (ROW) that contains two high power overhead electric transmission lines. The manicured lawns of Rose Hills Memorial Park extend for approximately one mile along the southwestern boundary of the project site. This shared boundary includes areas of open undeveloped grassland, which have been approved for cemetery expansion. An SCE ROW is located between Rose Hills Memorial Park and the project site. This SCE ROW contains two high power overhead electric transmission lines; a 220-kilovolt (kV) transmission line and a 500-kv transmission line suspended from lattice towers.

To the west, the project site is bordered by Rio Hondo College, a community college with a mix of uses, including extensive surface parking lots, classroom and administration buildings, and the native habitats of Ecology Canyon. Beyond Rio Hondo College to the west, there are light industrial and commercial uses, I-605, and the San Gabriel River.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels, and hotel uses make up the majority of these areas. Sensitive receptors that may be affected by project-generated noise include the single-family detached residential dwelling units located to the west, east, and south; the multi-family attached residential dwelling units located to the west; and Orange Grove Elementary School and Palm Elementary School located to the east.

Ambient Noise Measurements

An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the project area, five 10-minute daytime noise measurements were taken between the hours of 1:49 P.M. and 8:17 P.M. on February 19, 2016 (refer to Figure 3.11-1 for measurement locations).

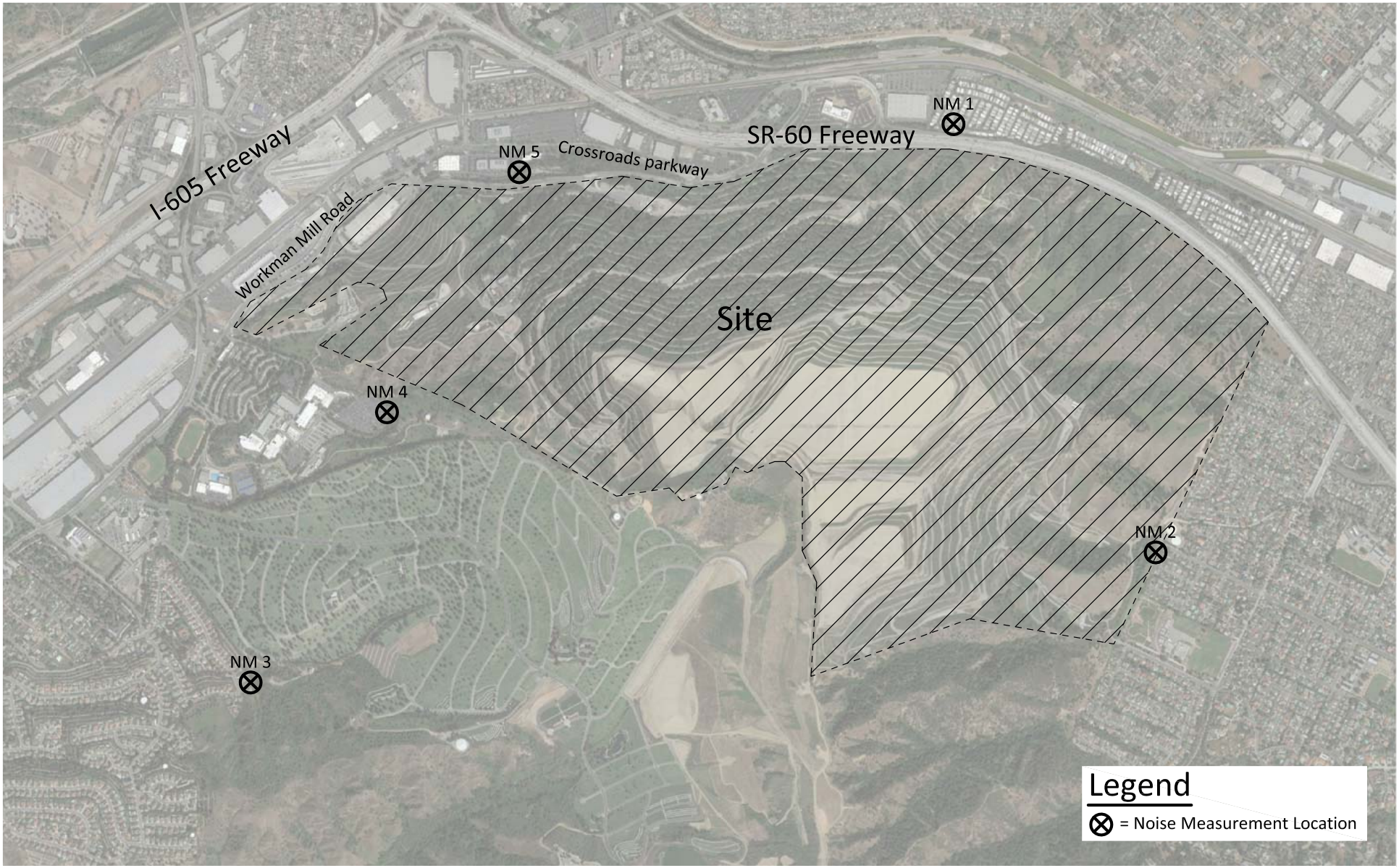
The noise measurements were taken on Meadowview Terrace within the mobile home park to the north of the project site, to the east of the project site in close proximity to the single-family detached residential dwelling units along Autumn Moon Drive, to the west of the project site just east of the single-family detached residential dwelling units along Overcrest Drive, to the northwest of the project along Circle Drive, and to the north of the project site at the southern edge of the Los Angeles County Services parking lot. Table 3.11-3 provides a summary of the short-term ambient noise data. Ambient noise levels measured 44.1 to 65.5 dBA Leq during the daytime (7:00 A.M. to 10:00 P.M.). Estimated ambient nighttime noise levels are anticipated to decrease by 5 dBA to ranging between 39.1 to 60.5 dBA Leq during nighttime hours. The dominant noise source was from vehicles traveling along SR-60, bird song, dogs barking, and train noises.

Table 3.11-3. Short-Term Noise Measurement Summary (dBA) 1, 2

SITE LOCATION	TIME STARTED	LEQ	LMAX	LMIN	L(2)	L(8)	L(25)	L(50)
1	1:49 PM	65.5	76.2	61.3	72.7	67.8	65.0	64.0
2	5:29 PM	44.1	61.4	37.1	51.3	47.5	43.4	41.4
3	6:33 PM	46.5	59.1	39.5	54.6	52.3	44.1	41.9
4	7:33 PM	51.1	65.9	45.3	59.7	55.4	48.2	47.1
5	8:17 PM	58.8	75.9	49.2	67.3	63.2	56.4	51.5

[1]See Figure 3.11-1 for noise measurement location. Each noise measurement was performed over a 10-minute duration.
[2]Noise measurements performed on February 19, 2016.

THIS PAGE INTENTIONALLY LEFT BLANK



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Noise_Measurement_Locations.mxd (AAguirre, 5/10/2016) - mapping_guest

Map Date: 5/10/2016
Source: Kunzman Associates, Inc. 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.11-1. Noise Measurement Locations

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

3.11.2 Regulatory Setting

3.11.2.1 Federal

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the Ldn should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA Ldn (i.e., there would not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated federal agencies, allowing more individualized control for specific issues by designated federal, state, and local government agencies.

3.11.2.2 State

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provide guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the Normally Acceptable outdoor exposure of noise-sensitive uses. The OPR Guidelines include a Noise and Land Use Compatibility Matrix, which identifies acceptable and unacceptable community noise exposure limits for various land use categories. The City of Industry utilizes the compatibility matrix and is demonstrated in Table 3.11-4.

Table 3.11-4. State of California Land Use Compatibility for Community Noise Exposure (dBA CNEL or L_{dn})[1]

LAND USE	55	60	65	70	75	80
Residential-Low Density Single Family, Duplexes and Mobile Homes						
Residential- Multiple Family						
Transient Lodging, Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arenas, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Businesses, Commercial and Professional						
Industrial, Manufacturing, Utilities, Agriculture						

NORMALLY ACCEPTABLE:	**CONDITIONALLY ACCEPTABLE:**	**NORMALLY UNACCEPTABLE:**	**CLEARLY UNACCEPTABLE:**
Specified land uses is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation or requirements.	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.	New construction and development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.	New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

[1] Sources: OPR 2003 and City of Industry 2014.

3.11.2.3 Local

City of Industry General Plan

Applicable policies and standards governing environmental noise in the City of Industry are set forth in the General Plan Safety Element. Those applicable to the Proposed Project are presented below.

Goal S6: An environment where noise does not adversely affect sensitive land uses.

Policy S6-1: Coordinate with Caltrans, San Gabriel Valley Council of Governments, Southern California Association of Governments, neighboring jurisdictions, and other transportation providers in the preparation and maintenance of transportation and land use plans to minimize noise impacts and provide appropriate mitigation measures.

Policy S6-2: Address noise impacts through the effective enforcement of the noise ordinance, project and environmental review, and compliance with state and federal noise standards.

Policy S6-3: Consider noise levels likely to be produced by any new businesses or substantially expanded business activities locating near existing noise-sensitive uses such as schools, community facilities, and residences, as well as adjacent to established businesses involving vibration-sensitive activities.

County of Los Angeles General Plan

The Los Angeles County 2035 General Plan establishes goals and policies in order to provide a healthy, livable, and sustainable community. Applicable policies and standards governing environmental noise in the County are set forth in the Noise Element. Those applicable to the proposed project are presented below.

Goal N 1: The reduction of excessive noise impacts.

Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.

Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.

Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).

Policy N 1.4: Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.

Policy N 1.5: Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or Ldn) noise exposure contours.

Policy N 1.6: Ensure cumulative impacts related to noise do not exceed health-based safety margins.

Policy N 1.7: Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.

Policy N 1.9: Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.

Policy N 1.12: Decisions on land adjacent to transportation facilities, such as the airports, freeways and other major highways, must consider both existing and future noise levels of these transportation facilities to assure the compatibility of proposed uses.

City of Industry Ordinance

The City's Municipal Code includes several references to noise control that apply to the Proposed Project. Therefore, the following sections of the Municipal Code that are applicable to land uses adjacent to and proposed as part of the project will be considered for the purpose of this analysis.

Section 9.31.050 Disturbances

It shall be unlawful for any person to disturb the peace and quiet of any park by making any unduly loud or unusual noise.

Section 17.12.030 Entertainment and/or Dance Regulations

The noise level created by any entertainment and/or dance business shall not exceed the following at the property line of any adjacent or nearby residential land use, hospital, school in session, church or public library as measured by a sound level meter:

- 55 dBA between 7 A.M. and 10 P.M. and 50 dBA between 10 P.M. and 7 A.M. for a cumulative period of more than 30 minutes in any hour;
- 60 dBA between 7 A.M. and 10 P.M. and 55 dBA between 10 P.M. and 7 A.M. for a cumulative period of more than 15 minutes in any hour;
- 65 dBA between 7 A.M. and 10 P.M. and 60 dBA between 10 P.M. and 7 A.M. for a cumulative period of more than five minutes in any hour;
- 70 dBA between 7 A.M. and 10 P.M. and 65 dBA between 10 P.M. and 7 A.M. at any time.

County of Los Angeles Ordinance

Chapter 12.08 Noise Control of the County's Municipal Code controls unnecessary, excessive and annoying noise and vibration within the County of Los Angeles. The following sections of the Municipal Code applicable to the land uses adjacent to and proposed as part of the project will be utilized for the purpose of this analysis.

As per Section 12.08.380 of the County Code, receptor properties are assigned to the following noise zones: Zone I – noise-sensitive area; Zone II – residential properties; Zone III – commercial properties; and Zone IV – industrial properties.

Requirements for building construction noise are also included in the County's Municipal Code under Section 12.12.030.

Section 12.08.390 Exterior Noise Standards

A. The following exterior noise levels shall apply to all receptor properties within a designated noise zone:

NOISE ZONE	DESIGNATED NOISE ZONE LAND USE (RECEPTOR PROPERTY)	TIME INTERVAL	EXTERIOR NOISE LEVEL (DB)
I	Noise-sensitive area	Anytime	45
II	Residential Properties	10:00 P.M. to 7:00 A.M. (nighttime)	45
		7:00 A.M. to 10:00 P.M. (daytime)	50
III	Commercial Properties	10:00 P.M. to 7:00 A.M. (nighttime)	55
		7:00 A.M. to 10:00 P.M. (daytime)	60
IV	Industrial Properties	Anytime	70

B. No person shall operate or cause to be operated, any source of sound at any location within the unincorporated county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property either incorporated or unincorporated, to exceed any of the following exterior noise standards:

- Standard No. 1 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level from subsection A of this section; or, if the ambient L50 exceeds the foregoing level, then the ambient L50 becomes the exterior noise level for Standard No. 1.

- Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from subsection A of this section plus 5 dB; or, if the ambient L25 exceeds the foregoing level, then the ambient L25 becomes the exterior noise level for Standard No. 2.

- Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from subsection A of this section plus 20 dB; or, if the ambient L8.3 exceeds the foregoing level, then the ambient L8.3 becomes exterior noise level for Standard No. 3.

- Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from subsection A of this section plus 15 dB; or, if the ambient L1.7 exceeds the foregoing level, then the ambient L1.7 becomes the exterior noise level for Standard No. 4.

- Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from subsection A of this section plus 20 dB; or, if the ambient L0 exceeds the foregoing level then the ambient L0 becomes the exterior noise level for Standard No. 5.

Section 12.08.400 Interior Noise Standards

A. No person shall operate or cause to be operated within a dwelling unit, any source of sound, or allow the creation of any noise, which causes the noise level when measured inside a neighboring receiving dwelling unit to exceed the following standards:

- Standard No. 1 The applicable interior noise level for cumulative period of more than five minutes in any hour; or
- Standard No. 2 The applicable interior noise level plus 5dB for a cumulative period of more than one minute in any hour; or
- Standard No. 3 The applicable interior noise level plus 10dB or the maximum measured ambient noise level for any period of time.

B. The following interior noise levels for multifamily residential dwellings shall apply, unless otherwise specifically indicated, within all such dwellings with windows in their normal seasonal configuration.

NOISE ZONE	DESIGNATED LAND USE	TIME INTERVAL	ALLOWABLE INTERIOR NOISE LEVEL (DB)
All	Multi-Family Residential	10:00 P.M. to 7:00 A.M.	40
		7:00 A.M. to 10:00 P.M.	45

C. If the measured ambient noise level reflected by the L50 exceeds that permissible within any of the interior noise standards in subsection A of Section 12.08.390, the allowable interior noise level shall be increased in 5 dB increments in each standard as appropriate to reflect said ambient noise level (L50).

Section 12.08.440 Construction Noise

A. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 P.M. and 7:00 A.M., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer is prohibited.

B. Noise Restrictions at Affected Structures. The contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in the following schedule:

a. At residential structures:

i. Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:

TIMEFRAME	SINGLE-FAMILY RESIDENTIAL	MULTI-FAMILY RESIDENTIAL	SEMI-RESIDENTIAL/ COMMERCIAL
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	75 dBA	80 dBA	85 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA

ii. Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

TIMEFRAME	SINGLE-FAMILY RESIDENTIAL	MULTI-FAMILY RESIDENTIAL	SEMI-RESIDENTIAL/ COMMERCIAL
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	60 dBA	65 dBA	70 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

b. At business structures:

i. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment: Daily, including Sunday and legal holidays, all hours: maximum of 85 dBA.

c. All mobile or stationary internal-combustion-engine powered equipment or machinery shall be equipped with suitable exhaust and air-intake silencers in proper working order.

Section 12.08.560 Vibration

Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the

source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

Section 12.12.030 Building Construction Noise

Except as otherwise provided in this chapter, a person, on any Sunday, or at any other time between the hours of 8:00 p.m. and 6:30 a.m. the following day, shall not perform any construction or repair work of any kind upon any building or structure, or perform any earth excavating, filling, or moving, where any of the foregoing entails the use of any air compressors; jackhammers; power-driven drill; riveting machine; excavator, diesel-powered truck, tractor or other earth moving equipment; hand hammers on steel or iron, or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in a dwelling, apartment, hotel, mobile home, or other place of residence.

3.11.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have a significant effect on noise if it would:

- Expose persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies;
- Expose persons to or generation of excessive groundborne vibration or groundborne noise levels;
- Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas;
- Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems;

There are no public airports or private airstrips within two miles of the project site. The closest airport is the El Monte Airport located approximately four miles north of the Project site. According to the Los Angeles County Airport Land Use Commission, the Project site is not located within the airport influence area for the El Monte Airport (ALUC 2003). The Proposed Project would not expose people residing or working in the Project area to excessive noise levels associated with an airport. No impact would occur. These issues are not discussed further in this PEIR.

3.11.4 Environmental Impacts

3.11.4.1 Noise

Threshold:	*Would the project expose persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?*

Threshold:	*Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?*
Threshold:	*Would the project cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?*

Phases I and II

Construction Noise

Construction noise is considered a short-term impact and would be considered significant if construction activities are undertaken outside the allowable times as described by the County of Los Angeles Municipal Code Section 12.08.440. Existing residences to the east, west, and south and the elementary schools to the east may be temporarily affected by short-term noise impacts associated the transport of workers, the movement of construction materials to and from the project site, demolition, ground clearing, excavation, grading, and building activities.

Project-generated construction noise would vary depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week), and the duration of the construction work. Site preparation and/or any grading is expected to produce the highest sustained construction noise levels. Typical noise sources and noise levels associated with the site grading phase of construction are shown in Table 3.11-5. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Noise levels would be loudest during site excavation/grading phase. A likely worst-case construction noise scenario during grading assumes the use of a grader, a dozer, two excavators, two backhoes, and a scraper operating at 300 feet from the nearest sensitive receptor.

Table 3.11-5. Typical Construction Equipment Noise Levels[1]

TYPE OF EQUIPMENT	RANGE OF MAXIMUM SOUND LEVELS MEASURED (DBA AT 50 FEET)	SUGGESTED MAXIMUM SOUND LEVELS FOR ANALYSIS (DBA AT 50 FEET)
Rock Drills	83-99	96
Jack Hammers	75-85	82
Pneumatic Tools	78-88	85
Pumps	74-84	80
Dozers	77-90	85
Scrappers	83-91	87
Haul Trucks	83-94	88

TYPE OF EQUIPMENT	RANGE OF MAXIMUM SOUND LEVELS MEASURED (DBA AT 50 FEET)	SUGGESTED MAXIMUM SOUND LEVELS FOR ANALYSIS (DBA AT 50 FEET)
Cranes	79-86	82
Portable Generators	71-87	80
Rollers	75-82	80
Tractors	77-82	80
Front-End Loaders	77-90	86
Hydraulic Excavators	81-90	86
Graders	79-89	86
Air Compressors	76-89	86
Trucks	81-87	86

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels at 300 feet have the potential to reach 71 dBA Leq and 73 dBA Lmax at the nearest sensitive receptors during excavation/grading. Noise levels for the other construction phases would be lower and range between 66 to 70 dBA.

The County's General Plan Noise Element establishes goals intended to protect residents from the harmful effects of noise from mechanical equipment and trucks. The majority of the project site is located at distance greater than 300 feet from any sensitive receptor. As demonstrated by the construction noise calculations, the construction noise level is below the City of Industry's/County's 75 dBA construction noise limit and therefore is consistent with the City's/County's General Plan Noise Element goals.

Construction is anticipated to occur during the permissible hours according the County's Municipal Code and not exceed 75 dBA threshold at nearest sensitive receptors. Construction noise would have a temporary or periodic increase in the ambient noise levels above the existing within the project vicinity. Pursuant to Municipal Code Section 12.08.440, construction activities may occur between the hours of 7:00 A.M. and 7:00 P.M. on weekdays and is prohibited on Sundays and federal holidays. These permitted hours of construction are included in the code in recognition that construction activities undertaken during daytime hours are a typical part of living in an urban environment and do not cause a significant disruption. Compliance with the County's ordinance, as well as implementation of Mitigation Measure N-1 would reduce potential construction noise impacts to nearby sensitive receptors to a less than significant level.

Operational Noise

Noise Impacts to Off-Site Receptors Due to Project Generated Traffic

The worst-case Project-generated (which consists of the High Build Alternative) traffic noise level was modeled utilizing the Federal Highways Administration (FHWA) Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated 50 feet from the centerline of the analyzed roadway. The modeling is theoretical and does not

take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the levels are shown for comparative purposes only to show the difference in with and without project conditions. In addition, the noise contours for 55, 60, 65, and 70 dBA CNEL were calculated. Roadway input parameters including average daily traffic volumes (ADTs), speeds, and vehicle distribution data is shown in Table 3.11-6. The potential on-site and off-site noise impacts caused by an increase of traffic from operation of the Proposed Project on the nearby roadways were calculated for the following scenarios:

- Existing Year (without Project): This scenario refers to existing year traffic noise conditions and is demonstrated in Table 3.11-7.
- Existing Year (Plus Project): This scenario refers to existing year traffic noise conditions and is demonstrated in Table 3.11-8.

Table 3.11-6. Project Average Daily Traffic Volumes and Roadway Parameters

ROADWAY	SEGMENT	AVERAGE DAILY TRAFFIC VOLUMES[1]		POSTED TRAVEL SPEEDS (MPH)	SITE CONDITIONS
		EXISTING	EXISTING PLUS PROJECT		
Crossroads Parkway North	East of Crossroads Parkway South	10,100	10,400	35	Soft
Crossroads Parkway South	Crossroads Parkway North to SR-60 Ramps	9,200	9,500	35	Soft
	SR-60 Ramps to Puente Hills Landfill Access	11,000	13,100	35	Soft
	Puente Hills Landfill Access to Workman Mill Road	11,900	13,400	35	Soft
	Workman Mill Road to Peck Road	11,500	12,400	35	Soft
Peck Road	South of Workman Mill Road	29,200	29,500	45	Soft
	Workman Mill Road to Pellisier Place	20,000	20,600	45	Soft
	North of Pellissier Place	18,800	19,500	45	Soft
Workman Mill Road	North of Crossroads Parkway South	5,200	5,800	35	Soft

VEHICLE DISTRIBUTION (TRUCK MIX)[2]				
MOTOR-VEHICLE TYPE	DAYTIME % (7 AM - 7 PM)	EVENING % (7 PM - 10 PM)	NIGHT % (10 PM - 7 AM)	TOTAL % OF TRAFFIC FLOW
Automobiles	77.5	12.9	9.6	95.00
Medium Trucks	84.8	4.9	10.3	2.50
Heavy Trucks	86.5	2.7	10.8	2.50

[1]Average daily traffic volumes were obtained from the San Gabriel Medical Office Building Traffic Impact Study, prepared by KOA (November 2015).
[2]Vehicle percentages are based on typical Southern California vehicle mix percentages.

Table 3.11-7. Existing (Without Project) Exterior Noise Levels Along Roadways (dBA CNEL)[1]

ROADWAY	SEGMENT	CNEL AT 50 FEET (DBA)	DISTANCE TO CONTOUR (FEET)			
			70 DBA CNEL	65 DBA CNEL	60 DBA CNEL	55 DBA CNEL
Crossroads Parkway North	East of Crossroads Parkway South	66.3	29	61	132	285
Crossroads Parkway South	Crossroads Parkway North to SR-60 Ramps	65.9	27	58	124	268
	SR-60 Ramps to Puente Hills Landfill Access	66.7	30	65	140	302
	Puente Hills Landfill Access to Workman Mill Road	67.1	32	69	148	318
	Workman Mill Road to Peck Road	66.9	31	67	144	311
Peck Road	South of Workman Mill Road	73.2	82	177	380	820
	Workman Mill Road to Pellissier Place	71.4	63	136	294	633
	North of Pellissier Place	71.0	60	130	280	604
Workman Mill Road	North of Crossroads Parkway South	63.0	18	39	84	180

[1]Exterior noise levels calculated 5 feet above pad elevation, perpendicular to subject roadway.

Table 3.11-8. Existing Plus Project Exterior Noise Levels Along Roadways (dBA CNEL)[1]

ROADWAY	SEGMENT	CNEL AT 50 FEET (DBA)	DISTANCE TO CONTOUR (FEET)			
			70 DBA CNEL	65 DBA CNEL	60 DBA CNEL	55 DBA CNEL
Crossroads Parkway North	East of Crossroads Parkway South	66.5	29	63	135	291
Crossroads Parkway South	Crossroads Parkway North to SR-60 Ramps	66.1	27	59	127	274
	SR-60 Ramps to Puente Hills Landfill Access	67.5	34	73	157	339
	Puente Hills Landfill Access to Workman Mill Road	67.6	34	74	160	344
	Workman Mill Road to Peck Road	67.2	33	70	152	327
Peck Road	South of Workman Mill Road	73.3	83	178	383	825
	Workman Mill Road to Pellisier Place	71.7	65	140	301	649
	North of Pellisier Place	71.5	63	135	291	626
Workman Mill Road	North of Crossroads Parkway South	63.9	20	42	91	197

[1]Exterior noise levels calculated 5 feet above pad elevation, perpendicular to subject roadway

All other Project scenarios (including the Proposed Project) would create noise levels lower than the analyzed worst-case scenario (the High Build Alternative). According to the Traffic Impact Analysis (Fehr & Peers 2016), the Proposed Project would generate 351 trips less than the worst-case scenario.

A project is considered to have a significant noise impact where it causes an adopted noise standard to be exceeded for the project site or for adjacent sensitive receptors. In addition to being concerned about the absolute noise level that might occur when a new source is introduced into an area, it is also important to consider the existing noise environment. In the case of the Proposed Project, the existing noise environment includes maintenance equipment and worker vehicles associated with landfill closure activities. If the existing noise environment is quiet and the new noise source greatly increases the noise exposure, even though a criterion level might not be exceeded, some impact may occur.

Lacking adopted standards for evaluating such impacts, general considerations for community noise environments are that a change of over 5 dBA is readily noticeable when the existing noise level is less than 60 dBA and, therefore, is considered a significant impact. Increases in the ambient noise level between 3 dBA and 5 dBA are noticed when existing noise levels are between 60 dBA and 65 dBA, therefore a significant impact would occur under these conditions. Changes in community noise levels greater than 1.5 dBA are noticeable when the existing noise level is greater than 65 dBA; this would result in a significant impact. The significance of changes in cumulative noise exposure is summarized below and was applied to the Proposed Project.

Potential significant impacts would result if increases in ambient noise levels exceeded the thresholds specified below and ambient noise level exceeds the thresholds stipulated within the City's Municipal Code.

AMBIENT NOISE LEVEL WITHOUT PROJECT (LDN OR CNEL)	SIGNIFICANT IMPACT ASSUMED TO OCCUR IF THE PROJECT INCREASES AMBIENT NOISE LEVELS BY:
< 60 dBA	5.0 dBA or more
60 dBA - 65 dBA	3.0 dBA or more
> 65 dBA	1.5 dBA or more

Source: EPA 1981

Table 3.11-9 compares the Existing and the Existing Plus Project scenario and shows the change in traffic noise levels as a result of the Proposed Project. It takes a change of 3 dB or more to hear an audible difference. As demonstrated in Table 3.11-9, the Proposed Project is anticipated to change the noise by a nominal amount (approximately 0.1 to 1.0 dBA CNEL) along the analyzed roadway segments.

Table 3.11-9. Change in Existing Noise Levels Along Roadways as a Result of Project (dBA CNEL)[1]

ROADWAY	SEGMENT	CNEL AT 50 FEET DBA			
		EXISTING WITHOUT PROJECT	EXISTING PLUS PROJECT	CHANGE IN NOISE LEVEL	POTENTIAL SIGNIFICANT IMPACT
Crossroads Parkway North	East of Crossroads Parkway South	66.3	66.5	0.1	No
Crossroads Parkway South	Crossroads Parkway North to SR-60 Ramps	65.9	66.1	0.1	No
	SR-60 Ramps to Puente Hills Landfill Access	66.7	67.5	0.8	No
	Puente Hills Landfill Access to Workman Mill Road	67.1	67.6	0.5	No
	Workman Mill Road to Peck Road	66.9	67.2	0.3	No
Peck Road	South of Workman Mill Road	73.2	73.3	0.0	No
	Workman Mill Road to Pellissier Place	71.4	71.7	0.3	No
	North of Pellissier Place	71.0	71.5	0.5	No

ROADWAY	SEGMENT	CNEL AT 50 FEET DBA			
		EXISTING WITHOUT PROJECT	EXISTING PLUS PROJECT	CHANGE IN NOISE LEVEL	POTENTIAL SIGNIFICANT IMPACT
Workman Mill Road	North of Crossroads Parkway South	63.0	63.9	1.0	No

[1]Exterior noise levels calculated 5 feet above pad elevation, perpendicular to subject roadway.

The increase along the subject roadways where the level is above 65 dBA CNEL is considered not significant as an increase of 1.5 dBA or more would need to occur before the impact would be considered significant. Accordingly, traffic noise impacts would be considered less than significant.

Noise Impacts to Off-site Receptors Due to On-site Operational Noise

Sensitive receptors that may be affected by Proposed Project operational noise include the residences to the east, west, and south and the elementary schools to the east. The worst-case stationary noise was modeled utilizing the SoundPLAN model. The proposed park is anticipated to operate during daytime hours, which falls within the City's/County's daytime allowable hours of 7 A.M. to 10 P.M. for noise limits.

Seven sensitive receptors were modeled to accurately evaluate the Proposed Project's operational noise impact. The evaluated receptors represent either a property line or a sensitive receptor such as an outdoor sensitive area (e.g., backyard, etc.).

Future operational noise levels (which includes typical live concert events at the amphitheater with approximately 2,000 people) are expected to range from 21.8 to 41.6 dBA Leq at the evaluated sensitive noise receptors. Noise associated with project operations will not exceed the City's most strict exterior daytime standard of 50 dBA. Therefore, the impact would be considered less than significant.

Typical "windows closed" condition assumes a 20 dBA noise reduction from building construction techniques. The anticipated interior noise level at the nearby sensitive receptors would range between 1.8 to 21.6 dBA, which is below the most strict nighttime 40 dBA standard (based on the City's thresholds; the County's most strict nighttime standard is 45 dBA). Therefore, Proposed Project operations would be considered less than significant as it relates to interior noise.

The CNEL generated by Project operational noise at the nearest sensitive receptors would range between 45 to 55 dBA CNEL, which is consistent with criteria presented in the City's Land Use Compatibility for Community Noise Environments. The Project would be consistent with applicable General Plan standards and municipal code and impacts are considered less than significant. As demonstrated above, noise levels for Proposed Project operations would be below the strictest applicable noise standards (the City's) and therefore are consistent with the City's General Plan.

Noise Impacts to On-site Receptors

The City of Industry land use compatibility guidelines set forth noise/land use compatibility criteria for various land use types. The guidelines state that the Proposed Project would be "normally acceptable" in areas with noise levels up to 70 dBA CNEL and "conditionally acceptable" in areas with noise levels up to 75 dBA CNEL.

Based upon the ambient measurements performed at or near the project vicinity, the project site would be exposed to levels below 65 dBA CNEL, which would be consistent with the strictest (City's) compatibility matrix and General Plan for park land uses. Furthermore, as demonstrated, the Proposed Project would not expose the adjacent (noise sensitive) land uses to noise levels in excess of the City's 65 dBA CNEL "normally acceptable" guideline and the Proposed Project would be consistent with the City's compatibility matrix and General Plan guidelines. Noise impacts to on-site sensitive receptors would be less than significant.

Future Phases

Construction and operation of future phases of the Proposed Project would result in similar noise levels as Phases I and II. Therefore, implementation of future phases would result in noise-related impacts that would be less than significant.

3.11.4.2 Vibration

Threshold:	*Would the project expose persons to or generation of excessive groundborne vibration or groundborne noise levels?*

Phases I and II

Vibration levels in the project area may be influenced by construction. A vibration impact would generally be considered significant if it involves any construction-related or operations-related impacts in excess of 0.01+ PPV (inches per second [in/sec]) over the range of 1 to 100 Hz.

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Table 3.11-2 above gives approximate vibration levels for particular construction activities. These data provide a reasonable estimate for a wide range of soil conditions.

The City allows vibration from temporary construction; however, this analysis provides the potential vibration impact for quantitative purposes. The nearest existing structure to the project site is located at a distance greater than 300 feet.

As shown in Table 3.11-2, the threshold at which there may be a risk of architectural damage to normal houses with plastered walls and ceilings is 0.20 PPV in/sec. Primary

sources of vibration during construction would be bulldozers. As shown in Table 3.11-2, a large bulldozer could produce up to 0.089 PPV at 25 feet.

At a distance of 300 feet, a bulldozer would yield no vibratory impact and would be a worst-case 0.015 PPV (in/sec) which is slightly within the threshold of perception. The impact is considered less than significant.

In addition, the County of Los Angeles Municipal Code Section 12.08.560 prohibits the operation of any device that creates vibration that is above the vibration perception threshold of any individual at or beyond the property boundary of the source. As previously stated, construction equipment is anticipated to be located at least 300 feet or more from any existing sensitive receptor. Vibration impacts would be short-term and would only occur during site grading and construction activities. Temporary vibration levels associated with Project construction would be less than significant.

Future Phases

Construction of future phases of the Proposed Project would result in similar vibration levels as Phases I and II. Therefore, implementation of Future Phases would result in vibration-related impacts that would be less than significant.

3.11.5 Mitigation Measures

N-1: In addition to adherence to the City of Industry's policies found in the Safety Element and Municipal Code (the City's policies are more stringent than the County's policies) limiting the construction hours of operation, the following measures shall be applied to reduce construction noise and vibrations, emanating from the Proposed Project:

1. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

2. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

3. Equipment shall be shut off and not left to idle when not in use.

4. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

5. Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.

3.11.6 Residual Impacts After Mitigation

No residual noise impacts would occur after implementation of the above mitigation measure.

THIS PAGE INTENTIONALLY LEFT BLANK

3.12 PUBLIC SERVICES

This section describes the environmental setting for public services including existing site conditions, the impacts on public services that would result from the Proposed Project, and the mitigation measures that would reduce these impacts. The following section describes existing and planned public services, and evaluates the operation and capacity of these services with the development of the Proposed Project. Public services utilized during construction and operation of the Project would include sheriff and fire protection. Parks and recreational facilities are discussed in Section 3.13 Recreation of this Draft PEIR. The following agencies provide public services to the Project site:

PUBLIC SERVICES SERVING PUENTE HILLS LANDFILL PARK	
Fire Protection	Los Angeles County Fire Department
Law Enforcement	Los Angeles County Sheriff's Department
Landfill Maintenance	Sanitation Districts of Los Angeles County
Local Trail Maintenance	Los Angeles County Department of Parks and Recreation; Puente Hills Habitat Authority

For information regarding public utilities such as water, wastewater, solid waste, and energy utilities, please refer to Section 3.15 Utilities and Service Systems, and for public transportation and parking, please refer to Section 3.14, Transportation and Circulation.

Development of the project site with park and recreational uses would increase demand on County services, including fire protection and sheriff protection, and may cause alterations to existing Sanitation Districts maintenance practices.

The PHLMP Initial Study determined that the Proposed Project is not expected to increase population in the area because it does not propose new housing or create a substantial number of permanent jobs. Therefore, no impacts to schools, parks, or libraries are anticipated. These issues are not discussed further in this section.

3.12.1 Environmental Setting

3.12.1.1 Fire Protection and Emergency Services

The Proposed Project is located within the boundaries of the Puente Hills Landfill in unincorporated Los Angeles County with the main entry located within the City of Industry. The project site is currently served by the Los Angeles County Fire Department (LACFD). The LACFD provides fire protection services to more than four million residents in 58 cities and all unincorporated communities within the County. Fire protection for the City of Industry is provided by LACFD Battalion 12. The nearest fire station to the project site is Fire Station 87, located at 140 South Second Avenue in the City of Industry, approximately 1.8 miles northeast of the project site (LACFD 2016).

3.12.1.2 Sheriff Protection

The Los Angeles County Sheriff's Department (LASD) provides sheriff protection services to the project site. LASD serves the County of Los Angeles, an area that encompasses approximately 3,087 square miles and includes 42 contract cities and 140

unincorporated communities. LASD currently employs 18,000 employees that include 9,100 sworn officers. The Industry Sheriff Station, located at 150 North Hudson Avenue in the City of Industry, currently serves the project site. The Industry Station's jurisdiction encompasses approximately 46 square miles and a population of more than 185,174 residents (LASD 2016a).

LASD's Parks Bureau polices 177 county parks, golf courses, and special event venues throughout Los Angeles County. The Parks Bureau Headquarters are located at 2101 North Highland Avenue, Hollywood, California 90068. The Parks Bureau Whitter Narrows Substation is located approximately 1.5 miles west of the project site at 1012 North Durfee Road, South El Monte, California 91733 (LASD 2016b).

3.12.2 Regulatory Setting

3.12.2.1 Federal

No federal plans, policies, regulations, and/or laws related to public services are applicable to the Proposed Project.

3.12.2.2 State

Fire Protection and Emergency Services

California Disaster and Civil Defense Master Mutual Aid Agreement

The California Disaster and Civil Defense Master Mutual Aid Agreement is an agreement between the State of California, its various departments and agencies, and the various political subdivisions, municipal corporations, and other public agencies of the State of California. The agreement allows for the use of all of the resources and facilities of participating agencies in preventing and combating the effect of disasters such as flood, fire, earthquake pestilence, war, sabotage, and riot. It commits the participating agencies to voluntarily aid and assist each other in the event of a disaster through the interchange of services and facilities including fire, sheriff, medical and health, communication, and transportation services and facilities as necessary to provide rescue, relief, evacuation, rehabilitation, and reconstruction.

California Code of Regulations Title 24, Part 9 (California Fire Code)

The California Fire Code establishes minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety assistance to fire fighters and emergency responders during emergency operations.

3.12.2.3 Local

The majority of Proposed Project is located within the County; however, the main access to the project site is located in the City of Industry.

Los Angeles County Code

Title 32 Adopts the California Fire Code and international fire code.

Los Angeles County General Plan

The County of Los Angeles General Plan Safety Element's purpose is to reduce the potential risk of death, injuries, and economic damage resulting from natural and manmade hazards (County of Los Angeles 2015). Goals and policies for emergency response include:

Goal S4: Effective County emergency response management capabilities.

Policy S4.5: Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.

Policy S4.6: Ensure that essential public facilities are maintained during natural disasters, such as flooding.

City of Industry General Plan

The City of Industry General Plan Safety Element sets out goals and policies for emergency preparedness to preserve life and minimize damage to property. The Los Angeles County Office of Emergency Management (OEM) provides recommendations for emergency planning, coordination, operations, public education, training, and grants administration services for the City of Industry. The County OEM also prepares the Operational Area Emergency Response Plan (OAERP), which strengthens short- and long-term emergency response and recovery capability and identifies emergency procedures and emergency management routes in the County (City of Industry 2014). The following goal and policy are applicable to the Proposed Project:

Goal S5: Effective disaster mitigation, preparedness, response, and recovery.

Policy S5-1: Coordinate with and support the County OEM in preparing and implementing the OAERP.

3.12.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, implementation of the Proposed Project may result in a potentially significant impact if the Proposed Project would cause the following:

- Create capacity or service level or emergency response problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire Protection?
  - Sheriff Protection?

3.12.4 Environmental Impacts

3.12.4.1 Fire and Sheriff Protection

Threshold:	*Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire and sheriff protection?*

Phase I and II

Implementation of Phases I and II of the Proposed Project would increase the demand of fire and sheriff protection required at the project site. Currently, the majority of the project site is closed to the public. The only area that is currently accessible to the public is the Schabarum/Skyline Trail located along the southern boundary of the landfill. Phases I and II would develop access infrastructure opening up the project site to the public. Visitation level projections show an average of 32,200 park users per month (at full buildout). In addition, an estimated 25 special events would be held annually with up to 5,000 visitors in attendance at each event. The addition of park users to an area previously closed to the public would create an increase demand for fire and sheriff protection services.

Due to the urbanized setting of the Proposed Project, the LACFD (3 stations within a 5-mile radius) and LASD (1 station within a 3-mile radius) already have resources in place to provide fire and sheriff protection services for the region. The Proposed Project is not anticipated to induce population growth because it does not include housing or a substantial number of new jobs. Therefore, it is anticipated that during regular park operations the Proposed Project would not require the expansion of fire or sheriff stations in the area. However, the addition of park users to an area previously closed to the public would create an increase in the demand for sheriff protection services, which are provided by both nearby Sheriff stations and the Sheriff's Department Parks Bureau for County parks.

The LASD estimates that at full build out of the Proposed Project (32,200 visitors per month) two deputies, two security officers, and one Sergeant per shift (day and night) would be required to provide law enforcement services to the park. The Sergeant may be responsible for liaison collateral duties. The early morning shift may require additional Parks Bureau personnel depending on the phasing and construction schedule. The need for two additional patrol vehicles and office space at the park security office was also identified (LASD 2016a).

During the construction it would be necessary for Parks Bureau to provide patrol checks because often times when a new park facility is being constructed there are reports/calls regarding burglaries and/or vandalism to the facility. These staffing estimates are preliminary based on the number of anticipated visitors and may be adjusted due to deployment of patrol deputies based on seven days a week with a relief factor. A staffing assessment and safety plan will be prepared by the LASD to determine the

demand for additional sheriff personnel and support services for each phase of the Proposed Project, whereby DPR would be responsible to fund its proportionate share of financial impacts for the increased costs of public services provided by LASD, per Mitigation Measure PS-5. With the implementation of Mitigation Measure PS-5 impacts would be less than significant.

Special events can potentially result in a substantial increase in fire and sheriff protection demand. This substantial increase would result in a significant impact on fire and sheriff protection services. With implementation of Mitigation Measures PS-1, PS-2, and PS-3 impacts would be less than significant.

Future Phases

Future Phases would continue the full development of the top decks and the Flare Site. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Three easement alternatives are being evaluated. Generally, all three easements follow the eastern two-way road and differ in the alignment across the Southern Deck. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill are available for development.

As more amenities are developed, park visitation will continue to increase up to the estimated average of 32,200 park users per month at full buildout. As discussed above, the LACFD and LASD already have resources in the area providing fire and sheriff protection. The gradual increase of park visitors as new areas are developed is not anticipated to result in a significant increase in the demand for fire and sheriff protection services. Therefore, it is anticipated Future Phases of the Proposed Project would not require the expansion of fire or sheriff stations in the area However, as stated for Phase I and II the addition of park users to an area previously closed to the public would create an increase in the demand for sheriff protection services. A staffing assessment and safety plan will be prepared by the LASD to determine the demand for additional sheriff personnel and support services for each phase of the Proposed Project, whereby DPR will be responsible to fund its proportionate share of financial impacts for the increased costs of public services provided by LASD, per Mitigation Measure PS-5. With the implementation of Mitigation Measure PS-5 impacts would be less than significant.

Special events (up to 25 annually) may generate up to 5,000 visitors potentially resulting in a significant demand for fire and sheriff protection services. With implementation of Mitigation Measures PS-1, PS-2, and PS-3 impacts would be less than significant.

Completion of the Rose Hills Memorial Park access road would incrementally increase demand for both sheriff protection services and landfill maintenance. First, two to three or more funeral processions, each consisting of between approximately 20 to 60 vehicles moving at slow processional speeds, would substantially increase demand for park law enforcement and traffic management services, particularly if such events overlap with busy weekend days when more than two to three funerals may occur, or if such funerals overlap with festivals or concerts. In this case, park law enforcement will be required to manage funeral processions so as not to interfere with park uses and to protect public health and safety. Rose Hills Memorial Park access Alternatives 2 and 3 would

significantly interrupt recreational use of the Southern Deck as they would pass through the middle of an active use area potentially populated by thousands of park visitors. Such traffic would require park law enforcement managers to ensure priority is given to park uses and that public health and safety are protected. While Alternative 1 may lessen direct impacts upon active recreational use areas by routing the access road around the edge of the Southern Deck, such processions could take 15 minutes or more to wind their way along the park access road, with potential for disruptions of and blockage of traffic flows. Therefore, completion of the Rose Hills Memorial Park Access Road would substantially increase demand for park law enforcement and traffic management services, which would be considered a potentially significant impact. With implementation of Mitigation Measure PS-4, impacts would be less than significant.

Rose Hills Memorial Park would generate approximately 50 percent of the Proposed Project's traffic, or about 1,150 average daily trips. In addition, two to three or more daily funeral processions consisting of between 20 to 60 vehicles and a hearse would also utilize the access road. It is undetermined, at this point, if heavy construction or maintenance vehicles working in Rose Hills Memorial Park would be permitted to use the access road. Although under the terms of the proposed easement, Rose Hills Memorial Park is required to maintain the access road, the exact criteria for maintenance, frequency of such maintenance, and responsibility for monitoring and timely completion are not set forth in detail. Therefore, such impacts are also considered potentially significant. Implementation of Mitigation Measure PS-4 would reduce this impacts to a less than significant level.

3.12.5 Mitigation Measures

PS-1: The special event operator will coordinate with the Los Angeles County Fire Department (LACFD) in its preparation and implementation of a Fire Incident Plan describing the fire inspection and protection services to be provided by the LACFD and identifying the number of fire department personnel to be provided, including fire suppression/emergency medical service (EMS), fire prevention (fire inspectors), emergency communications, and supervisory personnel. The special event operator shall reimburse the County of Los Angeles (County) for fire inspection and protection services provided under the Fire Incident Plan, pursuant to the reimbursement agreement with the County to be entered into in connection with the special event permit.

The Fire Incident Plan will also identify fire suppression equipment, supplies and other services to be provided by the special event operator during future festivals, including the number of fire suppression mobile carts. The number of fire suppression mobile carts required will be determined by the LACFD based on the site plan for future special events.

PS-2: Prior to the commencement of each special event, the special event operator will prepare and submit a Private Security Plan for review and approval by the Los Angeles County Sheriff's Department (LASD) describing all private security services to be provided and paid for by the special event operator. The Private Security Plan will identify the number

of private security personnel to be provided and how these resources will be deployed and supervised.

PS-3: The special event operator will coordinate with the Los Angeles County Sheriff's Department (LASD) in its preparation and implementation of an Operations Plan establishing the sheriff protection services to be provided by the County of Los Angeles to supplement the private security being provided by the special event operator. The special event operator will reimburse the County for sheriff protection services provided under the Operations Plan, pursuant to the reimbursement agreement with the County to be entered into in connection with the special event permit.

PS-4: Prior to the construction and use of the park access road by Rose Hills Memorial Park, the County, the Sanitation Districts of Los Angeles County, and Rose Hills Memorial Park will enter into a tri-party agreement (as more fully described under Mitigation Measure T-1) which will include a means for Rose Hills Memorial Park to fund in perpetuity its proportionate share of financial impacts of the increased costs for public services provided by the LASD Park Bureau, and DPR to ensure protection of public safety, ease of public access to the Park, and minimal interference with park uses.

PS-5: A staffing assessment and safety plan will be prepared by the LASD to determine the demand for additional sheriff personnel and support services for each phase of the Proposed Project, whereby DPR will be responsible to fund its proportionate share of financial impacts for the increased costs of public services provided by LASD. The staffing assessment and safety plan shall be reevaluated at the commencement of each project phase.

3.12.6 Residual Impacts after Mitigation

Any residual impacts to public services would be less than significant.

THIS PAGE INTENTIONALLY LEFT BLANK

3.13 RECREATION

This section describes the environmental and regulatory setting for recreation, including applicable plans, policies, regulations, and/or laws, recreation impacts at the project and program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

The Puente Hills Landfill Park Master Plan Initial Study determined that the Proposed Project would promote open space connectivity with the surrounding natural areas of the Puente Hills. While the Initial Study identified a beneficial impact, substantial comments were received from the public regarding habitat and open space connectivity. This is discussed further below as well as in Section 3.4, Biological Resources.

3.13.1 Environmental Setting

3.13.1.1 Puente Hills Landfill

The Proposed Project would be located at the closed Puente Hills Landfill. The only existing recreational facility within the landfill boundary is an approximately two-mile-long segment of the Schabarum-Skyline Trail located along the southern boundary of the landfill. The Schabarum-Skyline Trail is an approximately 30-mile-long connector trail located through open spaces and flood control channels connecting communities from Covina to Whittier. The trail allows recreational users and commuters to connect to a variety of other trails in the area, such as those in the Peter F. Schabarum Regional Park and Puente Hills Nature Preserve, as well as the San Gabriel and Rio Hondo River Trails. Within the landfill, the trail is generally an eight- to 20-foot-wide natural and paved surface trail with an elevation gain of approximately 950 feet from Workman Mill Road to Nike Hill, which contains a small picnic area; two water troughs provide water to support equestrian use of the trail.

3.13.1.2 Recreational Facilities in Project Vicinity

Regional parks typically have a minimum service radius of 25 miles. A 25-mile radius around the Puente Hills Landfill encompasses portions of the counties of Los Angeles, San Bernardino, Orange, and Riverside. Within this 25-mile radius from the landfill there are 1,328 parks. Table 3.13-1 summarizes the type of parks found within the 25-mile radius from the landfill.

Table 3.13-1. Recreational Facilities within 25 miles of the Project Site

TYPE OF PARK	COUNT
Local Park	1,311
National Park or Forest	5
Regional Park	17
State Park or Forest	7
Total	1,340

Source: ESRI Street Map 2015

Table 3.13-2 summarizes regional parks within 25 miles of the project site. Regional parks are defined as parks over 100 acres with at least three types of active amenities (Los Angeles County 2016c).

Table 3.13-2. Regional Parks within 25 miles of the Project Site

NAME	SIZE (ACRES)	MANAGING JURISDICTION
Whittier Narrows Recreation Area	1,492	Los Angeles County
Santa Fe Dam Recreation Area	836	Los Angeles County
Peter F. Schabarum Regional County Park	575	Los Angeles County
Ernest Debs Regional Park	282	City of Los Angeles
Frank G Bonelli Regional Park	1,975	Los Angeles County
Prado Regional Park	2,000	San Bernardino County
Cucamonga-Guasti Regional Park	150	San Bernardino County
Harriett Wieder Regional Park (planned)	106	Orange County
Talbert Regional Park	180	Orange County
Mile Square Regional Park	607	Orange County
Limestone Canyon Nature Preserve	5,500	Orange County
Irvine Regional Park	475	Orange County
Santiago Oaks Regional Park	1,269	Orange County
Yorba Regional Park	140	Orange County
Featherly Regional Park	795	Orange County
Ralph B Clark Regional Park	104	Orange County
Ted Craig Regional Park	124	Orange County

Out of the 17 regional parks within 25 miles of the project site, four are under the jurisdiction of the Los Angeles County Department of Parks and Recreation (DPR), one is under the jurisdiction of the City of Los Angeles, two are under the jurisdiction of San Bernardino County, and the remainder are under the jurisdiction of Orange County. DPR recently completed a countywide comprehensive parks and recreation needs assessment (Los Angeles County 2016c), which identified where parks are most needed based on five metrics: 1) the acres of park per 1,000 people; 2) park access; 3) park pressure, or how much park land is available to residents in the area around the park; 4) available park amenities; and 5) condition of park amenities and infrastructure. This analysis was conducted for both local and regional parks. In general, park pressure countywide is high at the County's regional parks, as they offer fewer than 3.3 acres of regional parkland per 1,000 people. Within the regional parks, the majority of amenities are in fair condition (42.8 percent), with 33.7 percent in poor condition and 23.5 percent in good condition. Park infrastructure condition is nearly evenly divided between poor condition (47.7 percent) and fair condition (47.1 percent) with only 5.2 percent in good condition. The evaluation showed a range of park need within 25 miles of the study area from very high to low. Areas north of the project site generally have higher identified park need. Areas south of the project site generally have low to moderate park need.

Areas to the east generally have a low to moderate park need, and areas to the west, have a low to very high park need (Los Angeles County 2016c).

Recreation facilities in the immediate vicinity of the landfill include the Habitat Authority Preserve; Whittier Narrows Recreation Area; Duck Farm Park; San Gabriel River Bicycle Path; Rio Hondo Bicycle Path; Santa Fe Dam Recreation Area; and Peck Road Water Conservation Park. These facilities are described below.

Habitat Authority Preserve

The Puente Hills Landfill Native Habitat Preservation Authority (Habitat Authority) manages a preserve in the Puente Hills, which provide passive recreational opportunities. The Habitat Authority's lands (Habitat Authority Preserve) consist of approximately 3,860 acres of undeveloped land located within the cities of Whittier and La Habra Heights and the unincorporated areas of Hacienda Heights and Rowland Heights, stretching from Harbor Boulevard in the east to the intersection of I-605 and SR-60 in the west. An approximately 225-acre portion of the Habitat Authority Preserve is located south of the Southern Deck. Habitat Authority lands in close proximity or adjacent to the project site include Sycamore Canyon, Hellman Park, Turnbull Canyon, and the Hacienda Hills.

The Habitat Authority Preserve contains a comprehensive road and trail network created by the historical uses of the area. Trails within the Habitat Authority Preserve are connected to the Schabarum-Skyline Trail which is also connected to the landfill. The unofficial roads and trails within the Habitat Authority Preserve are often used by the public for recreational purposes. The mission of the Habitat Authority is to manage open spaces for the preservation of the land in perpetuity with the primary purpose to protect the biological diversity of the area. Given the primary intent of the Habitat Authority (protection of habitat and resources), trails and public access are secondary to their mission. However, the Habitat Authority has committed to offering access and recreational opportunities to the public. The challenge for the Habitat Authority is to ensure that public access and recreational use are consistent with habitat protection. As such, the Habitat Authority implements a Trail Plan that focuses on the following:

- Prioritizing resource protection;
- Relocating or decommissioning trails if impacts on native habitat or other resources are discovered;
- Locating new trails away from sensitive habitat areas;
- Eliminating duplication of trails;
- Reconstructing existing trails rather than rerouting the trail to minimize ground disturbance;
- Providing diverse and interesting trail experiences to minimize unauthorized trail use;
- Using best management practices in the design, construction, and maintenance of trails; and
- Formulating seasonal trail guidelines including possible rotation of access points to protect sensitive species from significant adverse user impacts during nesting season or other sensitive periods (RMP 2007).

Whittier Narrows Recreation Area

The Whittier Narrows Recreation Area is a 1,492-acre park located in the City of South El Monte but operated by County of Los Angeles DPR. The park offers a wide range of amenities including a bicycle motocross track, a community garden, multi-use trails, an equestrian center, multi-purpose athletic fields, pedal boats, picnic areas, tennis courts, American Military Museum, bicycle trails, children's play area, disc golf course, dog sports park, three lakes with boating and fishing, and archery, rifle, trap and skeet shooting ranges. The park also includes the 400-acre Whittier Narrows Nature Center, a riparian woodland that features four lakes including many plants and animals native to wetland communities. In addition, 260 acres of the park is devoted to a 27-hole golf course which includes a driving range, practice greens, banquet facility, and a restaurant (County of Los Angeles 2016a).

Santa Fe Dam Recreation Area

The Santa Fe Dam Recreation Area is an 836-acre park operated by County of Los Angeles DPR. The park includes a 70-acre lake that provides a range of recreational activities including sailing, swimming, fishing, biking, hiking, picnicking, and camping. A 400-acre nature area is located north of the lake. Additionally, the San Gabriel River Bike Trail runs through the park (County of Los Angeles 2016b). The Santa Fe Dam Recreation Area is located approximately seven miles northeast of the landfill.

San Gabriel River Bicycle Path

The San Gabriel River Bicycle Path, also known as the San Gabriel River Trail, runs 30.2 miles along the San Gabriel River, from San Gabriel Canyon Road in the City of Azusa to El Dorado Park in the City of Long Beach (County of Los Angeles 2012). The San Gabriel River Bicycle Path is located approximately one mile northwest of the landfill.

Rio Hondo Bicycle Path

The Rio Hondo Bicycle Path runs 17.5 miles along the Rio Hondo. The northernmost part of the path begins at Peck Road Water Conservation Park in the City of Azusa and ends at Imperial Highway in the City of South Gate, where it connects to the Los Angeles River Bicycle Path (County of Los Angeles 2012). The Rio Hondo Bicycle Path is located approximately three miles west of the landfill.

Duck Farm Park

The Duck Farm Park is located within the Avocado Heights and Bassett communities of unincorporated Los Angeles County. The Duck Farm Park is a 37.5-acre park that includes a 14-acre riparian corridor, 4-acre native plant nursery, 2-acre wildflower meadow, 1-acre pocket park, visitor center, amphitheater/outdoor classroom, neighborhood park, river edge promenade, community garden, 1.5-acre demonstration wetland and freshwater marsh, equestrian facility, 250-space parking lot, and a 0.4 mile Americans with Disabilities Act accessible meandering interior trail (WCA 2007). Duck Farm Park is located approximately two miles north of the landfill.

Peck Road Water Conservation Park

The Peck Road Water Conservation Park is a five-acre neighborhood park operated by County of Los Angeles DPR. The five-acre park opens onto 210 acres of recreation and habitat areas for fishing, bird watching, walking, bike riding, jogging, picnicking and outdoor educational activities (County of Los Angeles 2013b). Peck Road Water Conservation Park is located approximately five miles north of the landfill.

3.13.1.3 Population

A 25-mile radius service area of the project site encompasses primary the County of Los Angeles along with small portions of Orange County, San Bernardino County, and Riverside County. Withers & Sandgren has prepared a report reviewing the demographics of the population within the 25-mile radius service area to better understand the community the Proposed Project would serve (W&S 2015). More than ten million residents live within a 25-mile radius of the project site, representing a community of high racial diversity, with the largest ethnic group being Hispanic and more than 27 percent of the residents being 19 years or under in age. Tables 3.13-3 through 5 summarize demographic information for the community within a 1-mile, 5-mile, and 25-mile service area of the Proposed Project.

Table 3.13-3. Population within 25 miles of the Project Site

	1 mile	5 miles	25 miles
Population	4,653	489,864	10,126,607

Source: W&S 2015

Table 3.13-4. Race & Origin of Population within 25 miles of the Project Site

RACE & ORIGIN	1 MILE 4,653		5 MILES 489,864		25 MILES 10,126,607	
White	848	18%	44,364	9%	2,574,321	25%
Black	60	1%	4,110	1%	736,059	7%
American Indian	5	<1%	18,678	<1%	18,678	<1%
Asian	515	11%	90,737	19%	1,599,708	16%
Pacific Islander	0	0%	771	<1%	28,542	<1%
Other race	6	<1%	558	<1%	23,066	<1%
Two or more races	251	<1%	3,733	1%	194,128	2%
Hispanic	3,192	69%	344,666	70%	4,952,101	49%

Source: W&S 2015

Table 3.13-5. Population Age Breakdown within 25 miles of the Project Site

POPULATION	1 MILE 4,653		5 MILES 489,864		25 MILES 10,126,607	
9 & under	531	11%	65,296	13%	1,321,031	13%
10 to 19	684	15%	72,773	15%	1,439,930	14%
20 to 29	543	12%	74,013	15%	1,591,799	16%
30 to 39	689	15%	68,451	14%	1,466,086	14%
40 to 49	615	13%	68,172	14%	1,450,351	14%
50 to 59	652	14%	58,965	12%	1,259,552	12%
60 to 69	526	11%	42,009	9%	823,025	8%
70 & over	410	9%	40,180	8%	774,829	8%

Source: W&S 2015

California's population growth is expected to continue at a rate of approximately 11 percent. This high rate is expected to continue into 2020 which will mean greater population densities and urbanization. Most of California's growth has been in its major metropolitan areas, such as Los Angeles. The Inland Empire is the second fastest growing region, after the Sierra foothills, with Riverside County growing 26 percent and San Bernardino County growing almost 17 percent in the 2000s (W&S 2015).

Growth in the Hispanic community is a trend that is being seen countywide and in particular the areas within the 25-mile service radius of the project site. The population within one mile of the project site is 69 percent Hispanic, 18 percent White, and 11 percent Asian. The population within five miles of the project site is very similar, with 70 percent Hispanic, 9 percent White, and 19 percent Asian. The age profile in the 1-, 5- and 25-mile service radius is relatively even across all ages with no one or two age groups dominating. Unemployment within the 1-, 5- and 25-mile service radius is also relatively even and out of the 64 percent labor force there is a 7 percent unemployment rate, significantly less than the County of Los Angeles average of 11 percent (W&S 2015).

As described above, the Proposed Project is in an area that is growing more dense and diverse. Meeting the needs of these communities must take into account multigenerational, multicultural communities. Parks must be accessible, and must include amenities such as larger picnic areas for multigenerational family gatherings, multilingual programming, and easy accessibility. Parks must provide programming for users from small children to senior citizens (W&S 2015).

3.13.2 Regulatory Setting

3.13.2.1 Federal

No federal plans, policies, regulations, and/or laws related to recreation are applicable to the Proposed Project.

3.13.2.2 State

Quimby Act (California Government Code §66477)

The Quimby Act authorizes cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act was created to ensure adequate open space acreages as development occurs. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities.

California Recreational Trails Plan

The California Department of Parks and Recreation (CADPR) manages more than 3,000 miles of trails. The Recreational Trails Plan Phase 1 (2002) identifies 12 trail-related goals and lists general action guidelines designed to reach those goals. These 12 goals and their action guidelines will direct the future actions of the CADPR Statewide Trails Office regarding trail programs both within the State Parks System and in its wider, statewide and national roles.

3.13.2.3 Local

Los Angeles County General Plan

The County of Los Angeles General Plan includes a Conservation and Natural Resources Element (Chapter 9) and a Parks and Recreation Element (Chapter 10) (County of Los Angeles 2015). The Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. Goals from this element that are applicable to the Proposed Project include:

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County.

Goal C/NR 2: Effective collaboration in open space resource preservation.

The Parks and Recreation Element provides policy direction for the maintenance and expansion of the County's parks and recreation system. Goals from this element that are applicable to the Proposed Project include:

Goal P/R 1: Enhanced active and passive park and recreation opportunities for all users.

Goal P/R 2: Enhanced multi-agency collaboration to leverage resources.

Goal P/R 3: Acquisition and development of additional parkland.

Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.

Goal P/R 5: Protection of historical and natural resources on County park properties.

Goal P/R 6: A sustainable parks and recreation system.

County of Los Angeles Bicycle Master Plan

The County of Los Angeles Bicycle Master Plan (Bicycle Master Plan) is intended to guide the development and maintenance of a comprehensive bicycle network and set of programs throughout the unincorporated communities of the County of Los Angeles for 20 years (2012 to 2032). The Bicycle Master Plan is a sub-element of the Transportation Element of the County General Plan. The Bicycle Master Plan provides direction for improving mobility of bicyclists and encouraging more bicycle ridership within the County by expanding the existing bikeways network, connecting gaps, addressing constrained areas, providing for greater local and regional connectivity, and encouraging more residents to bicycle more often. The Bicycle Master Plan proposes to build on the existing 144 miles of bikeways throughout the County, and install approximately 831 miles of new bikeways over a 20-year period starting in 2012. Along with the proposed bikeway network, the Bicycle Master Plan outlines a range of recommendations to facilitate accomplishing the regional goals of increasing the number of people who bike and the frequency of bicycle trips for all purposes (County of Los Angeles 2012).

County of Los Angeles Trails Manual

The County of Los Angeles Trails Manual (Trails Manual) was developed by DPR. The purpose of the Trails Manual is to provide guidance to County departments that interface with trail planning, design, development, and maintenance of hiking, equestrian, and mountain biking recreational trails, while addressing physical and social constraints and opportunities associated with the diverse topographic and social conditions that occur in the unincorporated territory of the County. It is the policy of DPR that all trails in the County are multi-use (hiking, mountain biking, equestrian). The Trails Manual does not provide guidelines for safety, volunteer programs, education programs, and trail etiquette. The Trails Manual is intended as a procedural document (County of Los Angeles 2011).

Los Angeles County Development Code Park Requirements

The Los Angeles County Code, Title 21, Sections 21.24.340 and 21.28.140 require developers of residential subdivisions to provide park space or to pay a fee in lieu of the provision of park land. Amounts of park land and fees vary by location in the County.

3.13.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have significant effect on the recreation environment if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment.
- Interfere with regional open space connectivity.

- Be inconsistent with the goals of the County Open Space and Conservation Element and/or Parks and Recreation Element.
- Cause incompatibilities with existing or planned recreational uses.

3.13.4 Environmental Impacts

Threshold:	*Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

Phases I and II

The Proposed Project would not result in the increase of the region's population because it does not include housing or would result in the creation of a significant number of permanent jobs. Therefore, no direct increase in the use of existing neighborhood and regional parks or other recreational facilities would occur.

However, the Proposed Project would develop a regional park which may indirectly result in an increase of recreational users on existing recreational facilities adjacent to and near in the project area.

Existing recreational facilities adjacent to the project site include the Schabarum-Skyline Trail and various trails within the Habitat Authority Preserve area. The Proposed Project would connect to the existing Schabarum-Skyline Trail. Connecting to this regional trail would potentially result in park users leaving the proposed park via this trail connection and travelling west towards the Whittier Narrows Recreation Area or south towards the Habitat Authority Preserve Area on existing multi-use trails.

However, the Proposed Project was designed to be a destination park with a wide range of amenities, including stair climbs, trail lift, zip lines, and bike skills areas, to meet the diverse needs of park users. The proposed park would itself become the destination for park users. Therefore, it is anticipated that the majority of park users that visit the park would remain within the park boundaries. Impacts would be less than significant.

Future Phases

Future phases of the Proposed Project would continue the recreational use of the site. At full build out, the Puente Hills Landfill Park would provide recreational opportunities in its service area based on the projected population trends. Impacts to existing neighborhood and regional parks or other recreational facilities from Future Phases are expected to be similar as those described above for the Phases I and II. However, due to the lack of project-specific details for projects to be developed under Future Phases, impacts to existing recreational facilities would be assessed during the additional environmental review of each future project.

Threshold:	*Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment?*

Phases I and II

The Proposed Project is the development of a regional park. The physical effect on the environment from the Proposed Project is discussed in the other sections of this Draft Program EIR. With implementation of mitigation measures as described in those sections, adverse physical effects on the environment would be less than significant.

Future Phases

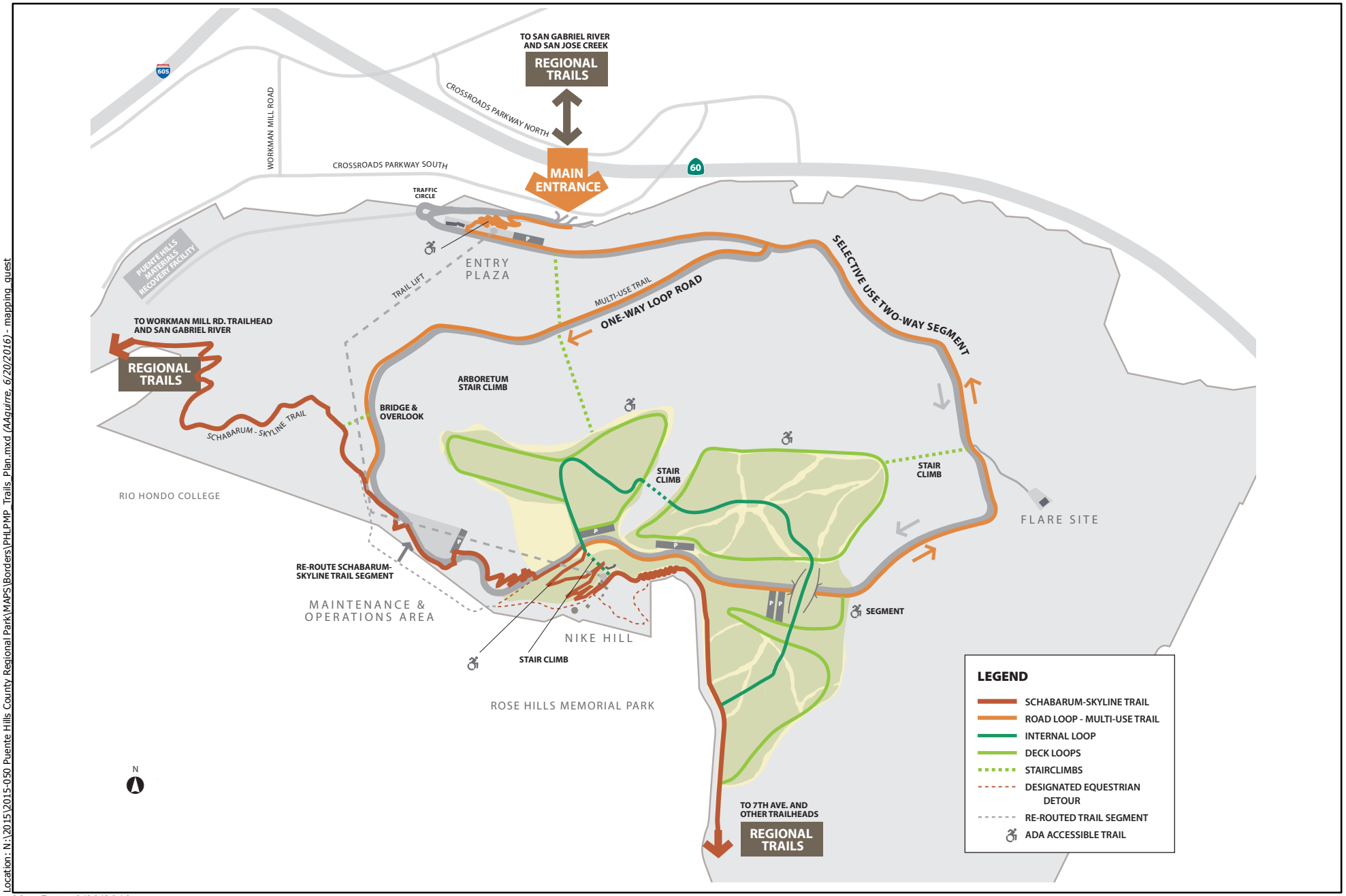
Future phases of the Proposed Project would continue the recreational use of the site. Due to the lack of project-specific details for projects to be developed under Future Phases, additional environmental review of projects would be completed to assess physical effects on the environment.

Threshold: Would the project interfere with regional open space connectivity?

Phases I and II

The site is bordered by native hillsides and canyons managed by the Puente Hills Habitat Authority to the south, the Rose Hills Memorial Park and Mortuaries to the southwest, and Rio Hondo College to the west. Other surrounding land uses include office and light industrial uses to the west and north and residential and preserve properties to the east. Open space areas of regional significance near the site are the 225 acres within the landfill boundary currently managed by the Habitat Authority as a preserve area, which include numerous multi-purpose trails. Schabarum-Skyline Trail is a nearly 30-mile multipurpose trail that begins in Covina and ends in Whittier. The trail connects to a variety of other trails in the area, such as those in the Peter F. Schabarum Regional Park and the Habitat Authority Preserve, as well as the San Gabriel and Rio Hondo river trails. The Schabarum-Skyline trail adjoins the site connecting east to west over the former landfill. In addition to providing recreational benefits, the Habitat Authority preserve area also provides open space that provides valuable connections for biological resources in this urban area. Connectivity for wildlife movement is discussed in more detail in Section 3.4, Biological Resources.

During Phase I, a portion of the Schabarum-Skyline Trail would be relocated off of adjacent property and onto the Nike Hill buttress site. The trail, a section of the park loop road, and an ADA-accessible switchback trail leading to the Nike Hill scenic overloop would all be located in this fill area. From this trail, park users could access Schabarum-Skyline Trail, and from there, other open spaces and trails in the region (Figure 3.13-1). Phases I and II also include improvements in the existing trailhead at Workman Mill Road, installation of new wayfinding signage, and landscaping. Phases I and II of the Proposed Project would improve regional open space connectivity, and would result in a beneficial impact.



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Trails_Plan.mxd (AAguirre, 6/20/2016) - mapping_guest

Map Date: 6/20/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.13-1 Trails Plan

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Future Phases

Although the connection to the Schabarum-Skyline Trail would occur in Phase I, future phases would continue the improvements to this trail, including trailhead design, signage, and wayfinding. Internal park trails would be connected to the regional trail improvements as segments are completed. A beneficial impact would occur to regional open space connectivity.

Threshold:	*Would the project be inconsistent with the goals of the County Open Space and Conservation Element and/or Parks and Recreation Element?*

The County of Los Angeles General Plan includes a Conservation and Natural Resources Element (Chapter 9) and a Parks and Recreation Element (Chapter 10) (County of Los Angeles 2015). The Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. Goals from this element that are applicable to the Proposed Project include:

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County.

Goal C/NR 2: Effective collaboration in open space resource preservation.

The Parks and Recreation Element provides policy direction for the maintenance and expansion of the County's parks and recreation system. Goals from this element that are applicable to the Proposed Project include:

Goal P/R 1: Enhanced active and passive park and recreation opportunities for all users.

Goal P/R 2: Enhanced multi-agency collaboration to leverage resources.

Goal P/R 3: Acquisition and development of additional parkland.

Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.

Goal P/R 5: Protection of historical and natural resources on County park properties.

Goal P/R 6: A sustainable parks and recreation system.

Phases I and II

The Proposed Project has been designed to meet the goals of both the Conservation and Natural Resources Element and the Parks and Recreation Element, and would result in a beneficial impact. As described in Section 2.5, Park Master Plan and Public Engagement Process, the Master Plan process included coordination among multiple agencies, policy experts, communities, and local and regional stakeholders. The Proposed Project would convert approximately 142 acres within a 1,365-acre former landfill into a regional park, implementing the requirements of a 1983 Conditional Use Permit and a 1987 Joint Powers Agreement between the Sanitation Districts and DPR, which identified the

ultimate use of the landfill site upon closure as a recreational use. More recently, the Los Angeles County General Plan Conservation and Natural Resources Element identifies this site as Recommended Open Space. The Proposed Park would be a mix of active and passive recreational amenities, and was designed to experience the site's natural, aesthetic, recreational, cultural, and historical resources.

The Project would meet the diverse needs of Los Angeles County and would provide enhanced active and passive park and recreation activities for all users. The 25-mile service radius of the Proposed Project includes two of the fastest growing regions in the state: the Los Angeles metropolitan area and the Inland Empire. The park would be located in an area of historically underserved minority populations. The population within five miles of the proposed park is 70 percent Hispanic, 19 percent Asian, and 9 percent white. The age profile is fairly even surrounding the park, with no one or two age groups dominating. The Proposed Project has been planned for recreational activities that support all age groups equally from young children to seniors (Withers & Sandgren 2015).

Future Phases

Future phases of the Proposed Project would continue to be compatible with the County General Plan, and a beneficial impact would occur. Additional park amenities would be constructed as landfill fill settlement slows. As population grows in the region, residents would be able to take advantage of these additional active and passive recreational opportunities.

Threshold:	*Would the project cause incompatibilities with existing or planned recreational uses?*

Phases I and II

Phases I and II of the proposed project would include trail connections to the existing Schabarum-Skyline Trail, an existing multi-use trail that is managed by DPR. This trail connects with other multi-use trails in the Habitat Authority Preserve. The trail would be relocated onto the landfill property, and improved with wayfinding and other signage. Internal park trails would connect with the Schabarum-Skyline Trail at Nike Hill. As discussed above, the Proposed Project would be compatible with existing recreational uses, enhance regional open space connectivity, and result in a beneficial impact.

Future Phases

Rose Hills Memorial Park has an agreement with the Sanitation Districts for a future roadway easement through the landfill property to access their site. The exact alignment of the easement was not identified in the agreement, but is subject to the master planning process for the future park. Three easement options aligned along the eastern portion of the park loop road were identified during the planning process and are shown on Figure 2-8. All three alternatives would conflict with the future recreational uses of the park after the road is constructed and used to access the cemetery, particularly during funerals. It is estimated that funeral processions of 20 to 60 vehicles may use the proposed access road that runs through the Proposed Project. Per the traffic study,

there would be approximately 11 interments per day at Rose Hills Memorial Park, some of which would use the proposed roadway easement. Conflicts on the portion of the loop access road to the Southern Deck would be the same for all three easement alignment alternatives. Conflicts with park visitor traffic, landfill maintenance vehicles, and emergency vehicles are discussed in Section 3.14, Transportation. These impacts would be less than significant with Mitigation Measures T-1 through T-6.

After reaching the Southern Deck, access Alternatives 2 and 3 would cross active park areas, which include a loop trail, a picnic area, the native plant nursery, and the equestrian staging area. Use of the roads on Alternatives 2 and 3 would represent an incompatible use, particularly during heavy use times such as funeral processions. Incompatibilities would include safety issues related to vehicle use near active and passive recreation areas that would be in use by park visitors. During funeral processions, it would be difficult to cross the proposed road easement, restricting access in a north-south direction on the Southern Deck. Mitigation Measures T-1 through T-6 would reduce impacts from incompatible uses to the extent possible, but impacts would remain significant even after mitigation.

Alternative 1 would be located south of the Southern Deck avoiding the park amenities that would be developed on the Southern Deck. The road would be separated from visitor use and could be screened and divided from active park areas with landscaping or hardscape. With implementation of Mitigation Measures T-1 through T-6, impacts would be less than significant.

3.13.5 Mitigation Measures

Impacts from future phases would be less than significant with Mitigation Measures T-1 through T-6. All other impacts would be beneficial or less than significant and no mitigation measures are required.

3.13.6 Residual Impacts After Mitigation

Impacts would be less than significant.

THIS PAGE INTENTIONALLY LEFT BLANK

3.14 TRANSPORTATION AND CIRCULATION

This section of the PEIR assesses the potential impacts associated with project-generated traffic on existing and future volumes of the surrounding street system. In addition, potential internal circulation impacts are discussed including emergency access. This section also describes the existing environmental and regulatory settings with regard to transportation, as well as identifies mitigation measures to reduce traffic impacts. A transportation analysis report was completed for the Proposed Project (Fehr & Peers 2016). The technical report is provided in Appendix H and summarized below.

The Puente Hills Landfill Park Master Plan Initial Study determined that there are no airports in the vicinity of the project site. Furthermore, the Proposed Project does not propose structures that would require changes to air traffic patterns due to height. These issues are not discussed further in this section.

3.14.1 Environmental Setting

3.14.1.1 Study Area

The study area selected for the traffic analysis extends from the San Gabriel River to the northwest, Rose Hills Road to the south, Peck Road to the east, and Crossroads Parkway North to the west. The streets in the study area are under the jurisdiction of the City of Industry and Los Angeles County. Freeways and freeway ramps in the study area are under the jurisdiction of the California Department of Transportation (Caltrans). In addition, the site's internal roadway network was reviewed to identify its general configuration, including site access, general road widths, and conditions.

3.14.1.2 Existing Street System

Major arterials serving the study area include Crossroads Parkway South, Crossroads Parkway North, Workman Mill Road, and Peck Road. Regional access to and from the study area is provided by I-605 and SR-60. The characteristics of analyzed streets serving the study area are listed below. The street descriptions include the existing designation under the current City of Industry General Plan (City of Industry 2014b).

Freeways

- **Interstate 605 (I-605, San Gabriel River Freeway)** is a north/south freeway that extends north from I-405 in Long Beach to I-210 in Duarte. Near the project site, this freeway is eight lanes wide and has a full interchange at Peck Road.
- **State Route 60 (SR-60, Pomona Freeway)** is an east/west freeway that extends between Los Angeles and Riverside Counties. Near the project site, this freeway is eight lanes wide and has full interchanges at Crossroads Parkway and Peck Road.

East/West Streets

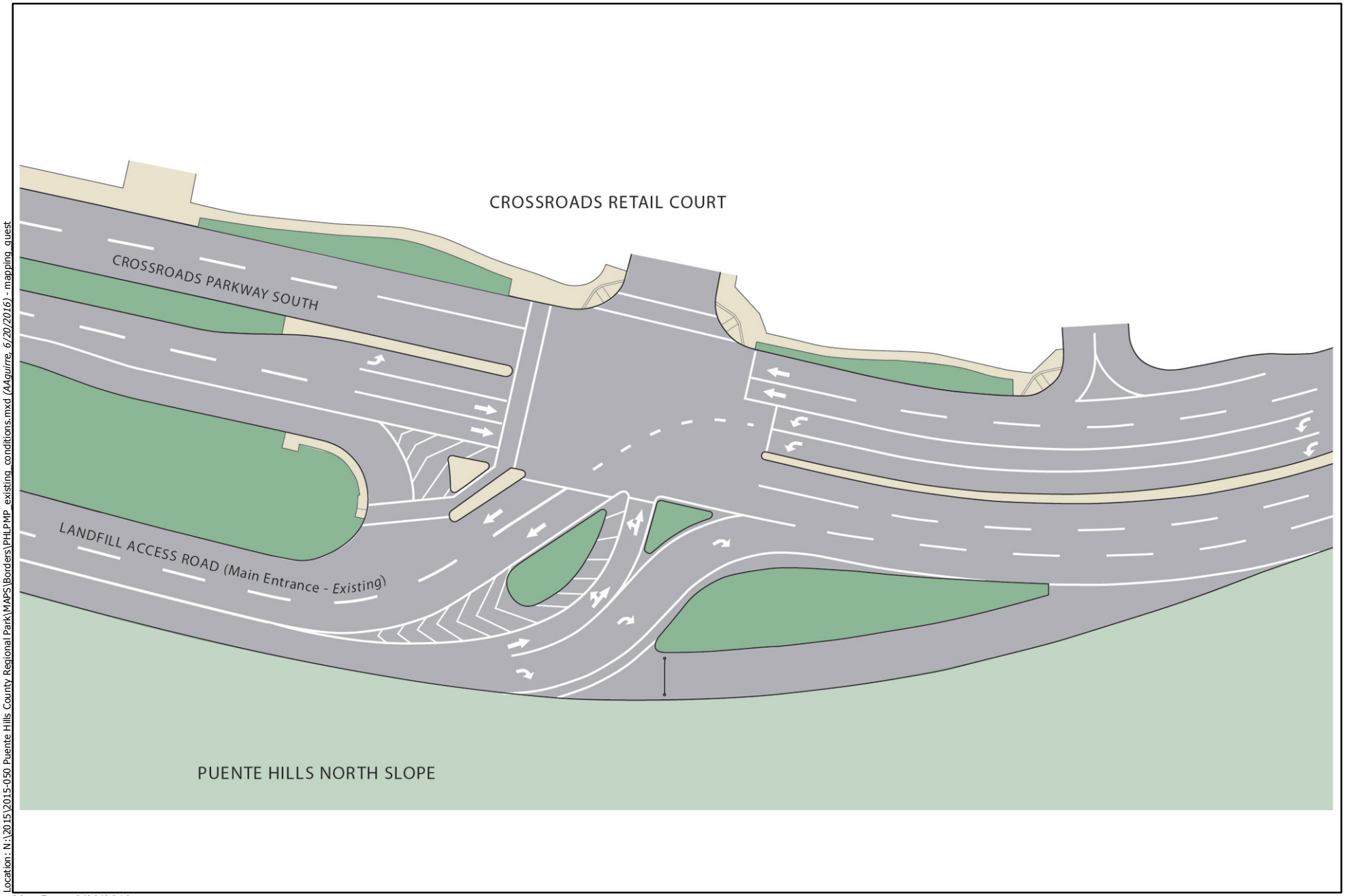
- **Crossroads Parkway South** is generally an east/west minor arterial roadway in the study area that runs north of the project site between Workman Mill Road and Crossroads Parkway North. Crossroads Parkway South connects with the entrance to

the landfill access road, which provides access to the project site and the existing Puente Hills Materials Recovery Facility (MRF). At the project site entrance, Crossroads Parkway South is a four lane divided road, with a posted speed limit of 35 miles per hour (mph). No bike paths are present on Crossroads Parkway South and sidewalks are present only on the north side of the road, adjacent to an existing shopping center.

The project site entrance at Crossroads Parkway South consists of two inbound and one outbound lane on the project site leg, which supports two free right turn merger lanes (one gated) onto eastbound Crossroads Parkway South, which enter a new third lane which turns into an onramp on SR-60 approximately 600 feet east of this project site entrance. Crossroads Parkway South supports a single eastbound free right turn lane into the project site, as well as dual westbound left turn lanes. A crosswalk is present on the western leg of this intersection which connects a sidewalk along the north side of the project site entrance road with the shopping center across the street. Figure 3.14-1 shows the existing landfill entrance.

- **Crossroads Parkway North** is an east/west minor arterial roadway in the study area that runs north of the project site. Crossroads Parkway North provides four travel lanes (two in each direction) with left-turn pockets and center medians throughout the entire corridor. Westbound interchanges for SR-60 are located on the eastern edge of Crossroads Parkway North.
- **Workman Mill Road** is an arterial roadway in the study area that generally runs northeast and southwest of the project site. Between Crossroads Parkway North and Pellissier Place, Workman Mill Road runs east/west, then shifts to the north/south direction between Pellissier Place and Crossroads Parkway South. At the intersection of Workman Mill Road and Crossroads Parkway South, the roadway turns in a southeast direction. Within the study area, Workman Mill Road provides four travels (two lanes in each direction) with center turn lanes throughout the majority of the corridor.

  Three secondary project site access driveways exist off of Workman Mill Road, located adjacent to the MRF, approximately 4,000 to 6,000 feet west of the existing landfill access driveway. These driveways consists of two driveways on either side of the MRF building, each with two outbound and two inbound lanes, both of which are currently gated and closed to general access. The driveway east of the MRF building is directly linked to the primary site access road and was formerly used for site access. The driveway west of the MRF building provides access to the Puente Hills Gas-to-Energy Facility. A third two lane driveway is located at the far west end of the site.



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_existing_conditions.mxd (AAguirre, 6/20/2016) - mapping_guest

Map Date: 6/20/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.14-1 Existing Conditions
Puente Hills Landfill Entrance & Crossroads Parkway South
2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

- **Pellissier Place** is a minor arterial roadway in the study area that runs northwest of the project site. Pellissier Place provides four lanes of travel (two in each direction) with center turn lanes throughout the corridor between Workman Mill Road and Peck Road. Northbound interchanges for the I-605 freeway are located along Pellissier Place east of Peck Road.

North/South Streets

- **Peck Road** is a north/south arterial roadway in the study area that runs west of the project site. Peck Road provides four lanes of travel between Workman Mill Road and Pellissier Place and passes under the Union Pacific Railroad line. Crossing over the Interstate-605 freeway via an overpass bridge, Peck Road narrows to two lanes (one lane in each direction) between Pellissier Road and Rooks Road. Within the study area, right-turn and left-turn pockets are provided at all intersections along Peck Road.

Transit Lines

There are four bus transit lines in the vicinity of the project site. These routes are operated by the Los Angeles County Metropolitan Transportation Authority (Metro), Norwalk Transit, and Foothill Transit.

- **Metro Line 270** provides local service between the cities of Norwalk and Monrovia through Santa Fe Springs, Whittier, South El Monte, El Monte, Irwindale, and Los Angeles. This line runs west of the project site along Workman Mill Road. Line 270 operates Monday through Sunday and has an average headway of 30 to 60 minutes during the weekday AM and PM peak periods and an average headway of 60 minutes on weekends.
- **Metro Line 577** provides local service between the cities of Long Beach and El Monte through Cerritos, Norwalk, Downey, Pico Rivera, and Los Angeles. This line runs west of the project site along Workman Mill Road. Line 577 operates Monday through Friday and has an average headway of 45 minutes during the weekday AM and PM peak periods.
- **Norwalk Transit Line 1** is a north/south line that provides service between Norwalk and the City of Industry through Santa Fe Springs, Whittier, and Los Angeles County. This line runs west and north of the project site along Workman Mill Road and Crossroads Parkway South. Line 1 operates Monday through Sunday and has an average headway of 30 minutes during the weekday AM and PM peak periods and an average headway of 45 minutes on weekends.
- **Foothill Transit Line 274** is generally a north/south line that provides service between Whittier to Baldwin Park through the City of Industry and West Covina. This line runs north of the project area along Workman Mill Road and Crossroads Parkway South. Line 274 operates Monday through Sunday and has an average headway of 60 minutes during all hours of operation.

3.14.1.3 Internal Site Circulation System

Existing Landfill Roads

The trunk roads within landfill property are generally paved and typically provide three travel lanes (two uphill and one downhill) with posted speed limits of either 15 or 25 mph. Pavement widths vary from approximately 30 to 40 feet. Some portions of these roads are heavily damaged in fill locations due to the amount of settlement. Landfill gas collection pipes are located adjacent to this paved road and adjacent to other paved and unpaved roads across the project site. Unpaved portions of the existing internal roadway network are located in an area of the upper decks where clean fill dirt continues to be accepted. In addition, many smaller paved and unpaved bench roads branch off the trunk roads to provide maintenance access throughout the entire landfill site where methane gas collection systems and other utilities are located. The presence of these above-ground pipelines limits the ability to widen the existing roadway network within the site (Fehr & Peers 2016).

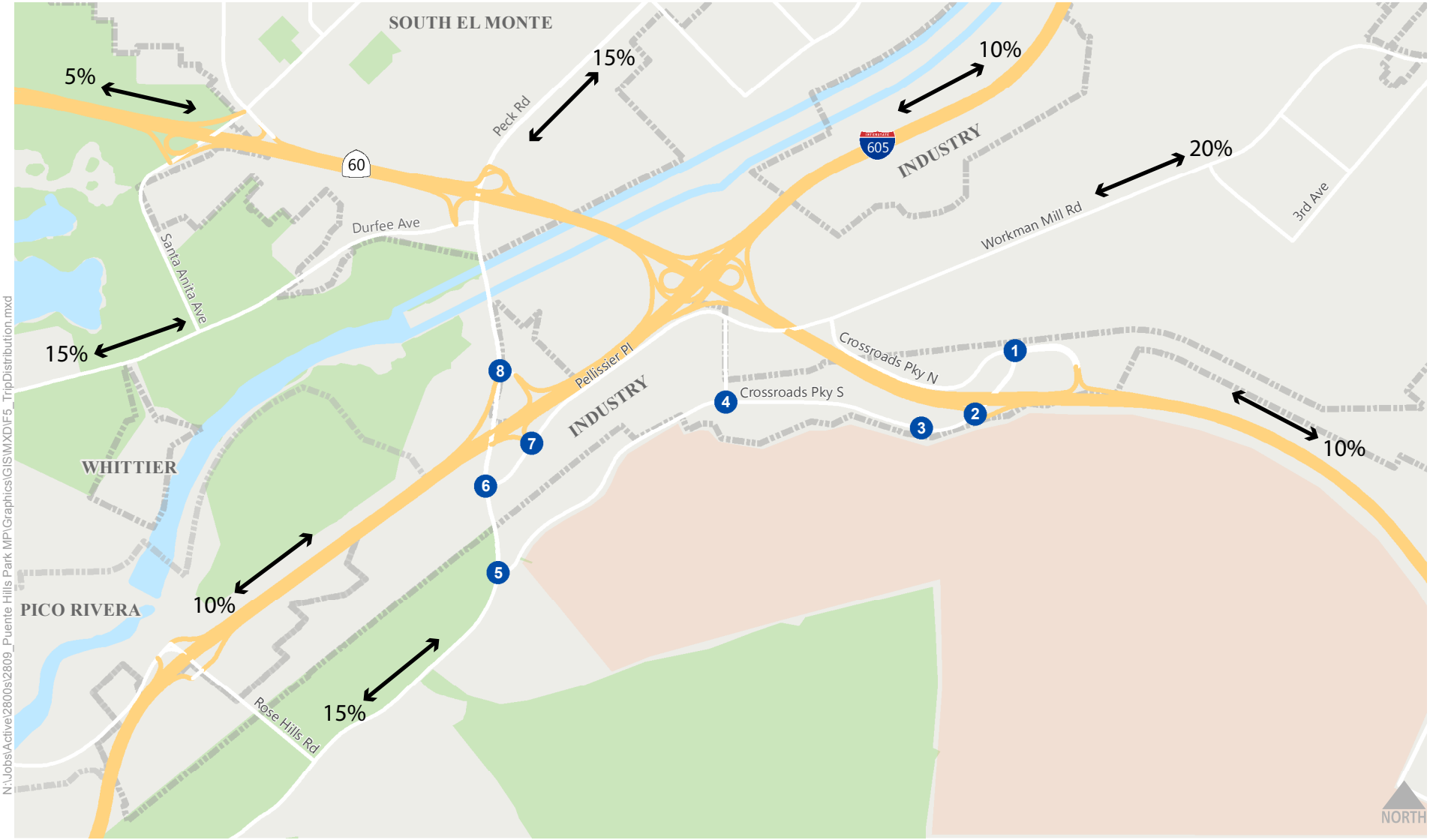
Existing Maintenance and Operations Yard and Road

The existing Maintenance and Operations Yard is currently being utilized by the Sanitation Districts for the construction of a buttressing fill to stabilize the western hillside of Nike Hill. The roads present in this area are mostly dirt, with one road which will be kept open only for Sanitation Districts' vehicles accessing the northern face of the Western Deck (PACE 2016).

3.14.1.4 Study Analysis Locations

The traffic study analyzed eight intersections as listed below and illustrated in Figure 3.14-2. These locations were identified in coordination with Los Angeles County with input from the surrounding cities. Table 3.14-1 indicates which jurisdictions control each intersection.

1) Crossroads Parkway North & Crossroads Parkway South
2) Crossroads Parkway South & SR-60 Eastbound Ramps
3) Crossroads Parkway South & Puente Hills Landfill Access
4) Workman Mill Road & Crossroads Parkway South
5) Peck Road & Workman Mill Road
6) Peck Road & Pellissier Place
7) I-605 Northbound Ramps & Pellissier Place
8) Peck Road & Rooks Road



Project Site

Study Intersections

Location: N:\Jobs\Active\2800s\2809_Puente Hills Park MP\Graphics\GIS\MXD\F5_TripDistribution.mxd

Map Date: 6/20/2016
Source: Fehr & Peers 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.14-2 Study Intersections and Trip Distribution

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Table 3.14-1. Jurisdiction of Analyzed Intersections

ID	N/S STREET NAME	E/W STREET NAME	CONTROL TYPE	JURISDICTION
1	Crossroads Parkway South	Crossroads Parkway North	Signalized	Industry
2	Crossroads Parkway South	SR 60 Eastbound Ramps	Signalized	Industry & Caltrans
3	Puente Hills Landfill Access	Crossroads Parkway South	Signalized	Industry & LA County
4	Workman Mill Road	Crossroads Parkway South	Signalized	Industry
5	Peck Road	Workman Mill Road	Signalized	LA County
6	Peck Road	Pellisier Place	Signalized	Industry
7	I-605 Northbound Ramps	Pellisier Place	Signalized	Industry & Caltrans
8	Peck Road	Rooks Road	Signalized	Industry, LA County, & Caltrans

3.14.1.5 Existing Traffic Volumes and Level of Service

This section describes the methodology used to assess the traffic conditions and analyzes the resulting operating conditions, indicating volume-to-capacity (V/C) ratios and levels of service (LOS).

Existing Traffic Volumes

Weekday morning and evening peak hour traffic counts were collected at the eight study intersections in January 2016. Existing weekday morning and evening peak hour traffic counts were collected between 7:00 and 9:00 AM and between 4:00 and 6:00 PM. The highest 1-hour volumes at each intersection were selected as the AM and PM peak hour volumes and used in this study.

Level of Service Methodology

LOS is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. Level of service definitions for signalized intersections are provided in Table 3.14-2.

Per the requirements of Los Angeles County and the City of Industry, the Intersection Capacity Utilization (ICU) methodology was used to determine the intersection V/C ratio and corresponding LOS for the study intersections. The ICU method of intersection capacity analysis determines the intersection V/C ratio and corresponding LOS for the turning movements and intersection characteristics at signalized intersections. “Capacity” represents the maximum volume of vehicles in the critical lanes that have a reasonable expectation of passing through an intersection in one hour under prevailing

roadway and traffic conditions. The ICU ratios used in the traffic study were calculated by dividing critical traffic movement volumes at an intersection by the capacity per number of lanes for the movement.

Table 3.14-2. ICU Level of Service Definitions for Signalized Intersections

LEVEL OF SERVICE	INTERSECTION CAPACITY UTILIZATION	DEFINITION
A	0.000-0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901-1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Existing Levels of Service

Existing year traffic volumes were analyzed using the ICU methodology described above to determine the existing operating conditions at the eight signalized study intersections. Table 3.14-3 summarizes the results of the ICU analysis of the existing weekday morning and afternoon peak hour V/C ratio or average delay and corresponding LOS at each of the analyzed signalized intersections. As indicated, all analyzed signalized intersections operate at LOS D or better during both peak hours.

Table 3.14-3. Existing Conditions Intersection Level of Service Analysis

ID	N/S STREET NAME	E/W STREET NAME	ANALYZED PERIODS	EXISTING 2016	
				V/C	LOS
1	Crossroads Parkway South	Crossroads Parkway North	AM	0.673	B
			PM	0.599	A
2	Crossroads Parkway South	SR 60 Eastbound Ramps	AM	0.359	A
			PM	0.387	A
3	Puente Hills Landfill Access	Crossroads Parkway South	AM	0.309	A
			PM	0.290	A
4	Workman Mill Road	Crossroads Parkway South	AM	0.394	A
			PM	0.390	A
5	Peck Road	Workman Mill Road	AM	0.568	A
			PM	0.533	A
6	Peck Road	Pellissier Place	AM	0.839	D
			PM	0.659	B
7	I-605 Northbound Ramps	Pellissier Place	AM	0.774	C
			PM	0.603	B
8	Peck Road	Rooks Road	AM	0.648	B
			PM	0.736	C

3.14.1.6 Existing Bicycle and Pedestrian Facilities

Bicycle Facilities

There are no bicycle facilities on roads bordering the project site. There is a Class I Bicycle Path in the study area north of the project site. The bicycle path is situated between Workman Mill Road and 7th Avenue and extends approximately two miles. Although the bicycle path is currently not connected to nearby regional and local bicycle facilities, various planning documents, including the Gateway Cities Council of Governments (GCCOG) Active Transportation Plan, have proposed potential improvement plans that may enhance regional and local bicycle connections to this area.

Pedestrian Facilities

A developed network of pedestrian facilities exists around the project area, though sidewalks are not present on both sides of each street. Crossroads Parkway South near the project site does not have a sidewalk on the south side of the street, though a sidewalk is present on the north side. The intersection of the landfill access road and Crossroads Parkway South, where the primary access point to the park would be located, is signalized and includes a pedestrian crossing on the west leg that is connected to a continuous sidewalk (approximately five feet wide) on the opposite (north) side of Crossroads Parkway South. Approximately 1,700 feet west of the landfill

access road, adjacent to existing office buildings, there is a sidewalk on the south side of Crossroads Parkway South (Fehr & Peers 2016).

3.14.2 Traffic Study Methodology

3.14.2.1 Traffic Scenarios

The traffic study analyzed the potential project-generated traffic impacts on the local street system for existing and future year traffic conditions with and without the addition of project traffic. It is anticipated that a portion of the Proposed Project would become operational in 2019, with full development of the planned facilities occurring by 2035. Due to the unique nature of the site, development of some portions is expected to continue beyond this 20-year horizon. The following traffic scenarios were developed and analyzed as part of the traffic study:

- Existing (2016) Conditions – The analysis of existing traffic conditions is intended to provide a basis for the traffic study. The existing conditions analysis includes a description of the transportation system serving the project site, existing traffic volumes, and an assessment of the operating conditions at the analyzed locations in the project vicinity.
- Existing (2016) plus Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of project-generated traffic. The direct impacts of the Proposed Project on existing traffic operating conditions were then identified.
- Cumulative Build-Out Year (2035) without Project – Build-out year traffic projections without the Proposed Project were developed for the year 2035. The objective of this analysis was to project future traffic growth and operating conditions that could be expected to result from regional growth and related development projects in the vicinity of the project site by the year 2035.
- Cumulative Build-Out Year (2035) with Project – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under future conditions with the addition of project-generated traffic. The project-related contributions to cumulative impacts under future traffic operating conditions were then identified.

Assessment of internal circulation impacts and those associated with Rose Hills Memorial Park traffic were more programmatic in nature as these involve review of future traffic operations on an internal road system which has not yet been constructed and which does not involve quantified LOS analysis. This analysis includes review of future roadway design characteristics and park uses and potential impacts that could arise on park roads and operations from the opening of the proposed Rose Hills Memorial Park easement in the future.

3.14.2.2 Traffic Projections

Project Traffic

The development of trip generation estimates for the Proposed Project followed a 3-step process: trip generation, trip distribution, and traffic assignment.

Project Trip Generation

Trip generation rates for Regional Park (developed) from the (*Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (San Diego Association of Governments 2002) were used to estimate weekday morning (AM) and evening (PM) peak hour trips generated by the Proposed Project. The Proposed Project is expected to generate approximately 94 trips during the weekday AM peak hour and 187 trips during the PM peak hour. Daily trip generation is estimated at 2,340 on a typical weekday at full buildout in 2035. These estimates formed the basis of the traffic impact analysis and represent conditions on a typical weekday. The Proposed Project would allow for performance and other special events during daylight hours. These would range in size and would likely be held primarily on holidays and weekend days when background traffic is lower and when opportunities to arrange for off-site parking are greater. Special events are estimated to involve up to 5,000 attendees, in addition to ongoing park attendance, and could be held on up to 25 days annually. While such special event traffic would occur during non peak weekend hours on external roads, it would represent peak traffic conditions on internal park access roads.

Attendance data was obtained from Schabarum Regional Park and Santa Fe Dam Recreation Area, both of which are operated by the County of Los Angeles Department of Parks and Recreation (DPR). These regional parks have 575 and 836 acres of developed space, respectively. While both are larger than the proposed Puente Hills Landfill Park, their location is close to the project site (seven and 11 miles away, respectively) and the fact that they are also regularly used parks in the County system supports their use for comparison purposes. Weekday attendance during typical months was reviewed and found to be lower than the estimates described above. Because the proposed park is not yet in operation, the more conservative estimates were used in the traffic study (Fehr & Peers 2016).

Project Traffic Distribution

The geographic distribution of the traffic generated by the Proposed Project depends on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which potential patrons of the proposed development are drawn, and the location of the project in relation to the surrounding street system. The general distribution pattern used in the traffic study is illustrated in Figure 3.14-2.

Project Traffic Assignment

All vehicular traffic for the Proposed Project would enter and exit the project site via the entrance located along Crossroads Parkway South.

Existing plus Project Traffic Conditions

Project-generated traffic was added to the existing traffic volumes to develop the Existing plus Project morning and evening peak hour traffic volumes.

Future Traffic Conditions

To evaluate the potential impacts of the Proposed Project on the local street system, it was necessary to develop estimates of future traffic conditions both with and without the project for Cumulative (2035) conditions. First, estimates of traffic growth were developed for the study area to forecast future conditions without the project, representing cumulative base conditions. The cumulative base traffic projections reflect growth in traffic from two primary sources: traffic generated by specific projects in, or in the vicinity of, the study area (cumulative projects), and background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area. These factors are described below.

Cumulative Projects Trip Generation

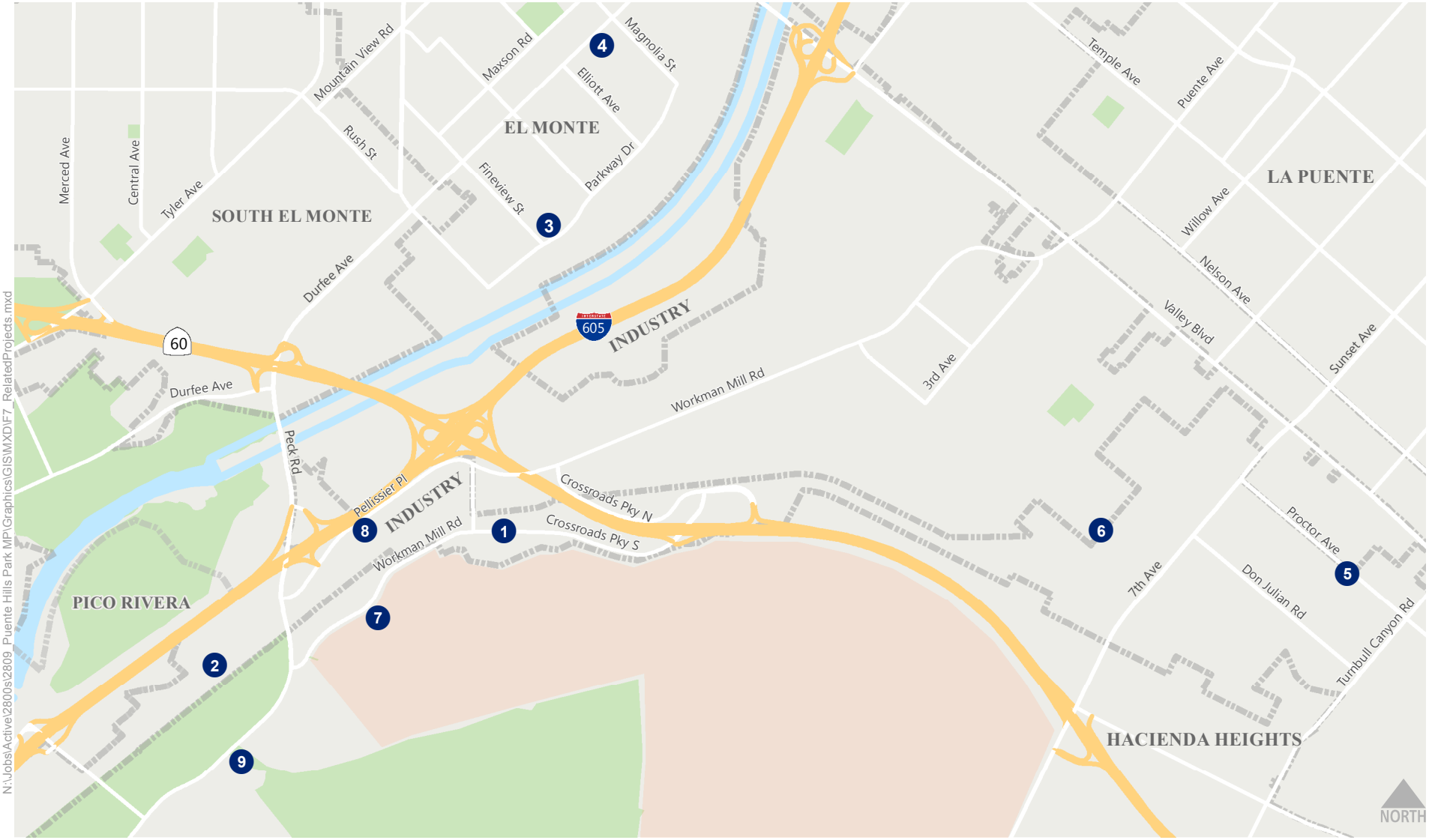
Cumulative Base traffic forecasts include the effects of specific projects, called related projects, expected to be implemented in the vicinity of the project site prior to the build-out date of the Proposed Project. Information on related projects in this area was obtained from Los Angeles County and the cities of Industry, Whittier, and El Monte. A total of nine cumulative projects were identified in the study area, which are listed in Table 3.14-4 and illustrated in Figure 3.14-3. Trip generation estimates for the related projects were calculated using a combination of previous study findings and trip generation rates contained in *Trip Generation, 9th Edition* (Institute of Transportation Engineers [ITE] 2012).

Table 3.14-4. Cumulative Projects Trip Generation Estimates

NO.	ADDRESS	CITY	ITE CODE	DESCRIPTION	SIZE	UNITS	AM IN	AM OUT	AM TOTAL	PM IN	PM OUT	PM TOTAL	ADT TOTAL
1	12851 Crossroads Parkway South	City of Industry	710	Office building	77.25	ksf	106	14	121	20	96	115	852
2	3718 Capitol Avenue	City of Industry	150	Warehouse	36.666	ksf	9	2	11	3	9	12	131
3	2231 Parkway Drive	El Monte	210	9 Unit Subdivision	9	du	2	5	7	6	3	9	86
4	2728 Durfee Avenue	El Monte	710	1,625 sf office building with a showroom	1.625	ksf	2	1	3	1	2	3	18
5	1330 9th Avenue	La Puente	560	Church sanctuary and bell tower	22.248	ksf	8	5	12	6	6	12	203
6	635 S 6th Avenue	La Puente	947	Truck wash facility	4	wash stalls	1	1	2	1	1	2	20
7	2808 Workman Mill Road	Whittier	n/a	Puente Hills Materials Recovery Facility (MRF) [1]	1,540	tpd	44	9	53	12	40	52	445
8	2500-2520 Pellissier Place	City of Industry	n/a	PH Intermodal Transfer Facility (employees) [2]	17.2	acres	18	10	28	10	18	28	56
				PH Intermodal Transfer Facility (waste hauling trucks) [2]			34	34	68	34	34	68	728
9	3888 Workman Mill Road	Whittier	n/a	Rose Hills Memorial Park - Existing [3]	1,224	acres	77	32	109	83	176	259	2,990
				Rose Hills Memorial Park - Expansion Area [3]	176	acres	11	4	15	12	25	37	429
				Rose Hills Memorial Park - with Incremental Growth [3]	1,400	acres	88	36	124	95	201	296	3,419

[1] Puente Hills MRF is currently in operation. Estimated increase in trips is based on a 35% increase in trip-making, as the daily tonnage received on the date of the baseline traffic counts was 65% of its permitted capacity. [2] Puente Hills Intermodal Facility Traffic Impact Analysis, Chapter 5 (IBI Group, June 19, 2007). [3] Total acreage of Rose Hills Memorial Park found at www.rosehills.com. Initial Study for Expansion of Cemetery Uses, CUP No. 89432, Los Angeles County Department of Regional Planning, September 1989.

THIS PAGE INTENTIONALLY LEFT BLANK



Location: N:\Jobs\Active\2800s\2809_Puente Hills Park MP\Graphics\GIS\MXD\F7_RelatedProjects.mxd
Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Related_Projects.mxd (AAguirre, 6/20/2016) - mapping_guest

Map Date: 5/20/2016
Source: Fehr & Peers 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.14-3 Related Project Locations

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Rose Hills Memorial Park

Rose Hills Memorial Park encompasses approximately 1,400 acres of land adjacent to the Puente Hills Landfill, sharing a common border along the eastern canyons of the Proposed Project. Contained within the total 1,400 acres is the planned development and expansion of 176 acres that is assumed to be completed by the Proposed Project's opening year (2019). Resulting from CUP 92-250 (4) (August 1994), a Setback and Easement Agreement (Agreement) was established between the Sanitation Districts and Rose Hills Memorial Park that provides for a future roadway easement for funeral processions and related traffic through a landfill access roadway. Per the Agreement, Rose Hills would utilize landfill roadways to gain a second point of access that could occur with or without development of the proposed regional park. However, such access is not currently in place, the exact access route is uncertain, and the timing of construction, allowable use, and management of traffic and access between Rose Hills Memorial Park and the existing closed landfill and the planned regional park have yet to be determined.

Trip generation rates found in the ITE *Trip Generation 9th Edition* handbook provide very limited information on trip generation characteristics of cemetery land uses and are not appropriate to use in the estimation of traffic occurring at the project site. ITE's trip generation for this particular land use (in terms of total acreage) is informed by only five studies (a very small and limited sample size) and the average size of the cemeteries in these studies is 108 acres; at 1,400 acres, Rose Hills is nearly 13 times larger.

As an alternative approach, results of a traffic study conducted for the *Forest Lawn Memorial Park – Hollywood Hills Master Plan* (Crain & Associates 2011) was used to inform trip generation estimates for Rose Hills Memorial Park. In terms of land size, Forest Lawn covers approximately 444 acres and is about one-third the size of Rose Hills. Although Forest Lawn Memorial Park is substantially smaller in acreage, the size of both cemeteries in terms of the total number of interment sites is fairly similar. At full build-out (2050), Forest Lawn Memorial Park is estimated to have approximately 319,000 interment sites. The traffic study provides a range of average daily interments over the course of 13 years and found an average of 11.3 interments per day. Under existing conditions, Rose Hills Memorial Park is estimated to have approximately 280,000 interments. By 2035 with full build-out of the 176-acre expansion area, it is anticipated that the total number of interment sites will increase. Based on a review of Rose Hills Memorial Park funeral operations and based on the estimated number of interment sites at both cemeteries, it is assumed that although Forest Lawn Memorial Park is smaller in acreage, Rose Hills will host a similar number of daily interments.

To estimate Forest Lawn's existing trip generation, traffic counts were taken over several days, resulting in 2,990 daily trips per day, 109 AM peak hour trips, and 259 PM peak hour trips. To estimate the Proposed Project's increase in trip generation over the 40-year build-out period, a growth rate of one percent per each 5-year period was applied to the project (8 percent total). Trip generation under future conditions for the Forest Lawn project was estimated to be 3,229 trips per day, 118 AM trips, and 280 PM trips.

Applying the same methodology used for Forest Lawn Memorial Park, under existing conditions with operations occurring over approximately 1,224 acres of developed land, Rose Hills Memorial Park is estimated to generate a total of 2,990 daily trips, 109 (77 inbound, 32 outbound) trips in the morning peak hour, and 259 (83 inbound, 176 outbound) trips in the evening peak hour. Development of the 176-acre expansion area is anticipated to increase the number of trips generated by Rose Hills by approximately 15 percent. At full build-out, including incremental growth, Rose Hills Memorial Park is estimated to generate 3,419 daily trips, 124 (88 inbound, 36 outbound) morning peak hour trips and 296 (95 inbound, 201 outbound) evening peak hour trips (Fehr & Peers 2016).

A special aspect of memorial operations would be the occurrence of funeral processions. Such processions typically involve mourners gathering at an offsite chapel for services and then proceeding to Rose Hills Memorial Park for services. Although no limits have been established, a primary purpose of the future Rose Hills Memorial Park easement across the proposed regional park is to accommodate such funeral processions. Based on one partial day of field observations, such typical funeral processions could range in size from 20 to 60 cars and include police motorcade escorts traveling at an average speed of 10 to 15 mph.

Los Angeles County Sanitation Districts' Facilities

The Sanitation Districts has existing and planned operations on the project site associated with the closure and post-closure monitoring and maintenance of the Puente Hills Landfill and the continued operation of other facilities within the landfill site. These facilities include the MRF, the Puente Hills Intermodal Facility (PHIMF), the Sanitation Districts' Puente Hills Field Office, and the landfill's gas management facilities.

Federal and State regulations under Title 40 CFR Part 264 require the Sanitation Districts to manage and regularly monitor, inspect, maintain, and repair the landfill's extensive environmental control systems, including the landfill's final cover, surface water drainage system, landscape and irrigation, groundwater quality protection system, landfill gas recovery system, and fire control measures for a minimum of 30 years from its closure date. With the closure of the Puente Hills Landfill in October 2013, post-closure operations currently exist at the project site and are included in the existing baseline traffic counts conducted in January 2016. It is anticipated that over time, these trips will gradually decline as landfill closure operations are completed by the year 2043; however, with full development of the Proposed Project extending into and beyond the year 2035, Sanitation Districts would maintain post-closure operations at the project site and on lands adjacent to the site in support of operations at the MRF and PHIMF.

Puente Hills Materials Recovery Facility

Conditional Use Permit (CUP) No. 92251 for the construction and operation of the MRF was approved in 1999. The MRF began operation in July 2005 to provide waste diversion and transfer capacity for Los Angeles County. The facility is designed to separate and recover recyclable materials (a minimum of 15 percent) from municipal solid waste delivered to the facility and, prior to the closure of Puente Hills Landfill in 2013, transfer up to 3,400 tons of waste per day to either the adjacent landfill or to an off-site landfill for disposal. Under future conditions and with the completion of the PHIMF, residuals

will be transferred to the adjacent waste-to-rail facility where they will be transported to an out-of-county landfill. In support of its operations, the MRF employs a maximum of 200 employees during one shift.

Under the CUP, the MRF is subject to specified conditions of approval to minimize the project's impacts on the local transportation system and to ensure that no undue negative impacts are imposed on nearby properties. Condition 8 of the CUP (approved prior to the landfill's closure) imposed a series of restrictions for day-to-day operations of the materials recovery facility. To mitigate impacts from the concurrent operation of the MRF and the Puente Hills Landfill (at their maximum permitted capacity of 17,600 tons of refuse per day), Condition 8I of the CUP restricted MRF operations during peak traffic hours between 6:00 and 9:00 AM and between 4:00 and 7:00 PM, limiting waste processing operations to 18 hours per day plus employee arrival and departure.

Before the final closure of Puente Hills Landfill (October 2013), the original CUP was modified in January 2013 in response to curtailing landfill operations, including significant reductions in total tonnage of incoming waste to the project site. Without conflicting peak hour operations between the MRF and Puente Hills Landfill, Condition 8I of the original CUP was no longer necessary and under the amended CUP, peak hour operation restrictions were lifted. Inbound and outbound shipments of commodities, residuals, and waste to the MRF over public roadways is allowed to occur 24 hours a day, six days a week (the facility is closed on Sundays) and allows employee arrival and departure during peak traffic hours to accommodate the facility's 24 hours per day operation.

Condition 8B of the CUP limits throughput received and processed to 24,000 tons per week, or 4,400 tons per day (TPD) and must not exceed a maximum weekly average of 4,000 TPD of waste. MRF operation at the maximum capacity of 4,400 TDP of waste was estimated to generate a total of 1,272 daily trips, 151 (125 inbound, 26 outbound) morning peak hour trips, and 148 (35 inbound, 114 outbound) evening peak hour trips. According to the Sanitation Districts, the MRF processed approximately 3,253 tons of waste with 628 loads of waste received at the time the existing baseline traffic data was collected in January 2016. It is anticipated that by full build-out of the Proposed Project, the MRF will handle its full capacity of 4,400 TPD of waste. To capture the effect of the additional transfer of 1,147 TPD of waste, future trips generated by the MRF are included in the cumulative analysis.

Puente Hills Intermodal Facility

Waste recovery and transfer operations at the MRF will be supported by the PHIMF Waste-by-Rail system. The PHIMF would facilitate the loading and unloading of rail-ready shipping containers containing residual waste between rail cars and trucks for shipment to remote landfills for disposal. The PHIMF would have the capacity of handling up to two waste-by-rail trains per day or approximately 8,000 TPD of waste, operating at 24 hours per day and seven days per week.

Trip generation studies of the PHIMF were estimated for employees and waste hauler trucks. Assuming the PHIMF will operate at full capacity, or 8,000 TPD of waste by the Proposed Project's build-out year (2035), the facility is estimated to generate a total of

56 daily trips, 28 (18 inbound, 10 outbound) morning peak hour trips, and 28 (10 inbound, 18 outbound) evening peak hour trips by employees and a total of 728 daily trips, 68 (34 inbound, 34 outbound) morning peak hour trips, and 68 (34 inbound, 34 outbound) evening peak hour trips by waste hauler trucks. In the Proposed Project's opening year (2019), it is assumed that the PHIMF will operate at 50 percent of its maximum capacity, or 4,000 TPD of waste and will operate at full capacity by 2035 (Fehr & Peers 2016).

Landfill Monitoring and Maintenance Activities

The Sanitation Districts field office will remain in operation for post-closure maintenance, inspections, monitoring, and operation of the methane gas collection system. This will require the shared use of the park's internal roadway system and park space. As is currently the case, these trips would at times require use of heavy trucks to transport specialized equipment as well as light-duty trucks and autos. Together, these uses are expected to generate approximately 130 additional AM peak hour trips (70 inbound, 60 outbound) and 90 additional PM peak hour trips (40 inbound, 50 outbound) over the lower portion of the park access roadway system, which represents approximately two trips per minute.

Cumulative Projects Trip Assignment

The geographic distribution of the traffic generated by the related projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which employees and potential patrons of proposed commercial developments may be drawn, the locations of employment and commercial centers to which residents of residential projects may be drawn, and the location of the projects in relation to the surrounding street system. Using the estimated trip generation and trip distribution patterns described above, traffic generated by the related projects was assigned to the street network. For related projects with available traffic impact studies, distribution assignment patterns from those studies were used to guide the assignment of related projects in the traffic study.

Background or Ambient Growth

Consistent with the long-term projected growth trend shown in the City of Industry General Plan EIR, the traffic study applied a growth factor of 0.5 percent per year through 2035. This is intended to reflect the effect of regional growth and development through the year 2035, and equates to an increase of 10 percent over existing traffic volumes. Because the Los Angeles County Department of Public Works does not require that an ambient growth factor be included in the analysis of future conditions, the three study intersections that are partly or wholly controlled by the County were analyzed in two ways: with and without the ambient growth factor.

Cumulative Base Traffic Volumes

Per the County's methodology, ambient growth was omitted from the intersections partly or wholly under the County's jurisdiction. The Cumulative Base year 2035 traffic conditions represent an estimate of future conditions without the Proposed Project.

Cumulative plus Project Traffic Projections

The estimated trips generated to and from the Proposed Project shown were added to the year 2035 Cumulative Base traffic projections, resulting in Cumulative plus Project morning and evening peak hour traffic volumes. The Cumulative plus Project scenario presents future traffic conditions with the completion of the proposed Project with and without ambient growth.

3.14.3 Regulatory Setting

3.14.3.1 Federal

No Federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the Proposed Project.

3.14.3.2 State

The California Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's state highway system, including rail and mass transit. Caltrans' mission is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability (Caltrans 2016b). Federal highway regulations in California are implemented by Caltrans.

The project area includes two highways that fall under Caltrans' jurisdiction: I-605 and SR-60.

3.14.3.3 Local

Los Angeles County Metropolitan Transportation Authority Congestion Management Program

The Los Angeles County Metropolitan Transportation Authority (Metro) is responsible for implementing the State mandated Congestion Management Program (CMP). The Metro Board adopted the CMP for Los Angeles County on October 28, 2010. The 2010 CMP comprehensively ties the transportation, land use, and air quality decisions for one of the most complex urban areas in the country by addressing the impact of local growth on the regional transportation system (Los Angeles County 2015; Metro 2016).

The analysis for the Proposed Project was conducted in accordance with the transportation impact analysis (TIA) procedures outlined in 2010 CMP. The CMP requires that, when an EIR is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use these facilities. In addition, analysis of State highway facilities was conducted to determine the potential project impacts at ramp intersections.

The CMP TIA guidelines indicate that if a proposed development project would add 150 or more trips in either direction during either the morning or evening peak hours to the mainline freeway monitoring location, then a CMP freeway analysis must be conducted. If a proposed project would add 50 or more peak hour trips (during the peak hour of

adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted (Fehr & Peers 2016).

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) Regional Council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy RTP/SCS on April 7, 2016. The RTP is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP integrates land use and transportation planning so that the region can grow smartly and sustainably (SCAG 2016). Major initiatives of the RTP applicable to the Proposed Project include:

- Expanding the regional transit system to give people more alternatives to driving alone;
- Promoting walking, biking, and other forms of active transportation;
- Improving air quality and reducing greenhouse gases; and
- Preserving natural lands.

Los Angeles County General Plan, Mobility Element

Goal M 1: Street designs that incorporate the needs of all users.

Policy M 1.1: Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, transportation corridors/networks whenever appropriate and feasible.

Goal M 2: Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use.

Policy M 2.1: Provide transportation corridors/networks that accommodate pedestrians, equestrians and bicyclists, and reduce motor vehicle accidents through a context-sensitive process that addresses the unique characteristics of urban, suburban, and rural communities whenever appropriate and feasible.

Policy M 2.6: Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible.

Policy M 2.8: Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.

Goal M 4: An efficient multimodal transportation system that serves the needs of all residents.

Policy M 4.1: Expand transportation options that reduce automobile dependence.
Policy M 4.2: Expand shuttle services to connect major transit centers to community points of interest.
Policy M 4.3: Maintain transit services within the unincorporated areas that are affordable, timely, cost-effective, and responsive to growth patterns and community input.

Goal M 5: Land use planning and transportation management that facilitates the use of transit.

City of Industry General Plan

The following goals and policies from the City of Industry General Plan, Circulation Element, are applicable to the Proposed Project.

Goal C1: A transportation system that supports the Vision and planned land uses while maintaining the desired level of service.

Policy C1-1: Roadways in the City of Industry will:

- Comply with federal, state, and local design and safety standards
- Meet the needs of multiple transportation modes and users
- Reflect the context and desired character of the surrounding land uses
- Be maintained in accordance with best practices and City standards

Policy C1-2: Maintain a peak-hour LOS D at intersections identified on the Roadway Classification Plan.

Goal C2: Safe and efficient circulations systems for automobiles, trucks, transit vehicles, bicycles, and pedestrians.

Policy C2-1: Maintain a multimodal system of sidewalks and trails that connect businesses, schools, and other key destination points.
Policy C2-4: Explore opportunities to expand the pedestrian and bicycle networks. This includes consideration of utility easements, drainage corridors, road rights-of way, and other potential options.
Policy C2-5: Encourage and facilitate the use of public transportation to reduce emissions associated with the use of automobiles.

3.14.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, a project would have significant effect on the Transportation/Traffic environment if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
- Conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

Criteria for Determination of Significant Traffic Impact

The eight analyzed intersections are in the jurisdictions of the City of Industry, Los Angeles County, and Caltrans, as noted in Table 3.14-1. The significant impact criteria for each of these jurisdictions are described below.

County of Los Angeles

In accordance with Los Angeles County criteria defined in *Traffic Impact Analysis Report Guidelines*, an impact is considered to be significant if one of the following thresholds is exceeded:

LOS	FINAL V/C RATIO	PROJECT-RELATED INCREASE IN V/C
C	0.701 - 0.800	equal to or greater than 0.040
D	0.801 - 0.900	equal to or greater than 0.020
E or F	> 0.901	equal to or greater than 0.010

City of Industry

The City of Industry defines a significant impact to be one in which the incremental project impact on V/C ratio equals or exceeds 0.02 (2 percent of the intersection's capacity) causing or worsening LOS E or F conditions.

CMP Significant Traffic Impact Criteria

The Congestion Management Plan (CMP) Transportation Impact Analysis (TIA) guidelines indicate that if a proposed development project would add 150 or more trips in either direction during either the morning or evening peak hours to the mainline

freeway monitoring location, then a CMP freeway analysis must be conducted. If a proposed project would add 50 or more peak hour trips (during the peak hour of adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted.

For the purposes of a CMP TIA, a project impact is considered to be significant if the proposed project increases traffic demand on a CMP facility by 2 percent of capacity (V/C ≥ 0.02), causing or worsening level of service (LOS) F (V/C > 1.00). Under this criterion, a project would not be considered to have a regionally significant impact if the analyzed facility is operating at LOS E or better after the addition of project traffic regardless of the increase in V/C ratio caused by the project. If the facility is operating at LOS F with project traffic and the incremental change in V/C ratio caused by the project is 0.02 or greater, then the project would be considered to have a significant impact.

3.14.5 Environmental Impacts

Threshold:	*Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*
Threshold:	*Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

3.14.5.1 External Circulation System

The following impact analysis applies to Phases I, II, and Future Phases of the Proposed Project.

Existing plus Project Impact Analysis

Existing plus Project Traffic Level of Service

The Existing plus Project traffic volumes were analyzed to determine the projected V/C ratios and LOS for each intersection. Table 3.14-5 summarizes the results of this analysis. All intersections were found to operate at LOS D or better with the addition of project traffic. A less than significant impact would occur.

Table 3.14-5. Existing Plus Project Intersection Level Of Service Analysis

ID	N/S STREET NAME	E/W STREET NAME	ANALYZED PERIODS	EXISTING (2016)		EXISTING PLUS PROJECT (2016)		PROJECT INCREASE IN V/C	SIGNIFICANT IMPACT
				V/C	LOS	V/C	LOS		
1	Crossroads Parkway South	Crossroads Parkway North	AM	0.673	B	0.676	B	0.003	NO
			PM	0.599	A	0.604	B	0.005	NO
2	Crossroads Parkway South	SR 60 Eastbound Ramps	AM	0.359	A	0.361	A	0.002	NO
			PM	0.387	A	0.392	A	0.005	NO
3	Puente Hills Landfill Access	Crossroads Parkway South	AM	0.309	A	0.331	A	0.022	NO
			PM	0.290	A	0.344	A	0.054	NO
4	Workman Mill Road	Crossroads Parkway South	AM	0.394	A	0.401	A	0.007	NO
			PM	0.390	A	0.416	A	0.026	NO
5	Peck Road	Workman Mill Road	AM	0.568	A	0.576	A	0.008	NO
			PM	0.533	A	0.549	A	0.016	NO
6	Peck Road	Pellissier Place	AM	0.839	D	0.846	D	0.007	NO
			PM	0.659	B	0.659	B	0.000	NO
7	I-605 Northbound Ramps	Pellissier Place	AM	0.774	C	0.778	C	0.004	NO
			PM	0.603	B	0.612	B	0.009	NO
8	Peck Road	Rooks Road	AM	0.648	B	0.652	B	0.004	NO
			PM	0.736	C	0.745	C	0.009	NO

Existing (2016) plus Project Intersection Impacts

As shown in Table 3.14-5, after applying the aforementioned Los Angeles County and City of Industry significant impact criteria, it was determined that the Proposed Project would not significantly impact traffic at the study locations under Existing (2016) plus Project conditions.

Cumulative plus Project Impact Analysis

Cumulative Base Conditions and Cumulative (2035) plus Project Traffic Conditions

The year 2035 Cumulative Base peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. Table 3.14-6 summarizes the cumulative LOS at all study intersections. Table 3.14-7 presents the cumulative LOS at study intersections located partly or wholly within the County.

The Cumulative (2035) plus Project peak hour traffic volumes were analyzed to determine the projected future operating conditions with the addition of the Proposed Project traffic. The results of the Cumulative (2035) plus Project analysis are presented in Tables 3.14-6 and 3.14-7.

As shown, all but one of the study intersections analyzed in the traffic study are projected to continue operating at LOS D or better. The exception is the intersection of Peck Road & Pellissier Place, which is projected to operate at LOS E in the AM peak hour. It should be noted that this intersection would still operate at LOS E without the Proposed Project in the year 2035. A less than significant impact would occur.

Cumulative (2035) plus Project Intersection Impacts

As shown in Tables 3.14-6 and 3.14-7, after applying the aforementioned Los Angeles County and City of Industry significant impact criteria, it was determined that the Proposed Project would not significantly impact future traffic conditions at the study intersection locations under the full build-out analysis scenario. A less than significant impact would occur.

Cumulative (2019) plus Project Intersection Impacts

In the Proposed Project's opening year (2019), construction of the planned park would be in the early stages of development. Because full development of the proposed park was found to result in less-than-significant traffic impacts in 2035, it is concluded that partial development of the proposed park in its opening year (2019) would also result in less than significant traffic impacts.

Table 3.14-6. Cumulative Plus Project Intersection Level of Service Analysis

ID	N/S STREET NAME	E/W STREET NAME	ANALYZED PERIODS	CUMULATIVE (2035)		CUMULATIVE PLUS PROJECT (2035)		PROJECT INCREASE IN V/C	SIGNIFICANT IMPACT
				V/C	LOS	V/C	LOS		
1	Crossroads Parkway South	Crossroads Parkway North	AM	0.738	C	0.741	C	0.003	NO
			PM	0.681	B	0.693	B	0.012	NO
2	Crossroads Parkway South	SR 60 Eastbound Ramps	AM	0.400	A	0.402	A	0.002	NO
			PM	0.448	A	0.452	A	0.004	NO
3	Puente Hills Landfill Access	Crossroads Parkway South	AM	0.369	A	0.391	A	0.022	NO
			PM	0.425	A	0.478	A	0.053	NO
4	Workman Mill Road	Crossroads Parkway South	AM	0.433	A	0.440	A	0.007	NO
			PM	0.473	A	0.504	A	0.031	NO
5	Peck Road	Workman Mill Road	AM	0.627	B	0.636	B	0.009	NO
			PM	0.607	B	0.623	B	0.016	NO
6	Peck Road	Pellissier Place	AM	0.912	E	0.920	E	0.008	NO
			PM	0.725	C	0.725	C	0.000	NO
7	I-605 Northbound Ramps	Pellissier Place	AM	0.872	D	0.876	D	0.004	NO
			PM	0.699	B	0.708	C	0.009	NO
8	Peck Road	Rooks Road	AM	0.726	C	0.730	C	0.004	NO
			PM	0.815	D	0.824	D	0.009	NO

Table 3.14-7. Cumulative Plus Project Without Ambient Growth ICU Intersection Level Of Service Analysis

ID	N/S STREET NAME	E/W STREET NAME	ANALYZED PERIODS	EXISTING (2016)		FUTURE PLUS PROJECT (2035)		PROJECT INCREASE IN V/C	SIGNIFICANT IMPACT
				V/C	LOS	V/C	LOS		
3	Puente Hills Landfill Access	Crossroads Parkway South	AM	0.309	A	0.347	A	0.038	NO
			PM	0.290	A	0.407	A	0.117	NO
5	Peck Road	Workman Mill Road	AM	0.568	A	0.580	A	0.012	NO
			PM	0.533	A	0.563	A	0.030	NO
8	Peck Road	Rooks Road	AM	0.648	B	0.671	B	0.023	NO
			PM	0.736	C	0.751	C	0.015	NO

3.14.5.2 Internal Circulation System

Shared Access with Sanitation Districts and Rose Hills Memorial Park Resulting in Temporary Delays

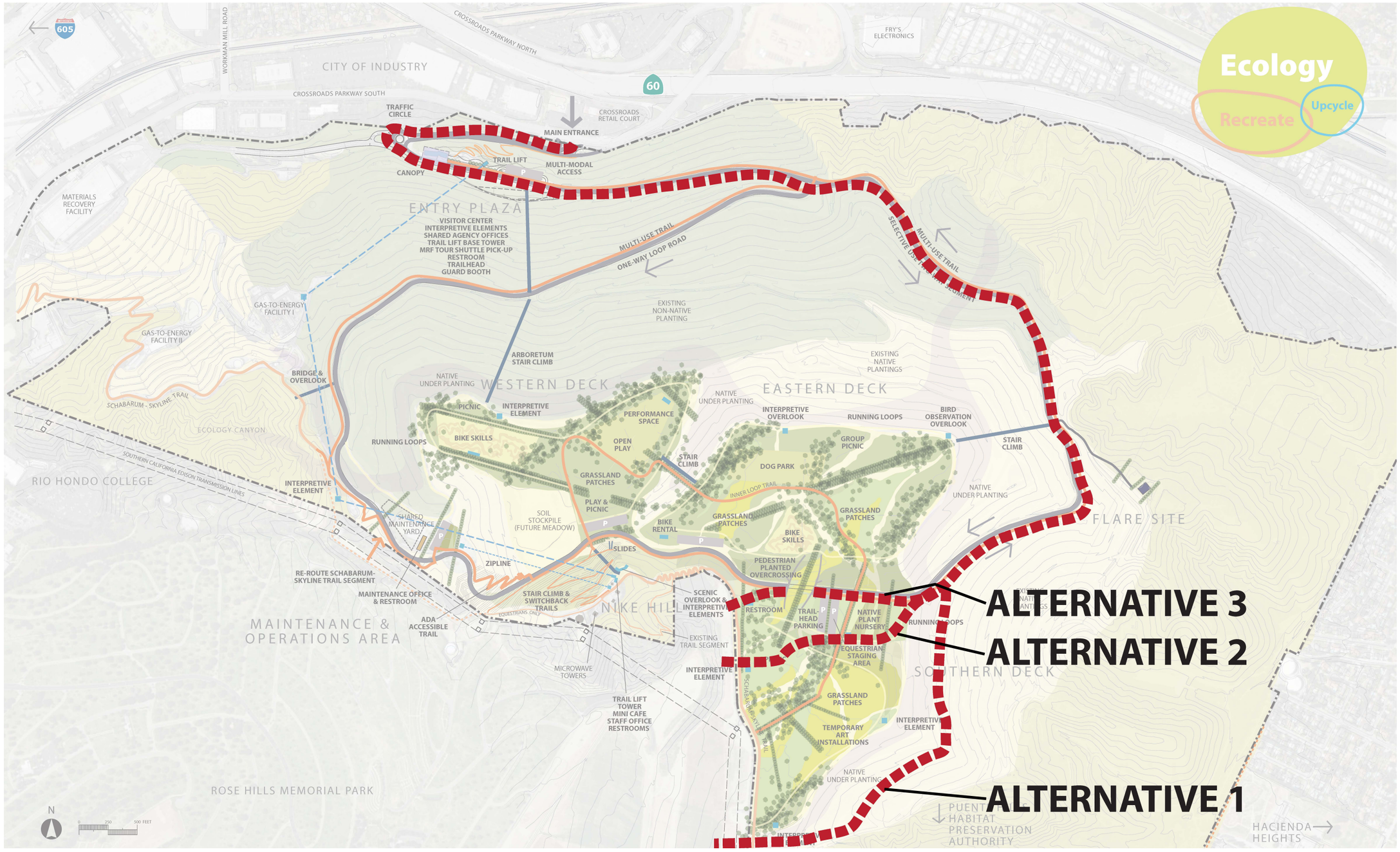
The existing entry road from Crossroads Parkway South would serve three main groups of users: park traffic, Sanitation Districts traffic related to MRF and PHIMF operations, and Rose Hills Memorial Park traffic. Traffic associated with the proposed Rose Hills Memorial Park roadway easement is expected to occur during Phase III.

Los Angeles County Sanitation Districts

As discussed above, the project site is currently used only by Sanitation Districts-related traffic. That traffic consists of waste-hauling trucks and other vehicles accessing the MRF and employee vehicles. Once the PHIMF becomes operational, additional waste-hauling trucks would use this route to access that facility via a tunnel beneath Crossroads Parkway South. The Sanitation Districts field office will remain in operation for post-closure maintenance, inspections, monitoring, and operation of the methane gas collection system. This will require the shared use of the park's internal roadway system and park space. As is currently the case, these trips would at times require use of heavy trucks to transport specialized equipment as well as light-duty trucks and autos. Together, these uses are expected to generate approximately 120 additional AM peak hour trips (78 inbound, 42 outbound) and 120 additional PM peak hour trips (46 inbound, 74 outbound) over the lower portion of the park access roadway system, which represents approximately two trips per minute.

Rose Hills Memorial Park

An easement agreement between Sanitation Districts and Rose Hills Memorial Park provides for future roadway access through the project site to provide a second route for vehicular traffic to and from the cemetery property. Currently, all cemetery-related traffic uses driveways on Workman Mill Road. Per the agreement, the specific alignment of the roadway easement is subject to the master planning process for the proposed park. As shown in Figure 3.14-4, the Master Plan identifies three route alternatives for Rose Hills Memorial Park traffic to travel through the park and reach the cemetery property from Crossroads Parkway South.



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Rose_Hills_Access.mxd (AAguirre)-mapping_guest 5/20/2016

Map Date: 5/20/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.14-4 Rose Hills Memorial Park Access Road Alternative Alignments

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Each alternative would follow the existing access road for approximately 2.3 miles between Crossroads Parkway South to the Southern Deck, passing by the proposed Entry Plaza and Visitor Center and following the planned two-way eastern portion of the park access road. Between the Southern Deck and the Rose Hills Memorial Park property line, cemetery traffic would follow one of three alternative alignments.

- **Alignment Alternative 1** would run for approximately 0.7 miles following an existing paved landfill maintenance road along the toe of landfill benches 30 to 40 feet in elevation below the natural edge of the Southern Deck of the park, prior to making a 90 degree turn and ascending steeply up to the edge of the landfill deck, largely avoiding the areas planned for active park uses.
- **Alignment Alternative 2** would run along a new park access road directly across planned park uses on the Southern Deck for a distance of approximately 0.3 miles, passing through a planned native plant nursery, a planned equestrian staging area, a trail and trailhead parking lot E, and a picnic area.
- **Alignment Alternative 3** would also be approximately 0.3 miles long and also run directly across the Southern Deck avoiding the planned picnic area, instead following a new separate roadway specifically designed to carry Rose Hills Memorial Park traffic parallel to the park loop road that would travel beneath the pedestrian planted overcrossing that is planned to span the park loop road.

Each of the three Alignment Alternatives for routing cemetery traffic would cross the existing Schabarum-Skyline Trail, which is open to hikers, mountain bikers, dog walkers, and equestrians, before reaching the eastern canyons common boundary with Rose Hills Memorial Park. The Schabarum-Skyline Trail along this reach is lined with a mature windrow of eucalyptus and other trees providing welcome shade, but in places also limiting visibility for trail users. Further, while much of this reach is relatively level, the eastern end of this area is at the base of Nike Hill and cyclists descending the hill can reach higher rates of speed.

Rose Hills Memorial Park's use of the proposed access road would be limited to daylight hours, per the terms of the easement agreement, which is consistent with the planned hours of operation of the park. It is estimated that up to one-third of all cemetery-related trips may travel through the proposed park, or approximately 1,150 trips per day. That level of traffic (including approximately 40 trips in the AM peak hour and 100 trips in the PM peak hour) would represent approximately 40 to 50 percent of the estimated peak hour and daily trips related to the park itself.

Cemetery-related traffic is composed primarily of graveside visits by individuals or small groups, and funeral processions. These processions originate at funeral homes throughout the region and are made up of vehicles with headlights turned on and special window placards and, based on field observations, range in size from 20 to 60 cars. Other trips may be made by Rose Hills Memorial Park staff and maintenance vehicles. While most of these trips are dispersed through the day, funeral processions create platoons of inbound vehicles, often with police motorcycle escort, which can obstruct cross traffic for two to four minutes or more, depending on the number of vehicles in the procession. The total travel time for each vehicle in a funeral procession to travel at 10 miles per hour (mph) through the park over Alignment Alternative 1

would be approximately 18 minutes; at 15 mph the travel time would be 12 minutes. Under Alignment Alternatives 2 and 3, the travel time would be slightly lower, ranging from 11 to 16 minutes. A funeral procession of 20 to 60 vehicles would be approximately 1,000 to 3,000 feet long. At any point along the route, funeral processions of these lengths would block cross traffic for approximately one to four minutes, if such processions proceed unobstructed. However, within active park use areas, recreational activities (e.g., children playing, riding bikes etc.), may slow or impede such processions, periodically increasing the amount of time required for such processions to pass by any given point.

While the California Vehicle Code does not specifically give the right-of-way to funeral processions, they are commonly escorted by uniformed peace officers who have the authority to control conflicting traffic that would otherwise break up the processions (California Vehicle Code 2817). The Los Angeles County Municipal Code (Section 15.76.070) prohibits drivers and cyclists from traveling between vehicles in a funeral procession when those vehicles are placarded or otherwise clearly distinguishable as part of the procession. For these reasons, funeral processions would result in temporary delays to other road users resulting in a temporary significant impact. This impact would be mitigated to a less than significant level with the implementation of Mitigation Measures T-1 and T-4.

Internal Congestion Impacts Related to Rose Hills Memorial Park Funeral Processions

Traffic Congestion at Park Entry

Most trips related to Rose Hills Memorial Park would be dispersed throughout the day and would be made by vehicles traveling individually or in small groups. Funeral processions, however, would occur two, three, or more times each day and would consist of long trains of vehicles traveling through the park to reach the cemetery property. These processions would pass through the project entry, configured as either a signalized intersection or a roundabout. Based on field observations, such processions can range from 20 to 60 cars following a hearse and police escort and proceed at an average speed of 10 to 15 mph.

Such slow moving lengthy funeral processions would create temporary operational traffic congestion and delays at the intersection of Crossroads Parkway South and the Park Access Road (existing landfill access road), at the internal intersection where the park entrance road diverges from the MRF access road, and at other locations within the park, particularly along long steep portions of the access road that pass through the arboretum on the north slopes of the landfill.

The blockages, while temporary, would be from two to four minutes or more, depending on the length of the funeral processions. This would be similar to delays that occur at highway-railroad at-grade crossings when trains pass by, resulting in much longer delays than would otherwise occur at crossing points within the future park or at a typical traffic signal. Repeated and extended blockages at the entry to the park and crossings within the park would result in a significant impact. These impacts are discussed further below.

During funeral processions entering the park, all traffic, including park traffic, Sanitation Districts' traffic, and non-procession RHMP traffic, would be unable to enter the park from Crossroads Parkway South when escorted funeral processions are passing through it. While the eastbound right-turn lane on Crossroads Parkway South at the main entrance road provides a great deal of space to store queued vehicles when processions are entering in the westbound direction, the westbound dual left-turn lanes on Crossroads Parkway South provide considerably less vehicle storage space. Further, vehicles exiting eastbound SR-60 onto Crossroads Parkway South seeking to enter the park would not have a safe place to wait on-street if a funeral procession were exiting the freeway on the eastbound off-ramp or traveling west over the SR-60 bridge on Crossroads Parkway South and entering the park. This could result in on-street queuing in excess of available capacity on Crossroads Parkway South and on the SR-60 freeway off-ramp, and potentially back to the freeway mainline. The temporary increases in congestion and delay on Crossroads Parkway South at the entry to the park would be considered a significant access impact. Such congestion and operation concerns would be even more substantial on days of peak park usage where special events could draw 5,000 visitors over and above daily park use. Implementation of Mitigation Measures T-1 and T-2 would reduce this impact to a less than significant level.

At the entry intersection, whether it is configured as a signalized intersection or as a roundabout, such processions would temporarily obstruct traffic exiting from the MRF, future PHIMF, and ongoing park related traffic. During average weekday operations, a delay of four minutes could cause a queue of approximately eight to 10 vehicles, which could be accommodated in the available road space between the MRF and that location. This impact would be considered less than significant.

Delays of two to four minutes, or more, per funeral procession would be experienced by park-related traffic on the internal access road between the entry intersection and the point at which the loop road begins. This would affect park traffic that would be temporarily unable to enter the park at all, or would be unable to proceed from the Visitor Center parking lot to areas within the park. Park shuttles would also be unable to transport park-goers into the park. The temporary increases in delay on this segment of the park access road would be considered a significant access impact. Implementation of Mitigation Measure T-1 would reduce this impact to a less than significant level.

Exiting park traffic would not be obstructed within the park, though delays could occur for exiting vehicles intending to travel westbound onto Crossroads Parkway South. Such delays could be more substantial during special events. This impact would be considered less than significant. Potential impacts to emergency access are discussed below under the emergency access threshold.

Bicycle, Pedestrian, and Equestrian Access

Funeral processions would also temporarily interfere with bicycle, pedestrian, and equestrian access to and use of the multi-use trail (1) where the trail enters the one-way portion of the loop road, (2) near the eastern stair climb, (3) at the edge of the Southern Deck, and (4) access into and out of the park's primary Parking Lot A adjacent to the Visitor Center. Similarly, funeral processions would interfere with access to and use of the Schabarum-Skyline Trail. The temporary increases in delay to bicycle,

pedestrian, and equestrian users within the park due to Rose Hills Memorial Park funeral processions would be considered a significant access impact. In addition, prolonged delays on the multi-use trail at these locations would lead to localized congestion of trail users (a mix of pedestrians, cyclists, and equestrians). Implementation of Mitigation Measure T-1 would reduce this impact to a less than significant level.

Trail Use and Proposed Rose Hills Memorial Park Access Road Conflicts

The three Rose Hills Memorial Park alternative access routes would cross the Schabarum-Skyline Trail at various locations on the western side of the Southern Deck. The interaction of a new road crossing with the backbone trail of the regional trail network would create potential user conflicts as ongoing traffic and funeral processions cross this trail disrupting trail use and create potential safety hazards with motor vehicles interacting with trail users.

In particular, all access road alternatives have potential with line of sight issues between trail users and Rose Hills Memorial Park traffic as visibility along the trail can be limited due to existing mature vegetation. Further, under Alignment Alternative 1, eastbound cyclists descending Nike Hill may be proceeding at relatively high rates of speed due to steep grades. When combined with the potential for limited lines of sight between speeding cyclists and Rose Hills Memorial Park traffic, especially extended processions, the potential for bicycle/vehicle collisions exists.

The safety of existing equestrians and other trail users along the Schabarum-Skyline Trail could be adversely affected by construction of the new road. Planned Rose Hills Memorial Park traffic of approximately 1,150 trips per day crossing this trail may cause substantial safety hazards, especially where riders and mounts are not accustomed to motorized traffic. In addition, the proposed Puente Hills Landfill Park would include a major new trailhead and equestrian staging area at Parking Lot E proximate to the proposed road crossing of this regional backbone trail, substantially increasing future use by equestrians and other groups. Depending on the road crossing location, potential exists for vehicular/mountain bike conflicts, particularly if bikers attempt to pass in front of or between an extended line of vehicles associated with funeral processions.

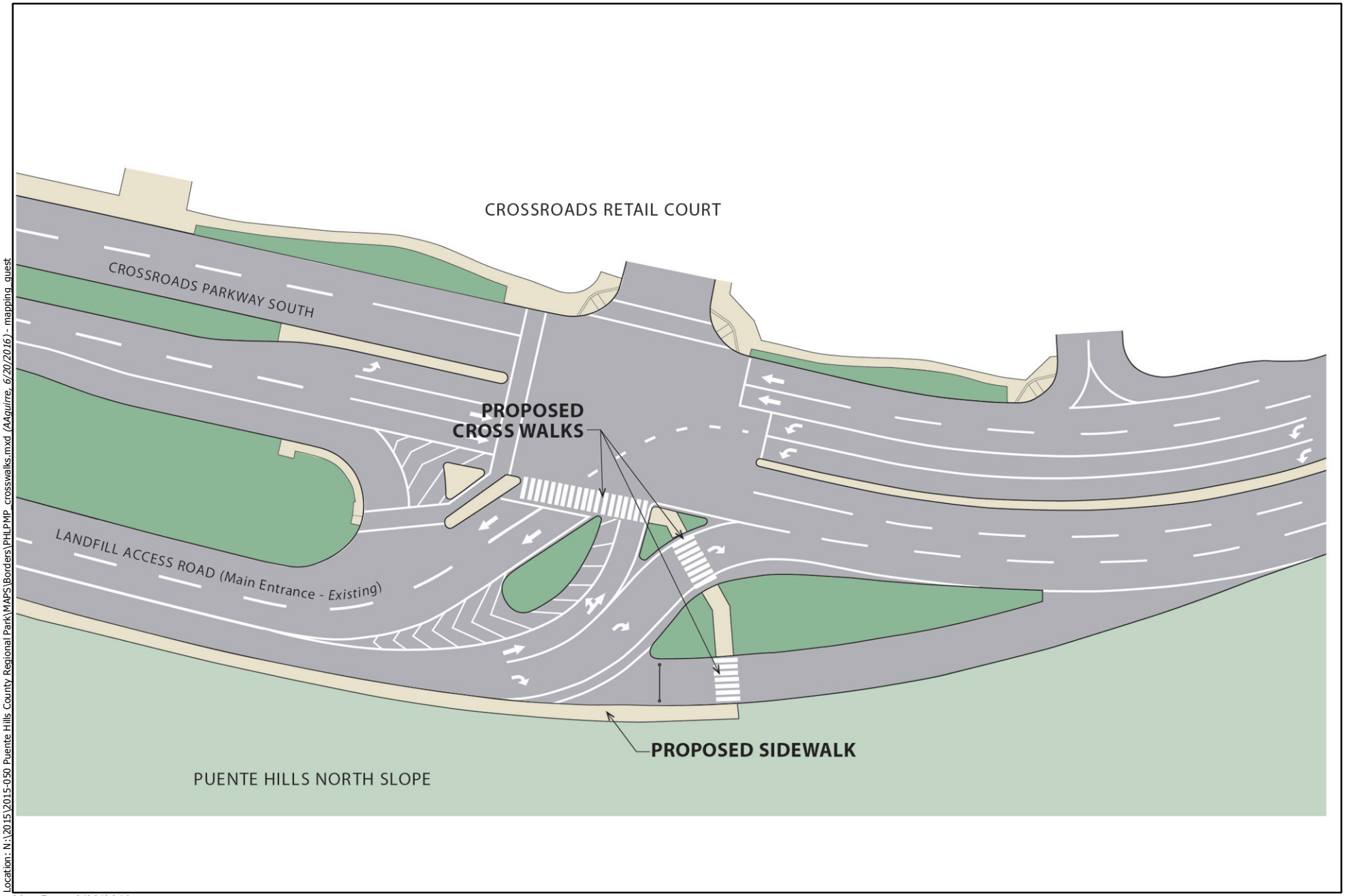
Further, while most horses and their riders could be accommodated safely with a signalized at grade road crossing, the potential exists for some horses to be spooked while waiting for two to four minutes at such a crossing for extended funeral processions to pass by. Horses spooking along a busy trail proximate to passing vehicles and potentially near other trail users waiting to cross the road has the potential to result in serious injury to horses, riders, and other trail users over the next 30 or more years. This impact also exists along the multi-use trail adjacent to the park loop road, where a funeral procession rounding a bend led by a law enforcement vehicle with flashing lights may startle a horse. Such vehicular/trail user conflicts and potential for serious injuries would be considered a potentially significant impact. The proposed at grade crossings along the park loop road and at the park entrance will be designed per the *County of Los Angeles Trail Manual* (adopted May 17, 2011). With the adherence to these design guidelines impacts at the at-grade crossing are considered less than significant. The potential trail/vehicular impacts at the proposed crossing of the proposed Rose Hills Memorial Park access road and the Schabarum-Skyline Trail would

be reduced to a less than significant level with the implementation of Mitigation Measure T-3.

3.14.5.3 Impacts to Transit, Bicycle, and Pedestrian Operations

The Proposed Project is located in an auto dependent area where roads and land uses are not currently designed to support pedestrian or bicycle travel. The existing bicycle path network is not configured to support the site's planned use as a major destination for bicycle fitness activities. Existing transit service to the site, and on roads bordering the site, is not configured to support access to the planned regional park by the transit dependent public nor to support the PHLPMP goals which emphasize and encourage park visitors to utilize transit to access planned park facilities. Major changes to adjacent bicycle, pedestrian, and transit facilities would be required to fully support integration of the proposed park into a multiple modal transportation framework. Two projects are in the planning stages at Rio Hondo College (Rio Gateway Plaza and Metrolink Station) to provide intermodal access to the area. To be successful, such changes would need to be supported by gradual changes in the planned mix of allowable land uses in nearby areas. The PHLPMP includes the addition of crosswalks at the existing main entrance of the landfill along Crossroads Parkway South and a sidewalk on a portion of the south side of the landfill access road (Figure 3.14-5). No other project improvements are proposed at the main entrance.

THIS PAGE INTENTIONALLY LEFT BLANK



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_crosswalks.mxd (AAguirre, 6/20/2016) - mapping_guest

Map Date: 6/20/2016
Source: Withers and Sandgren 2016

Figure 3.14-5 Proposed Crosswalks and Sidewalk
Puente Hills Landfill Entrance & Crossroads Parkway South

2015-050 Puente Hills Landfill Park Master Plan

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

THIS PAGE INTENTIONALLY LEFT BLANK

A key objective in the PHLPMP is to provide multi-modal access and circulation throughout the park and to ensure that inclusive mobility accommodations are provided for all user groups and people of differing abilities.

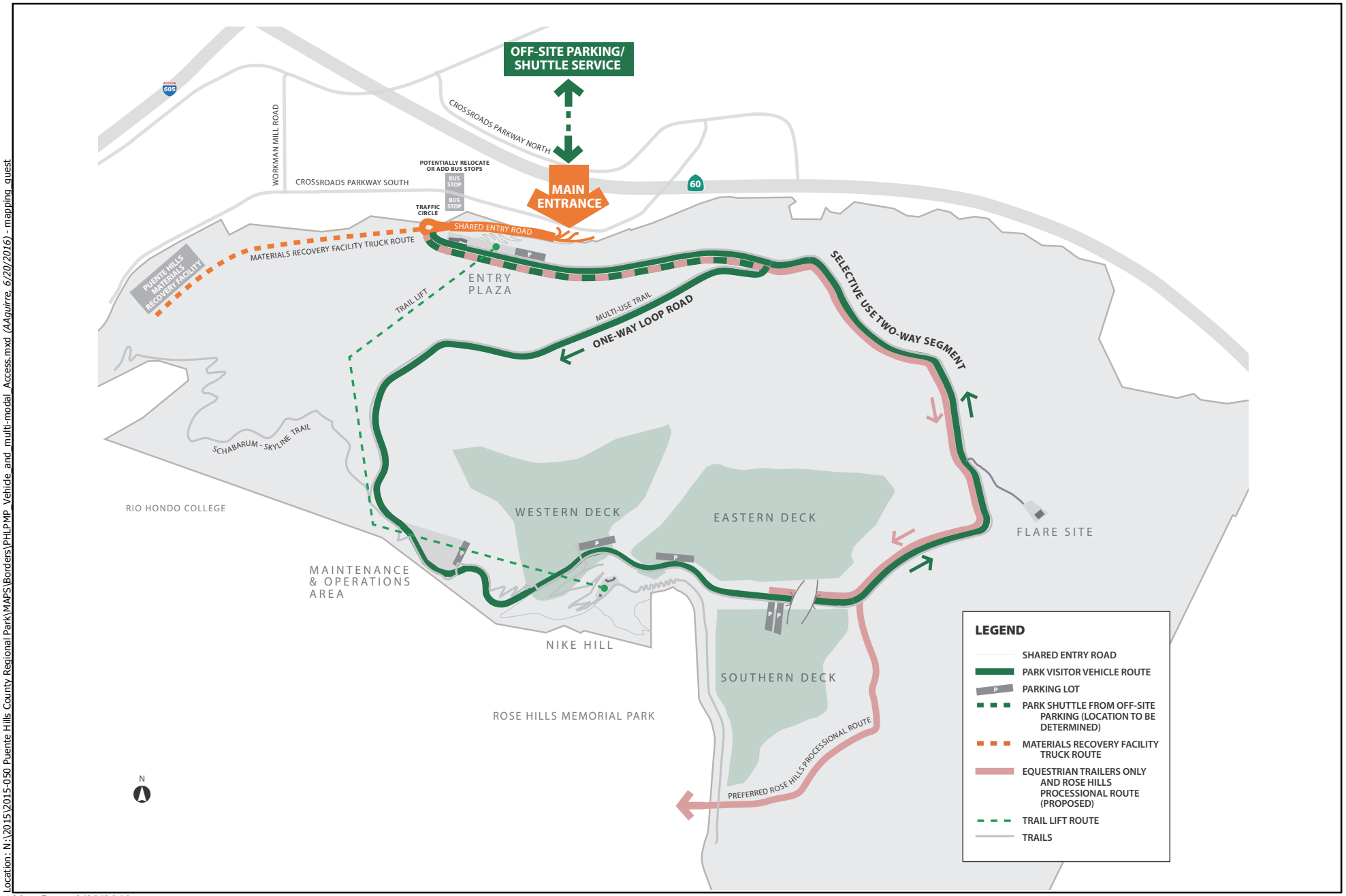
The project site's existing roadway system was designed for use by waste-hauling trucks and landfill maintenance vehicles. The proposed park access road (existing landfill access road) is a four-lane access road that would enter the site from a signalized intersection with Crossroads Parkway South and then run within the site roughly parallel to Crossroads Parkway South, ascending gradually for approximately one-quarter mile to a point where it separates into two branches. One branch descends to the MRF and Sanitation Districts field office, where additional driveways are located that are used for employee trips and some outbound vehicles. In addition to serving those facilities, which would remain in operation, this route would also be used by waste-hauling trucks accessing the future PHIMF. The other branch leads immediately to a large paved area where truck scales and a small office are located, and then ascends to the upper portion of the site where landfill operations most recently occurred. It is along this branch and throughout the upper areas of the landfill site that most of the park facilities are planned for development.

An Entry Plaza and Visitor Center would be in the vicinity of the existing scales, and is planned as a key focal point of visitor activities and gateway to the park. It would serve as the information and transit hub for the park, as well as providing administrative offices. Multi-modal access to this gateway area from Crossroads Parkway South would be provided by a multi-purpose trail (including an ADA-compliant ramp) that would serve local and regional park visitors arriving via public transit, bicycle, or on foot. Other on-site circulation improvements included in the PHLPMP are provisions for new bus stops on Crossroads Parkway South near the park entrance to improve regional transit access, the striping of crosswalks on the internal access roads, the addition of a traffic signal or a roundabout where the main access road branches between the park site and the Sanitation Districts facilities, paving of an internal loop road through the park site, provision of five parking lots through the park, the expansion of existing trails within the site, the development of a multi-purpose trail alongside the primary vehicular circulation system, and additional hiking trails throughout the park.

The Entry Plaza would provide parking and passenger loading areas for shuttle buses and for park visitors. Planned transit operations include both off-site and internal shuttle services. An arrival/departure shuttle would be operated on weekends, on peak days, and during special events, and would include stops located at an off-site parking lot, nearby bus stops, and the Entry Plaza. Internal park shuttles would follow a loop route through the park with potential stops located at the Entry Plaza, Maintenance and Operations Area, bottom of Nike Hill, Western Deck, Eastern Deck, Southern Deck, and the Flare Site. General auto traffic within the park is planned for a counter-clockwise loop route (Figure 3.14-6).

The western portion of the loop road would provide two lanes configured for one-way (uphill) travel. The eastern portion of the loop road would provide two lanes configured for two-way traffic which would allow all traffic to travel counter-clockwise (downhill). Clockwise (uphill) travel on the eastern portion of the loop road would be limited to park

shuttles, equestrian trailers, park maintenance vehicles, emergency response vehicles, and Rose Hills Memorial Park traffic (during Phase III) (Figure 3.14-6). Adjacent to the paved loop road and following the same alignment within the existing trunk road system, a six-to-ten foot wide multi-use trail would provide multi-modal park circulation for non-motorized travelers. The trail would be physically separated from the travel lanes by a guard rail and a buffer of varying width. Another multi-use trail, the Inner Loop Trail, is planned to connect the three upper decks with the Schabarum-Skyline Trail. Paved roadways that are open for public access within the park would be a minimum of 20 feet wide, consistent with Los Angeles County Fire Department requirements, and would follow existing landfill roads for approximately four miles, providing access to all upper deck areas throughout the park. Alternatively, an ADA-accessible trail lift is proposed to serve as a people mover and would reduce the number of cars operating within the park. The proposed trail lift would be anchored at the Entry Plaza and would carry up to eight visitors per basket to the Nike Hill and scenic overlooks. The design of the trail lift is in the conceptual planning stage and is subject to change in the final concept. As described above, the Proposed Project would be accessible via existing and planned public transit systems and would provide new bicycle and pedestrian trails. These park amenities would be designed according to adopted policies, plans, and programs and would not decrease the performance or safety of the existing circulation network. Impacts would be less than significant.



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Vehicle_and_multi-modal_Access.mxd (AAguirre, 6/20/2016) - mapping_guest

Map Date: 6/20/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.14-6 Vehicular and Multi-modal Circulation

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

Future Phases.

The impacts to Future Phases would be similar to Phases I and II with the exception of potential conflicts between the proposed Rose Hills Memorial Park roadway easement, internal circulation system, and emergency access. These impacts are discussed under the design features and emergency thresholds below. Impacts would be less than significant with the implementation of Mitigation Measures T-1 through T-6.

3.14.5.4 Performance Events

The Proposed Project includes up to 25 events per year of up to 5,000 people. These events would result in impacts to the internal and external circulation systems and emergency access during such events. Impacts to emergency services would be less than significant with the implementation of Mitigation Measures PS-1 through PS-4 from Section 3.12, Public Services of this EIR. Impacts from potential conflicts with the processions on the proposed Rose Hills Memorial Park access road and performance events would be mitigated to a less than significant level with Mitigation Measure T-2.

To address impacts to the external and internal circulation systems, including safety, the County will also prepare and implement a Traffic Management Plan (TMP) which will identify the primary routes of travel to ensure efficient vehicle traffic movement and control between the I-605, SR-60, and adjacent roadways and the Proposed Project. The plan will designate the routes for entry and exit, signage placement along these routes, temporary street closures and other special traffic management procedures, such as use of traffic control personnel to direct traffic at key intersections. The staffing levels and locations of law enforcement officers, including security, traffic, and parking personnel will also be identified to assist with the control of the roadways. With implementation of the TMP, per Mitigation Measure T-6, impacts would be less than significant.

3.14.5.5 Construction

The Proposed Project would be constructed in three major phases over the next 30 years with three additional phases that would be refined as the landfill decks stop settling, park operations increase, and landfill maintenance operations decline. Phase I and Phase II projects would be constructed in the first 20 years. The construction details of Phases III through VI (Years 21 through 75) become speculative as the future phases are further refined depending on the landfill site conditions and operation of the park. As such, construction traffic would be located throughout the project site and at different durations depending on the specific project element being implemented. Construction traffic would be temporary and as described above under the different traffic scenarios, the Proposed Project would result in less than significant impacts to the external circulation system. However, potential conflicts may occur with existing landfill maintenance vehicles, park users, the future Rose Hills Memorial Park roadway easement, and emergency vehicles. These temporary construction-related impacts would be minimized with implementation of a Construction Traffic Management Plan (TMP), to be prepared and approved by the County prior to construction of any park improvements. The Construction TMP would require prior notices, adequate sign-posting, detours, phased construction and temporary driveways where necessary to reduce construction-related impacts that may result from the Proposed Project. The

Construction TMP shall be subject to review and approval by the following County departments: Public Works, Fire, Regional Planning, and Sheriff prior to issuance of grading or building permits. With implementation of the TMP per Mitigation Measure T-6, impacts would be less than significant.

Threshold:	*Would the project conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?*

Phases I, II, and Future Phases

CMP Freeway and Arterial Intersection Analysis

The CMP freeway monitoring stations closest to the project site are on I-605 north of SR-60 and on SR-60 east of SR-57. The nearest CMP arterial monitoring intersection is Rosemead Boulevard and Whittier Boulevard, over four miles southwest from the project site.

According to the project trip generation and trip distribution estimates for the Proposed Project, the Proposed Project would add fewer than 150 peak hour vehicles to the nearest CMP freeway monitoring locations and fewer than 50 peak hour vehicles to the nearest arterial monitoring intersection. Therefore, CMP freeway and arterial intersection analyses are not required and impacts to the CMP monitoring system would be considered less than significant.

CMP Transit Impact Analysis

Potential increases in transit person trips generated by the Proposed Project were estimated as follows. Section B.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a project based on the projected number of vehicle trips. This methodology assumes an Average Vehicle Ridership (AVR) factor of 1.4 in order to estimate the number of person trips to and from the project and then provides guidance regarding the percent of person trips assigned to public transit depending on the type of use (commercial/other versus residential, or other) and the proximity to transit services. To estimate project-generated transit trips for the Proposed Project, person trips were multiplied by 3.5 percent yielding an estimate of five transit trips in the AM peak hour and nine transit trips in the PM peak hour. Each hour, there are approximately 10 buses that pass through the study area. Thus, assuming an even distribution, the estimated increase in transit trips equates to one to two new riders per bus per hour; a less than significant impact would occur.

State Highway System Analysis

Per *Caltrans' Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), study intersections that included freeway on-ramps or off-ramps were analyzed using Highway Capacity Manual (HCM) (Transportation Research Board 2000) analysis methodology. Table 3.14-8 presents LOS definitions for signalized intersections per the HCM methodology, which are based on average vehicle control delay. The HCM methodology also calculates the V/C ratio of an intersection. The results of the HCM results for the

Existing and Existing plus Project scenarios are presented in Table 3.14-9. The results of the HCM results for the Cumulative and Cumulative plus Project scenarios are presented in Table 3.14-10.

Table 3.14-8. HCM Level of Service Definitions for Signalized Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (SEC/VEH)	DEFINITION
A	≤10	Free flow
B	>10 - 20	Stable flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasional wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

Source: Transportation Research Board 2000

Table 3.14-9. Existing Plus Project HCM Intersection Level of Service Analysis

ID	N/S STREET NAME	E/W STREET NAME	ANALYZED PERIODS	EXISTING (2016)			EXISTING PLUS PROJECT (2016)			PROJECT CHANGE IN V/C OR DELAY	
				DELAY (SEC)	V/C	LOS	DELAY (SEC)	V/C	LOS		
2	Crossroads Parkway South	SR 60 Eastbound Ramps	AM	12	0.38	B	12	0.38	B	0.00	0
			PM	13	0.37	B	13	0.37	B	0.00	0
7	I-605 Northbound Ramps	Pellissier Place	AM	35	0.77	D	35	0.77	D	0.00	0
			PM	41	0.57	D	41	0.58	D	0.01	0
8	Peck Road	Rooks Road	AM	9	0.59	A	9	0.60	A	0.01	0
			PM	15	0.73	B	15	0.74	B	0.01	0

Table 3.14-10. Cumulative Plus Project HCM Intersection Level of Service Analysis

ID	N/S STREET NAME	E/W STREET NAME	ANALYZED PERIODS	CUMULATIVE (2035)			CUMULATIVE PLUS PROJECT (2035)			PROJECT CHANGE IN V/C OR DELAY	
				DELAY (SEC)	V/C	LOS	DELAY (SEC)	V/C	LOS		
2	Crossroads Parkway South	SR 60 Eastbound Ramps	AM	12	0.42	B	12	0.42	B	0.00	0
			PM	13	0.44	B	13	0.44	B	0.00	0
7	I-605 Northbound Ramps	Pellissier Place	AM	52	0.88	D	53	0.89	D	0.01	1
			PM	40	0.66	D	40	0.67	D	0.01	0
8	Peck Road	Rooks Road	AM	11	0.68	B	11	0.69	B	0.01	0
			PM	19	0.83	B	19	0.84	B	0.01	0

Based on the HCM analysis, all ramp intersections are projected to operate at LOS D or better. While *Caltrans' Guide for the Preparation of Traffic Impact Studies* provides screening criteria to determine whether a Traffic Impact Study is needed, their guidance does not provide definitive criteria to determine whether the project's trip generation should be considered "significant." As such, the significance criteria of the lead agency, Los Angeles County, were utilized for the impact analysis; no significant impact would occur.

Threshold:	*Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Phases I and II

The internal roadway system would follow established routes within the former landfill that were designed for and used primarily by heavy trucks. Upgraded and new roads within the park will be designed to comply with Los Angeles County Fire Department requirements regarding minimum roadway widths and maximum grades, and with relevant design standards followed by Los Angeles County regarding turning radii, maximum grades and grade changes, pavement type, fencing, lighting, signage, grade separations, etc. At locations within the park where vehicular traffic would cross the multi-use trail or the Schabarum-Skyline Trail, best practices will be employed to minimize the potential for conflicts. Relevant standards and design guidance are found in the *County of Los Angeles Trail Manual* (adopted May 17, 2011), the *California Department of Transportation Highway Design Manual* (HDM, updated 2015), and the *California Manual on Uniform Traffic Control Devices* (MUTCD, updated 2014). The first of these referenced documents includes plans for both at-grade crossings and grade-separated crossings of multi-use trails with roadways. Impacts would be less than significant.

Future Phases

Impacts related to the proposed internal roadway system during the Future Phases would be the same as Phases I and II with the exception of the proposed Rose Hills Memorial Park access road as discussed below.

Rose Hills Memorial Park

The PHLPMP includes three alignment alternatives for a Rose Hills Memorial Park roadway easement. Alignment Alternative 1 is slightly longer than the other two Alignment Alternatives under consideration, but would largely avoid the areas planned for active park uses. Alignment Alternatives 2 and 3 would pass through areas planned for active park uses, including a native plant nursery, an equestrian staging area, a trailhead, a parking lot and, under Alignment Alternative 2, a picnic area, resulting in potential conflicts between park users and the anticipated cemetery processions on the proposed roadway as discussed above in section 3.14.5.2. To minimize potential conflicts with park users, in particular equestrians, the Rose Hills Memorial Park access road will be designed to appropriate County standards and Los Angeles County Fire Department requirements. Implementation of Mitigation Measure T-3 would further

reduce impacts to the Schabarum-Skyline Trail from conflicts with the proposed Rose Hills Memorial Park access road to a less than significant level.

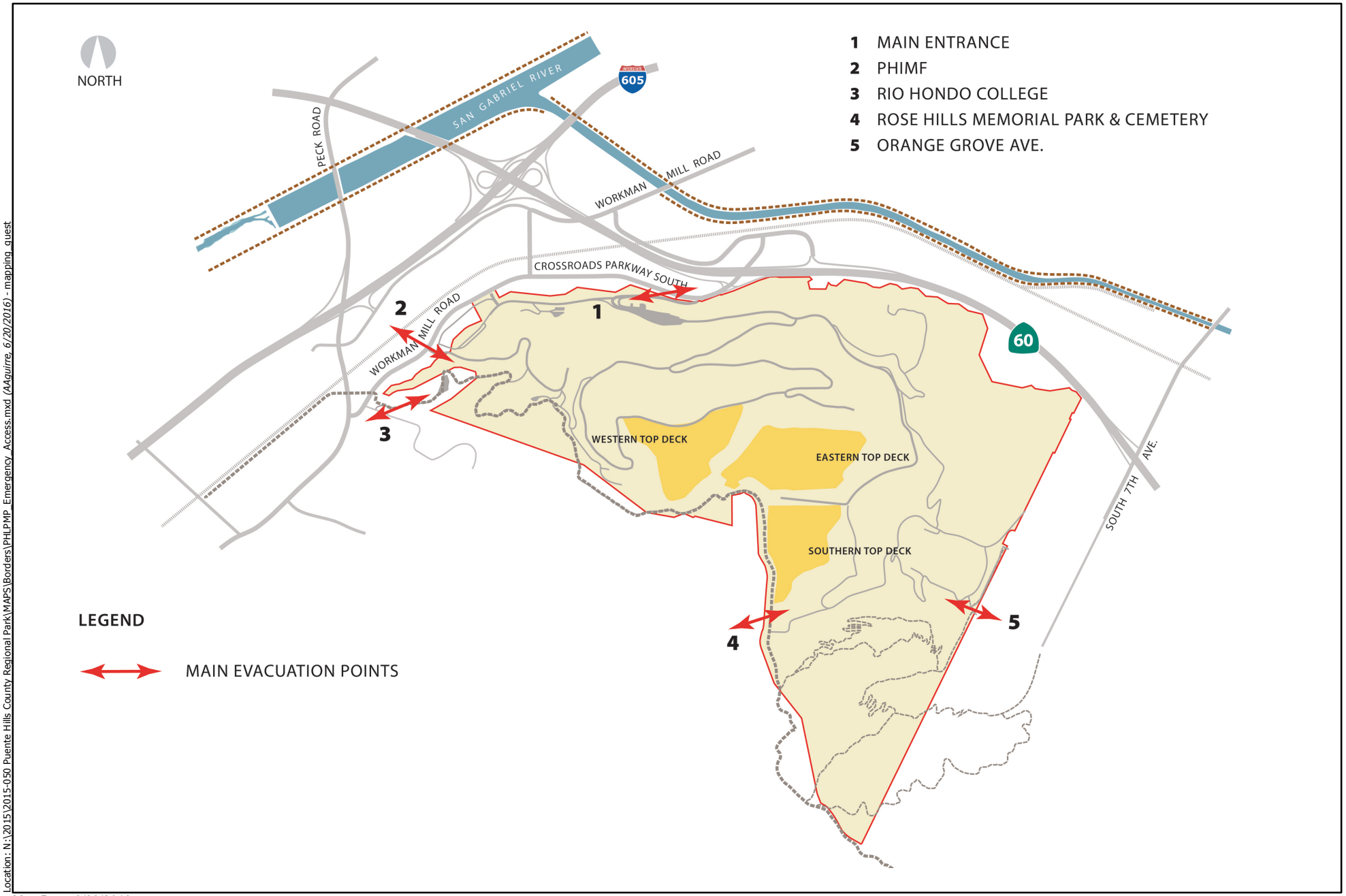
Threshold: Would the project result in inadequate emergency access?

Phases I and II

During the construction and operation of Phases I and II adequate emergency access would be maintained. The Sanitation Districts has developed and implemented several emergency response plans following regulatory requirements for specific activities related to the Puente Hills Landfill post-closure activities, including an Emergency Action/Fire Prevention Plan. As part of the JPA between the Sanitation Districts and DPR, a similar emergency action plan would be developed for the park use that would include the roles of park staff, evacuation routes, and communication protocols in the event of an emergency. Impacts during Phases I and II would be less than significant.

The park loop road would be constructed in Phase I and would provide emergency access to all proposed park facilities. Heavy traffic at the one park ingress and egress from Crossroads Parkway South could be an emergency or evacuation bottle-neck. Given the many demands on the park entry, several ingress and egress road sites at the perimeter of the landfill would serve as emergency access points and shown on Figure 3.14-7. In the case of a park visitor emergency, first responders from the adjacent municipalities with emergency facilities in response to an emergency/evacuation situation range in distance from three to 13 miles from the park entry. In an emergency, all the bench roads within the landfill area, not open to the public, would be available for emergency vehicle use. Emergency vehicles (in unusual or extreme disaster situations) may be able to access the Puente Hills MRF area located on the former landfill site via the existing gated access road and/or a new internal off-street access road. The County would coordinate with Sanitation Districts and park staff to expedite emergency access. A County Animal Services Coordinator trained in disaster response, animal care, and animal rescue would be available if equestrians and their horses become part of an emergency or evacuation at the Puente Hills Landfill Park (Withers & Sandgren 2016).

THIS PAGE INTENTIONALLY LEFT BLANK



Location: N:\2015\2015-050 Puente Hills County Regional Park\MAPS\Borders\PHLPMP_Emergency_Access.mxd (AAquirre, 6/20/2016) - mapping_guest

Map Date: 6/20/2016
Source: Withers and Sandgren 2016

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3.14-7 Emergency Access and Evacuation Points

2015-050 Puente Hills Landfill Park Master Plan

THIS PAGE INTENTIONALLY LEFT BLANK

All counties of California have a local Office of Emergency Services (OES) to identify hazards and to prepare for, respond to, mitigate, and help recover from both large and small local incidents. The Los Angeles County Office of Emergency Management (OEM) is a coordinating agency that brings together local agencies to focus on unified responses to disaster. The existing main entrance off of Crossroads Parkway South and the entrance station area would serve as the primary emergency ingress and egress. Two additional ingress and egress sites on the west and south park boundaries include the Rio Hondo College entrance road and the Rose Hills Memorial Park road network. The most appropriate ingress and egress site would depend on the type and severity of the emergency and subsequent evacuation procedures. Ingress and egress at the street end of Orange Grove and up the Eastern Canyon either at Canyon 4 or Canyon 5 could service park emergencies as a second option if the main entry is blocked by traffic, landslide, fire, or other emergency event requiring evacuation of park users (Withers & Sandgren 2016).

If the degree of emergency intensifies to a site wide issue affecting the park and landfill, emergency aid and the *County of Los Angeles Disaster Routes* have been developed for the region. Guidance for such an emergency is to be structured to be consistent with the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and all relevant county, State, and Federal laws. Regulatory requirements for specific activities related to Puente Hills Landfill operations remain in effect post-closure. These include: 1) Emergency Action/Fire Prevention Plan (EAP), 2) Spill Prevention, Control, and Countermeasure Plan (SPCC), 3) Hazardous Materials Business Plan, and 4) Storm Water Pollution Prevention Plan (SWPPP) which contains a Liquid Discharge Emergency Response Plan for release of landfill liquids to surface water. As such, impacts would be less than significant.

Future Phases

Impacts to emergency access would be the same as for Phases I and II with the exception of potential conflicts with the proposed Rose Hills Memorial Park roadway easement alternatives as discussed below.

Rose Hills Memorial Park

The proposed use of the internal roadway system in the park by funeral processions would result in a potentially significant emergency access impact, due to the prolonged blockages they would cause. The traffic generated by these processions is unlike other traffic expected to occur within the park because processions extend over substantial distances (up to 3,000 feet for a 60 vehicle procession). Proposed funeral processions would travel uphill on the eastern portion of the park loop road, which would have limited sight distance and would provide only one lane in each direction, making safe passing infeasible. While motorists are required to pull over or otherwise yield for emergency vehicles using a siren and red lights, the physical constraints on the internal roadway (e.g., lack of a useable shoulder) make it difficult for motorists to comply and for emergency vehicle drivers to safely pass. Emergency vehicles passing a funeral procession would need to travel in the opposing traffic lane for an extended distance and period of time, without the ability to see oncoming traffic that may be beyond a curve. This would not be an undue problem with other traffic expected to occur within

the park, because single vehicles can safely be overtaken in such conditions. The potential for delays to emergency service vehicles by funeral processions on the segments of the internal roadway system that lack adequate passing space represents a potentially significant impact. A potential emergency access impact would also occur on other roadway segments that are planned to have only one lane in each direction. Over the long term, potential exists that such traffic would obstruct narrow segments park roads and emergency vehicle access, delaying emergency responders with resultant impacts to public health, safety, and welfare. Implementation of Mitigation Measures T-1, T-2, T-4, T-5, and PS-4 would reduce these impacts to a less than significant level.

3.14.6 Mitigation Measures

T-1: Prior to the construction and use of the access road by Rose Hills Memorial Park, the County, the Sanitation Districts of Los Angeles County (Sanitation Districts), and Rose Hills Memorial Park (Rose Hills) will enter into a tri-party agreement setting forth each of the parties rights and responsibilities for the construction, maintenance, and use of the access road and any extension or modifications thereto.

The tri-party agreement will include funding for public service expenses per Mitigation Measure PS-4, as well as related access road management issues including, but not limited to:

- The number of proposed funeral processions that would utilize the Rose Hills Memorial Park access road easement, the size of such processions, and the allowable schedule for all such processions.
- Traffic management measures for all such funeral processions designed to ensure compatibility with park uses, including avoidance of peak park use periods.
- Roadway maintenance protocols such as inspections, maintenance actions, scheduling, and other factors designed to allocate cost to all parties proportionally based on their share of impact on the road.
- Offset the impacts of Rose Hills Memorial Park traffic on shared portions of the access road.
- Improvements to the park entrance to minimize traffic and operational conflicts with the Sanitation Districts and Rose Hills, such as signage, lighting, and roadway improvements.

T-2: No Rose Hills funeral processions shall occur on the shared access road on days with scheduled performance events (e.g. concerts, festivals) to avoid traffic congestion at the park entry and to improve safety to park users. Performance events are estimated to occur up to 25 times per year. The County shall inform Rose Hills of such events pursuant to the terms of the tri-party agreement.

T-3: Prior to the construction by Rose Hills of any extension to the shared access road to connect to the Rose Hills property, Rose Hills shall fund the design and construction of a trail overcrossing at the intersection with the Schabarum-Skyline Trail to permit trail users to safely bypass funeral

processions and vehicular traffic. The trail overcrossing shall be designed to be wide enough and of a gentle grade to safely accommodate equestrians, other trail users, and wildlife passage as appropriate. Safety fencing, landscape screening, earthen surfaces or other non-slip materials, and other techniques shall be employed to ensure trail user safety. The overpass shall be designed per the County of Los Angeles Trail Manual (adopted May 17, 2011). The Trail Manual includes plans for both at-grade crossings and grade-separated crossings of multi-use trails with roadways. The design shall be approved by the County's Department of Public Works and Department of Parks and Recreation prior to construction of the trail overcrossing. The requirements of this mitigation measure may become part of the tri-party agreement to be entered to among the County, the Sanitation Districts, and Rose Hills.

T-4: Rose Hills shall provide at least 24 hours advance notice to DPR staff for funeral processions that will travel through the Park to reach the Rose Hills property, including the estimated time of arrival. Rose Hills shall fund deployment of County traffic enforcement personnel to ensure protection of public safety, ease of public access to the Park, and minimal interference with Park users. These measures shall apply to Alignment Alternatives 1, 2, and 3 for the Rose Hills access road. The requirements of this mitigation measure may become part of the tri-party agreement to be entered to among the County, the Sanitation Districts, and Rose Hills.

T-5: To maintain emergency access and minimize potential conflicts with park users, the park access road between Crossroads Parkway South and the Visitor Center, and between the Visitor Center and the point at which the park loop road begins, shall be configured to accommodate shoulder space for inbound vehicles to pull over and allow emergency service vehicles to safely pass. The Rose Hills access road shall be designed to appropriate County standards, Fire Department requirements, which shall be subject to review and approval by the Department of Public Works and the Department of Parks and Recreation. These measures shall apply to Alignment Alternatives 1, 2 and 3 for the Rose Hills access road.

At the narrow section between the Visitor Center and the point at which the park loop road begins, the presence of methane collection systems adjacent to the road makes it impossible to provide two inbound lanes or to provide a similar pavement width, accordingly, a funeral procession could not pull over sufficiently to allow an inbound emergency vehicle to pass. To address this limitation, when funeral processions are passing at the same time that emergency access is needed, the multi-use trail surface will be designed and constructed to allow for inbound vehicles to temporarily pull over onto the trail to allow emergency vehicles to pass or, alternatively, a traffic control officer shall be stationed uphill from that narrow segment to halt outbound traffic when an emergency vehicle is arriving. These measures apply to Alignment Alternatives 1, 2 and 3 for the Rose Hills access road.

T-6: The County shall prepare and implement a Traffic Management Plan (TMP) which will identify the primary routes of travel to ensure efficient vehicle traffic movement and control between the I-605, SR-60, and adjacent roadways and the Proposed Project. The plan will designate the routes for entry and exit, signage placement along these routes, temporary street closures and other special traffic management procedures, such as use of traffic control personnel to direct traffic at key intersections. The staffing levels and locations of law enforcement officers, including security, traffic, and parking personnel will also be identified to assist with the control of the roadways. Each TMP shall be tailored to the specific special event(s) and approved prior to the start of the event. The TMP will also identify potential off-site parking locations and ways to bring event-goers from there to the park.

A Construction Traffic Management Plan (TMP) shall also be prepared and approved by the County prior to construction of any park improvements. The Construction TMP shall require prior notices, adequate sign-posting, detours, phased construction and temporary driveways where necessary to reduce construction-related impacts that may result from the Proposed Project. The Construction TMP shall also identify any haul routes for earth, concrete, or construction materials and equipment. The Construction TMP shall be subject to review and approval by the following County departments: Public Works, Fire, Regional Planning, and Sheriff prior to issuance of grading or building permits.

3.14.7 Residual Impacts After Mitigation

With implementation of Mitigation Measures T-1 through T-6, any residual impacts would be less than significant.

3.15 UTILITIES AND SERVICE SYSTEMS

This section describes the environmental setting for utilities and service systems, including the regulatory setting and existing site conditions, the impacts on utilities and service systems at the program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts. Review of utilities includes the adequacy of water supply to serve the Proposed Project, the availability of waste water disposal services, solid waste and electric power service.

The PHLPMP Initial Study determined that the Proposed Project would comply with the Los Angeles County Green Building Standards Code (L.A. County Code Title 31) and with federal, State, and local statutes and regulation related to solid waste. The Initial Study also resulted in a no impact determination for County of Los Angeles Energy thresholds. These issues are not discussed further in this section.

3.15.1 Environmental Setting

3.15.1.1 Water Supply

Water supply at the landfill includes both potable and reclaimed water. Potable water is supplied by the San Gabriel Valley Water Company (SGVWC) and reclaimed water is supplied by the San Jose Creek Water Reclamation Plant (San Jose Creek WRP).

The SGVWC service area covers 45 square miles and includes the City of Industry and unincorporated areas of Los Angeles County (SGVWC 2016). The SGVWC's water supply consists mainly of groundwater from the Main San Gabriel Valley and Central Groundwater Basins. The SGVWC provides the potable water supply for the current operations at the Puente Hills Landfill. The Puente Hills Landfill water supply is obtained from the Main San Gabriel Basin (Basin).

The storage capacity of the Basin was estimated to be 10,438,000 acre feet (af) by the California Department of Water Resources (DWR) (1975). Changes to this report from the DWR report include removal of the Raymond Groundwater Basin (new basin 4-23) and addition of the Upper Santa Ana Valley (old basin 4-14). The storage capacity of the Raymond Basin is about 450,000 af and the storage capacity of the Upper Santa Ana Valley Basin is about 750,000 af (DWR 1975). Taking these changes into account suggests that the storage capacity of the San Gabriel Valley Basin is about 10,740,000 af (DWR 2004).

Water within the Basin is primarily calcium bicarbonate in character. In the north, west, and central regions of the Basin, total dissolved solids (TDS) ranges from 90 to 4,288 milligrams per liter (mg/L) and averages around 367 mg/l (DWR unpublished data). In the southern portion of the Basin, the TDS averages around 1,222 mg/L. TDS content ranges from 500 to 1,500 mg/L in the eastern part of the Basin, and from 200 to 500 mg/L in the northeast part. Data from 259 public supply wells shows an average TDS content of 318 mg/L and a range of 172 to 914 mg/L. Four areas of the Basin are Superfund Sites. Trichloroethylene, Perchloroethylene, and Carbon Tetrachloride

contaminate the Whittier Narrows, Puente Basin, Baldwin Park and El Monte areas (DWR 2004).

Operating Safe Yield (OSY) is the quantity of water which the Main San Gabriel Basin Watermaster (Watermaster) determines may be pumped from the Basin in a fiscal year, free of replacement water assessments. The Watermaster evaluates numerous factors when determining the OSY. The most critical factors are the provisions of the Judgment and the current and projected groundwater elevation at the Baldwin Park Key Well (Key Well), which represents the water stored in the Basin. Watermaster also reviews historical and current hydrologic conditions within the Basin, such as rainfall, storage of local runoff in surface reservoirs, and conservation of local runoff; the availability of Supplemental Water; the quantity of water in Cyclic Storage; Carry-over Rights; and other information. During water year 2014-15, rainfall was 7.47 inches (41 percent of average), replenishment of local runoff was about 14,500 acre-feet (af) (14 percent of average), untreated imported water deliveries were 41,500 af and groundwater production was 208,300 af. These factors brought the operational groundwater elevation at the Key Well to 166.2 feet (measured at about 174 feet) by November 2015 (MSGB Watermaster 2016).

As of February 29, 2016, rainfall in the San Gabriel River watershed has been about 70 percent of average for that time of year. Local runoff was about 21 percent (about 21,700 af) of the 42-year average. Fiscal year 2015-16 is the fifth consecutive year of below average rainfall. The El Niño conditions have not resulted in above-average rainfall for the Basin's watershed (MSGB Watermaster 2016).

The Watermaster established the OSY for fiscal year 2015-16 at 150,000 af. Based on an evaluation conducted by the Watermaster, the Basin's OSY for fiscal year 2016-17 should be maintained at 150,000 af. A preliminary report completed for determining the OSY recommends the Watermaster should consider maintaining the OSY at no more than 150,000 af until such time the operational elevation at the Key Well is significantly above elevation 200 feet, in accordance with the Judgment provisions. The SGVWC has a pumper's share of 10.31274 percent which allows it to pump 15,469.11 acre feet per year (OSY of 150,000 acre feet) free of replacement water assessment (MSGB Watermaster 2016).

Groundwater is obtained from four separate SGVWC wells. This water source is treated prior to delivery to the landfill (Sanitation Districts 2001). Potable water is supplied to two storage tanks on the landfill. The first is a tank fed directly from the main 14-inch lateral from Crossroads Parkway and supplies gravity-fed pressure to the facilities in the scales area for the use at the Sanitation Districts office. From the first lower tank, water is pumped to another storage tank located near the Gas-to-Energy Phase II building located at the west end of the landfill. From this location the water pressure within the lines supplies the Sanitation Districts buildings associated with the gas-to-energy process. The cooling tower at the Gas-to-Energy Facility utilizes both reclaimed and potable water as needed for proper functioning. The potable water service line is connected to the non-potable irrigation storage tank with an air gap so a backup source is provided and periodic salts flushing could be provided with lower-salinity water (PACE 2016).

Reclaimed water supplied by the San Jose Creek WRP is used for irrigation, dust control, cooling tower water, and other non-potable uses (Sanitation Districts 2001). Currently, three storage tanks are utilized to irrigate the landfill based on elevation differences.

- The lower-zone contains a 650,000-gallon tank at an elevation of 725 feet. This network supplies recycled water to the Puente Hills Gas to Energy Facility cooling tower, the fill stand, and to the irrigation piping located on the landfill's front face (non-native arboretum) between elevations of approximately 300 and 600 feet. The lower-zone tank irrigates approximately 25 acres.
- The mid-zone contains a 1,200,000-gallon tank at an elevation of approximately 1,000 feet. This tank serves the irrigation needs of both the landfill and Rose Hills Memorial Park. The mid-zone irrigation network extends above and beyond the front face lower-zone up to an elevation of approximately 900 feet. Approximately 50 acres of the landfill is irrigated from this tank.
- The high-zone contains an 800,000-gallon tank located at an elevation of approximately 1,150 feet at Nike Hill. The high-zone irrigation network supplies water to the high-zone irrigation system and the fill stands (PACE 2016).

Approximately four to 50 million gallons of water are used per month depending on the season, a peak of approximately two million gallons per day (mgd) (PACE 2016).

3.15.1.2 Wastewater Services

Wastewater Collection

The Los Angeles County Consolidated Sewer Maintenance District (CSMD) is administered by the Los Angeles County Department of Public Works (DPW), and contracts with various jurisdictions to provide and maintain public sewer systems. The CSMD provides sewer services to the unincorporated areas of Los Angeles that are part of the Proposed Project, as well as the City of Industry (DPW 2016). An eight-inch sewer line is supplied from Crossroads Parkway that splits to the scales area using a six-inch line and an eight-inch line running up to the Gas to Energy Facility.

Wastewater Treatment

The Sanitation Districts operates a Joint Outfall System (JOS), which is an interconnected system of facilities that provides sewage treatment, reuse, and disposal for residential, commercial, and industrial users. There are two water reclamation plants located within the vicinity of the Proposed Project. These include the San Jose Creek WRP and the Whittier Narrows Water Reclamation Plant (Whittier Narrows WRP). The San Jose Creek WRP supplies reclaimed wastewater to the Puente Hills Landfill. The reclaimed wastewater is pumped from the San Jose Creek WRP to a 650,000-gallon tank located above Puente Hills Energy-Recovery-from-Gas (PERG) facility and then to a 1,200,000-gallon tank located in the Rose Hills Memorial Park. Reclaimed water at the landfill is used for irrigation, dust control, cooling tower water, and other non-potable uses (Sanitation Districts 2001). The San Jose Creek WRP has a 100 mgd capacity and treated average flows of 63 mgd in 2013. The Whittier Narrows WRP has a 15 mgd capacity and treated average flows of 8.6 mgd in 2013 (County of Los Angeles 2014).

3.15.1.3 Solid Waste

The Proposed Project is located within the boundaries of the Puente Hills Landfill, which is owned by the Sanitation Districts of Los Angeles County. The landfill is approximately 1,365 acres in size and has been closed since 2013. The Puente Hills Materials Recovery Facility (MRF) is located within the landfill property and has a maximum permitted throughput of 4,400 tons per day (County of Los Angeles 2014). The Sanitation Districts has developed the Puente Hills Intermodal Facility that would serve as the dedicated intermodal yard located in close proximity to the Puente Hills MRF. The Puente Hills Intermodal Facility is a component of the Sanitation Districts Waste by Rail System. Once online, waste would be transported via train to the Mesquite Regional Landfill. This 4,250-acre site is permitted for 20,000 tons per day, with a total capacity of 600 million tons. The project life of the Mesquite Regional Facility is approximately 100 years (Sanitation Districts 2016a).

3.15.1.4 Energy (Electrical)

Southern California Edison (SCE) provides electricity to meet the existing electrical needs of the landfill. The SCE network within the landfill consists of electrical poles and subterranean feeds. SCE transmission lines run along the southern edge of the landfill. The landfill also contains a Gas-to-Energy Facility that generates electricity.

3.15.2 Regulatory Setting

3.15.2.1 Federal

Clean Water Act

The Clean Water Act is discussed in Section 3.9, Hydrology and Water Quality, of this Draft PEIR.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was passed in 1974 in order to protect public health by regulating the nation's public drinking water supply. The SDWA gives the Environmental Protection Agency (EPA) the authority to create national health-based standards for drinking water in order to protect against contamination. The SWDA focuses on providing safe drinking water from the tap, protecting the source water, and improving water systems. This act can be applied to every public water system in the nation. The EPA creates national primary drinking water regulations, which set an enforceable maximum contaminant level for contaminants in drinking water. The EPA also sets forth regulations on how to remove contaminants from drinking water (EPA 2004).

3.15.2.2 State

Urban Water Management Planning Act of 1983

The Urban Water Management Planning Act of 1983 requires California's urban water suppliers that either provide over 3,000 af of water annually or serve more than 3,000 connections to submit an Urban Water Management Plan (UWMP) to the Department of

Water Resources (DWR) every five years. In these plans, suppliers assess the reliability of their water sources over a 20-year planning horizon considering normal, dry, and multiple dry years. The purpose of these plans is to ensure that water suppliers have adequate water supplies for existing and future demands (CWC 2013).

Sustainable Groundwater Management Act (SGMA)

In September 2014, Governor Edmund G. Brown Jr. signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA) (CA Groundwater 2016). The Sustainable Groundwater Management Act:

- Provides for sustainable management of groundwater basins
- Enhances local management of groundwater consistent with rights to use or store groundwater
- Establishes minimum standards for effective, continuous management of groundwater
- Provides local groundwater agencies with the authority, technical, and financial assistance needed to maintain groundwater supplies
- Avoids or minimizes impacts for land subsidence
- Improves data collection and understanding of groundwater resources and management
- Increases groundwater storage and removes impediments to recharge
- Empowers local agencies to manage groundwater basins, while minimizing state intervention

California Plumbing Code

Part 5 of the California Building Code is the California Plumbing Code, which provides standards for the design and construction of water and sewer systems, storm drains, and recycled water systems in buildings (CBSC 2016).

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Re-use and Recycling Access Act of 1991 set the California Department of Resources Recycling and Recovery, also known as CalRecycle, in charge of drafting a model ordinance relating to adequate areas for collecting and loading recyclable materials in development projects. Local agencies, such as the County of Los Angeles, are then required to adopt the model, or an ordinance of their own.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires all counties to prepare a Countywide Integrated Waste Management Plan (CIWMP). The plan must include the following elements: source reduction, recycling and composting, and environmentally safe transformation and land disposal (CalRecycle 1997).

3.15.2.3 Local

Los Angeles County Code of Ordinances

Chapter 20.87, Construction and Demolition Debris Recycling and Reuse, amends Title 20 of the County Code. The County of Los Angeles added this ordinance which states that at least 50 percent of all construction and demolition debris, soil, rock, and gravel removed from a project site must be recycled or reused. A Recycling and Reuse Plan (RRP) must be submitted to the DPW, Environmental Programs Division, after an application for a permit has been filed for a project. The RRP must contain a project description and the estimated total weight of the project's construction and demolition debris, with separate estimates for (1) soil, rock, and gravel; (2) other inert materials; and (3) all other project construction and demolition debris. The ordinance also requires that either an initial progress report or annual progress report be submitted to the Director of the DPW for review.

County of Los Angeles Integrated Waste Management Plan

In accordance with AB 939, the Sanitation Districts created a CIWMP that was adopted in 1997. The Los Angeles County CIWMP establishes countywide goals for waste management, describes the historical countywide system of waste management infrastructure, describes the current system of waste management in the County, and summarizes the waste management programs.

The CIWMP includes the following elements: source reduction and recycling element, household hazardous waste element, countywide sitting element, and the non-disposal facility element. An annual report on each element is published every year to update the public on any changes that have taken place to the CIWMP (DPW 2012).

Los Angeles County General Plan

The County of Los Angeles General Plan Public Service and Facilities Element contains goals and policies for Sanitary Sewers.

Goal PS/F 4: Reliable sewer and urban runoff conveyance treatment systems.

Policy PS/F 4.1:	Encourage the planning and continued development of efficient countywide sewer conveyance treatment systems.
Policy PS/F 4.2:	Support capital improvement plants to improve aging and deficient wastewater systems, particularly in areas where the General Plan encourages development, such as TODs.
Policy PS/F 4.3:	Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.
Policy PS/F 4.4:	Evaluate the potential for treating stormwater runoff in wastewater management systems or through other similar systems and methods.

City of Industry

The City of Industry's General Plan Resource Management Element has set goals and policies related to the City's watershed, water quality, and waste collection and recycling. Goals and policies applicable to the Proposed Project are as follows:

Goal RM1: A reliable system that enables the City to efficiently and cost-effectively manage its water resources and needs.

Policy RM1-1: Work with local water providers to construct, maintain, and upgrade our water supply, transmission, storage, and treatment facilities to support existing and new development.

Policy RM1-4: Require control and management of urban runoff, consistent with Regional Water Quality Control Board and Los Angeles County MS4 Permit Regulations.

Policy RM1-5: Seek and pursue the most efficient and cost-effective means of implementing NPDES permit requirements. Allow new development projects to creatively implement NPDES standards and requirements.

Policy RM1-6: Encourage the use of low impact development strategies to intercept runoff, slow the discharge rate, increase infiltration, and ultimate reduce discharge volumes to traditional storm drain systems.

Policy RM1-7: Protect groundwater quality by incorporating strategies that prevent pollution, require remediation where necessary, capture and treat urban runoff, and recharge the aquifer. Cooperate with federal, state, and local agencies that are charged with improving water quality in the region.

Policy RM1-8: Require the management of wastewater discharge and collection consistent with requirements adopted by the Regional Water Quality Control Board.

Additionally, the City of Industry's General Plan Resource Management Element also identifies goals and policies related to the City's solid waste. Goals and policies applicable to the Proposed Project are as follows:

Goal RM4: A cost-effective, integrated waste management system that meets or exceeds state and federal recycling and waste diversion mandates.

Policy RM4-1: Meet or Exceed AB 939 requirements.

3.15.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and County of Los Angeles thresholds, Implementation of the Proposed Project may result in a potentially significant impact if the Proposed Project would cause the following:

- Exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards;

- Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Create drainage system capacity problems, or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses;
- Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, and local statutes and regulations related to solid waste.

3.15.4 Environmental Impacts

Threshold:	*Would the project exceed wastewater treatment requirements for the Los Angeles Regional Water Quality Control Board?*

Phases I and II

The Proposed Project would develop a regional park at the closed Puente Hills Landfill. Phase I would establish access infrastructure to open the landfill for the public and develop recreational facilities, such as trails and a bike skills area. Phase II would continue improving the access infrastructure, which would include the construction of a Trail Lift structure to move people from the Entry Plaza to Nike Hill, and further improvements to the top decks to provide additional recreational facilities and attract visitors. The Proposed Project would generate wastewater from four restrooms provided for visitors and staff. Restrooms proposed in Phase I and II would be connected to an existing sewer main on Workman Mill Road, northwest of the project, via new sewer lines constructed by the Proposed Project (PACE 2016). Because the Proposed Project would introduce additional people (park visitors and staff) to the landfill, an increase in the wastewater currently being generated at the landfill is expected.

Based on projected visitation levels on an average of 32,200 park users per month (at full buildout), average wastewater flows at completion of Phases I and II are estimated to be 6,000 gpd. While planned restrooms would accommodate part of this increased flow, wastewater demand generated at special events would also likely be met by use of portable toilets. It is anticipated that 100 portable toilets or six trailer mobile vaulted restrooms with 20 stalls each would meet the demand for events attracting up to 5,000 visitors. All wastewater generated by the Proposed Project would be discharged to the sanitary sewer at two potential locations. One discharge location is at a Sanitation Districts 15-inch diameter trunk sewer located in a private right-of-way in the landfill. This 15-inch diameter trunk sewer has a capacity of 4.2 mgd and conveyed a peak flow of 0.6 mgd when last measured in 2013. The second potential discharge location is a local sewer line located in Workman Mill Road, which is not maintained by the Sanitation

Districts. This local sewer line conveys wastewater to the Sanitation Districts' Joint Outfall H Unit 5A Trunk Sewer located in Peck Road just south of I-605. This Sanitation Districts' 51-inch diameter trunk sewer has a capacity of 72 mgd and conveyed a peak flow of 67.8 mgd when last measured in 2014. The wastewater from the two potential discharge locations are treated at the Joint Water Pollution Control Plant located in the City of Carson, which has a design capacity of 400 mgd and currently processes an average flow of 258.4 mgd (Sanitation Districts 2016b). The increase of wastewater by the Proposed Project is not expected to exceed wastewater treatment requirements for the Los Angeles RWQCB. Impacts would be less than significant.

Future Phases

Future Phases would continue the full development of the top decks and the Flare Site. Phase III would expand the development on the Eastern and Southern Decks and include the development of the proposed Rose Hills Memorial Park roadway easement. Three easement alternatives are being evaluated. Generally, all three easement alternatives follow the eastern two-way road and differ in the alignment across the Southern Deck. Phases IV through VI would improve internal circulation and expand the level of development as additional areas at the landfill are available for development. Future Phases would include additional restrooms and water fountains to service the additional areas as they are developed. At full buildout restrooms would be provided at the Entry Plaza, Parking Lot B (near the M&O Yard), Nike Hill, and at the Southern Deck. The design of restroom facilities proposed in Future Phases is currently unknown and would be subject to future master planning. However, it is anticipated that the addition of new water fixtures would result in a slight increase in wastewater generated at the project site and would be similar to Phases I and II. Therefore, impacts would be less than significant.

Threshold:	*Would the project create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Phases I and II

The Proposed Project would require water for drinking and restroom facilities and for landscape irrigation. Wastewater would be generated from restroom facilities. Projects included in Phases I and II would establish access infrastructure and begin the development of recreational facilities and establishment of landscaping on the top decks. During these two phases development would be focused on the Western Deck; however, some small-scale development would occur within the Eastern and Southern Decks.

Potable water would be required for drinking and restroom facilities. As previously stated, SGVWC provides the potable water supply for the landfill. To meet the potable water needs of the Proposed Project, the potable water line currently located near the Gas-to-Energy Facility would be extended via a new water line. Potable water would be pumped via the new water line to a proposed 100,000-gallon tank located just west of

Nike Hill at an approximate elevation of 1,125 feet. Providing the project site with a 100,000 gallon tank would reduce the frequency of pumping required and would also allow for expansion of new water fixtures. This new 100,000-gallon tank would gravity feed the restroom facilities and drinking fountains. The demand for these fixtures has been estimated to be approximately 500 gallons per day (gpd) (PACE 2016). In addition, during an estimated 25 special events annually, up to 5,000 visitors would utilize park facilities, generating an additional demand for potable water. However, due to the infrequent nature of these events, the use of portable toilets, and availability of alternate sources of potable water for drinking (e.g., water bottles), it is anticipated that potable water demand would be met by the SGVWC. Due to the minimal potable water needs of the regional park, it is anticipated that SGVWC would have sufficient capacity to meet the potable water needs of the Proposed Project and that increased demands upon the SGVWC would not be substantial and would not exacerbate overdraft or other groundwater conditions of concern. Impacts would be less than significant.

The Proposed Project's greatest demand for water would be for landscape irrigation. The Proposed Project would expand the landfill's reclaimed wastewater distribution system to meet the needs of the Proposed Project. The proposed reclaimed water system would be connected to the existing 18-inch pipe main that is being serviced from the Nike Hill tank (800,000 gallons). The proposed laterals would service four proposed fire hydrants and irrigation lines located on the top decks. It is estimated that the Proposed Project would use approximately 182 million gallons of reclaimed water per year [approximately 500,000 gallons per day (gpd)]. Currently, the San Jose Creek WRP supplies reclaimed wastewater to the landfill. The San Jose Creek WRP has a design capacity of 100 million gallons per day (mgd). During fiscal year (FY) 2013-2014 the San Jose Creek WRP produced 59.43 mgd (59,430,000 gpd) of reclaimed water (Sanitation Districts 2014). The Proposed Project (at full build out) would demand approximately 0.841 percent of the reclaimed water produced daily by the San Jose Creek WRP. As such, the Proposed Project would not create water capacity problems due to irrigation. Impacts would be less than significant.

Wastewater demands of the Proposed Project are addressed above, and would not create wastewater treatment capacity problems. Impacts would be less than significant.

Future Phases

Impacts to water and wastewater capacity from Future Phases would be similar to Phases I and II. Potable water needs would increase slightly with the addition of restrooms. As all top decks are developed and landscaped, more reclaimed water would be needed for irrigation. Future Phases would include improvements to the reclaimed water distribution system to adequately irrigate new areas as they are landscaped. Impacts would be less than significant.

Threshold:	*Would the project create drainage system capacity problems, or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Phases I and II

Phases I and II would establish access infrastructure and begin the development of recreational facilities and the establishment of landscaping on the top decks. The proposed development would require compatibility with the landfill's existing drainage system. Drainage controls, structures, and facilities on the top decks would be designed to divert any precipitation or tributary runoff and prevent ponding and percolation of water. New drainage systems would tie into existing systems.

Implementation of Phases I and II would include the construction of a new drainage system to safely collect stormwater runoff from the project areas. The Proposed Project would not substantially alter the grade of the top decks. The top decks must be maintained at a minimum three percent slope to shed surface water and prevent ponding. The only area requiring significant amounts of grading would be the buttress area. The buttress area is located between the M&O Yard and Nike Hill. Approximately 300,000 cubic yards of soil would be added to this location to stabilize Nike Hill, which was over-excavated in anticipation of receiving landfill waste. Stormwater runoff from this road segment would be conveyed through a curb gutter system into a new debris basin (Basin T) to be located just west of the M&O Yard (PACE 2016). The drainage study completed for the Proposed Project found that the existing detention basins within the landfill would see negligible changes in volumes and peak flows due to the minimal impervious area added within the park by the Proposed Project (PACE 2016). Therefore, the only proposed drainage facilities to be constructed or improved by the Proposed Project would be Basin T and associated conveyance facilities, as discussed above. It is anticipated that the existing drainage system, along with modifications to integrate the proposed development, would have sufficient capacity. As such, impacts would be less than significant.

Future Phases

As the development within the landfill increases, new drainage systems would be constructed. The landfill's existing drainage system would also be modified to address any deficiencies in capacity or water quality concerns. Since the drainage system is based on gravity and the landfill will settle at different rates drainage characteristics would continue to be studied in later phases of the Proposed Project. If drainage is no longer effective in an area, additional drains would be added or the area would be regraded to at least a three percent grade to avoid unplanned ponding. Impacts from the construction and expansion of drainage facilities would be similar as those described for Phases I and II. It should be noted that there would be slight variations in the amount of runoff for the three Rose Hills Memorial Park roadway easements. New drainage systems and improvements to the landfill's existing drainage system would be designed to safely convey stormwater through the landfill. Impacts would be less than significant.

Threshold:	*Would the project have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses?*

Phases I and II

The Proposed Project would require water for drinking and restroom facilities and for landscape irrigation. Landscape irrigation would create the greatest demand for water. Potable water would be needed for drinking and restroom facilities while reclaimed water could be used for landscape irrigation. Please see the discussion regarding reclaimed water demand and capacity of the San Jose Creek WRP above. The Proposed Project (at full buildout) would demand approximately 0.841 percent of the reclaimed water produced daily by the San Jose Creek WRP. As such, the Proposed Project would not create water capacity problems due to irrigation. Impacts would be less than significant.

It is anticipated that the Proposed Project would require approximately 500 gallons of potable water per day for restroom and water fountains (PACE 2016). Due to the minimal potable water needs of the regional park, it is anticipated that SGVWC would have sufficient water supplies to meet the potable water needs of the Proposed Project. Impacts would be less than significant.

Future Phases

Future Phases would continue with the full development of the top decks and the Flare Site. As additional restroom and landscaping are added, water needs of the Proposed Project would increase. However, only a minimal increase in the need for potable water is anticipated due to the low amount of restrooms or other potable need facilities (e.g., café) at full buildout. Furthermore, reclaimed water for landscaping irrigation would continue to be available. Impacts would be less than significant.

Threshold:	*Would the project create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

Phases I and II

Electricity would be required for proposed buildings, safety and security lighting, and for facilities like the trail lift. Park development would include recreational elements that support sustainable technologies. The park would include solar technology, a partially solar powered scenic trail lift, electric car hook-ups, and a Leadership in Energy and Environmental Design (LEED) certified building (Visitor Center). Structures built would be energy neutral or energy producers. It is anticipated that the Proposed Project would not create energy utility system capacity problems. Impacts would be less than significant.

Future Phases

Development under Future Phases would continue the sustainable approach described for Phases I and II. Impacts would be less than significant.

Threshold:	*Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

Phases I and II

Solid waste would be generated during construction. Construction of Phases I and II would occur over a 20-year period. During this period, trash would be generated gradually as each park facility is built. Trash would also be generated during operation of the park. Trash generated during operation would be typical of trash generated by park visitors (i.e., plastic bottles, food wrappers, food waste).

Trash generated by the Proposed Project would be collected by a County approved waste collector and taken to the Puente Hills MRF, located on the landfill property, where it would be processed. The Puente Hills MRF has a maximum permitted throughput of 4,400 tons per day (County of Los Angeles 2014). The MRF is designed specifically for the salvage of recyclable materials. Trash processed through the MRF is trucked to various regional landfills, which include the Olinda Alpha Sanitary Landfill and the Frank Bowerman Landfill. The Olinda Alpha Sanitary Landfill has a remaining capacity of 36,589,707 cubic yards (cy). The Frank Bowerman Landfill has a remaining capacity of 205,000,000 cy (CalRecycle 2016). The Sanitation Districts is also developing a Waste-by-Rail system to transport waste via train to the Mesquite Regional Landfill. The Mesquite Regional Landfill is a 4,250-acre site that is permitted for 20,000 tons per day, with a total capacity of 600 million tons (Sanitation Districts 2016a). As such, implementation of Phases I and II would not affect landfill capacity. Impacts would be less than significant.

Future Phases

Future Phases would continue with the full development of the top decks and Flare Site. Trash generation from construction of Future Phases is anticipated to be similar as described for Phases I and II. However, trash generated during park operation is expected to increase due to an anticipated increase of park visitors. An increase in park visitors is anticipated due to the continued development of the park and the diverse recreational opportunities that may attract park visitors. However, as described in the response for Phases I and II sufficient landfill permitted capacity is available to serve the Future Phases of the Proposed Project. Therefore, implementation of Future Phases would not affect landfill capacity. Impacts would be less than significant.

3.15.5 Mitigation Measures

The Proposed Project would not result in any significant utility impacts; no mitigation measures are required.

3.15.6 Residual Impacts After Mitigation

Any residual utility impacts would be less than significant.

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 4.0 ALTERNATIVES TO THE PROPOSED PROJECT

4.1 INTRODUCTION

CEQA requires that an EIR consider a reasonable range of alternatives to a proposed project that can attain most of the basic project goals, but has the potential to reduce or eliminate significant adverse impacts of the proposed project and may be feasibly accomplished in a successful manner, considering the economic, environmental, social, and technological factors involved. An EIR must evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6(a), (d) and (e)). If certain alternatives are found to be infeasible, the analysis must explain the reasons and facts supporting that conclusion.

Section 15126.6(d) also requires that, if an alternative would cause one or more significant effects in addition to those caused by the proposed project, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. One of the alternatives analyzed must be the “No Project” alternative (CEQA Guidelines Section 15126.6(e)). The EIR must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency’s determination (CEQA Guidelines Section 15126.6(c)).

CEQA Guidelines Section 15126.6(e)(2) requires that the EIR identify the environmentally superior alternative. If that alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The environmentally superior alternative is discussed in Section 4.6.

4.2 ALTERNATIVES SELECTION PROCESS

As described above, alternatives were identified and evaluated as to whether the alternative would attain most of the project objectives, avoid or substantially lessen significant effects identified for the Proposed Project, and would be feasible. The only significant unavoidable impact from the Proposed Project would be greenhouse gas.

Coordination between multiple agencies, policy makers, experts, communities, and local and regional stakeholders was conducted as part of the park master plan process. Creation of the initial vision for the park was reliant on the early outreach efforts to these groups. Over a six-month period in late 2015 and early 2016, the County sought and documented the public’s needs and interests through community meetings and other means in order to shape the initial park vision. Six distinct park components emerged from this process:

1. Provide connections to nature
2. Provide ways for people to be healthy and active
3. Provide active sports facilities
4. Provide access
5. Alleviate pressures on the existing Puente Hills trails
6. Provide gateways to environmental stewardship

Alternative plan development sought diverse opinions to form three multi-layered, community driven designs. The main themes that emerged from the site analysis and the community/stakeholder visioning process were combined into three alternative park development concepts.

- **Ecology:** Emphasize habitat enhancement, native flora and fauna, nature education and programs, trails, scenic overlooks, and interpretation.
- **Recreate:** Provide dynamic, active fitness options. Expanded fitness, family activities, and programming.
- **Upcycle:** Elevate the opportunity for a hybrid park to cohabitate with a working industrial facility; highlight the unique landfill infrastructure and leverage the site's history to inspire environmental awareness, sustainability, and innovation.

Results of public voting clearly selected Ecology as the main theme. However, family recreation and fitness dominated the selection of recreational elements that were chosen for the new park. The final park concept (Proposed Project) is an adaptation of the original Ecology concept, but retains aspects of the other themes as each design proposes unique solutions that can be transferred over to the Ecology theme.

The master plan process helped inform the alternatives selection process in the EIR by providing three concept plans that were vetted with the community and DPR. As described above, the Proposed Project is the Ecology theme with selected elements from the Recreation and Upcycle themes. In response to comments received during the EIR scoping period, the more passive Ecology and higher use Recreate alternatives were further defined and carried forward for analysis as the Low Build Alternative and the High Build Alternative. As such, no alternatives were rejected; instead they were further developed as part of the EIR. These two alternatives are described below and were evaluated for their ability to meet the project objectives. They were both deemed feasible and reasonable alternatives to the Proposed Project.

4.3 ALTERNATIVES CARRIED FORWARD FOR ANALYSIS

4.3.1 Low Build Alternative

4.3.1.1 Purpose and Intent

Under the Low Build Alternative, the park would be developed for passive recreational uses without the varied and active recreational facilities included in the Proposed Project. This Alternative would focus more on establishing passive open space and habitat areas rather than on the provision of diverse recreational opportunities. This Alternative would emphasize habitat enhancement, native flora and fauna, nature education and programs, trails, scenic overlooks, and interpretation to a substantially greater extent than the Proposed Project. Under this Alternative, the focus on limited passive uses would substantially reduce both the number of visitors to the park and the diversity of user groups by eliminating those users and groups more oriented toward active and varied uses as shown in Table 4-1.

Table 4-1. Changes in Major Improvements Under the Low Build Alternative

RECREATION FACILITIES AND USES	PROPOSED PROJECT	LOW BUILD ALTERNATIVE
Traffic Circle	Yes	No (traffic signal)
Park Entry Plaza	8,600 sf	5,600 sf
Trail Lift	Yes	No
Maintenance & Operations Area	1,650 sf	1,300 sf
Road Circulation	One-way, 4-mile-long loop road, approx. 20 ft wide	Two-way, 2-mile-long non-loop road, approx. 40 ft wide
Parking	200 parking spaces	220 parking spaces
Nike Hill Scenic Overlook	6,000 sf	1,000 sf
Anticipated Monthly Visitation	32,200 visitors	3,000 visitors
Miles of Trail Development	13.75	5.75
Bike Skills Areas/ Rentals	Yes	No
Performance Space	Yes	No
Public Restrooms	4	1
Picnic Areas	4	2
Interpretive/Overlook Areas	7	4
Dog Park	Yes	No
Slides/ Zip Line/ Stair Climbs	Yes	No
Flare Tower Structure	Yes	No
Temporary Art Installation	Yes	No
Plant Nursery	Yes	No
Pedestrian Planted Overcrossing	Yes	No
West Side Pedestrian Bridge	Yes	No

The goal of this Alternative would be to maximize enhancement of native habitats and provision of wildlife linkages within the park while providing passive recreational amenities to enable public enjoyment of this County regional park. This Alternative's nature-focused and passive recreational options would fulfill some of the project objectives, but half of the objectives would not be met. Specifically, low intensity park development options may meet ecological and habitat enhancement and passive recreational goals, but due to the loss of varied recreational opportunities to meet the needs of diverse user groups, the Low Build Alternative would not meet a number of key project objectives as discussed in Table 4-2.

Table 4-2. Low Build Alternative Project Objectives

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
1. Develop a "Park For All" that offers diverse, healthy, passive, and active recreational experiences and programming for visitors of all ages, abilities, interests and backgrounds.	**No**. This Alternative would not provide an accessible regional "Park For All" as it would include only limited largely passive recreational experiences, targeting a more limited set of visitors of certain abilities and interests.

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
2. Develop a regional destination park which uniquely reflects the site's history, urban-wildland location, scale and topography.	**Yes**. This Alternative would partially achieve this objective by providing a regional park in a unique area of the Puente Hills, while addressing habitat enhancement and connectivity. However, the park would not include stair climbs, slides, or zip lines that would emphasize or uniquely reflect the site's topography.
3. Develop a range of active and passive amenities to meet varied recreational demands and provide outdoor fitness opportunities to help address national trends related to inactivity, obesity and nature-deficit disorder.	**No**. This Alternative would provide outdoor fitness opportunities, but would not fully meet this objective as it would not provide a wide range of amenities to meet varied recreational demands.
4. Attract diverse, new audiences, particularly underrepresented or disadvantaged populations, to inspire connection to outdoor activities, nature, and environmental stewardship.	**No**. This Alternative would not attract diverse new audiences, particularly underrepresented or disadvantaged populations, due to its limited singular focus on passive recreation and lack of accessible transit options both to and within the park, which would not serve the diverse communities of the San Gabriel Valley.
5. Integrate active recreational facilities with natural habitats to enhance and sustain both the recreational and ecological functions of the park.	**No**. This Alternative would not integrate active recreational facilities with natural habitats due to its focus on habitat enhancement and limited passive recreational amenities.
6. Promote and support wildlife movement and habitat connectivity through the Puente Hills Significant Ecological Area (SEA), the Rio Hondo College Wildlife Sanctuary SEA and the San Gabriel River.	**Yes**. This Alternative would meet this objective by providing large areas of undisturbed restored habitat to facilitate wildlife movement through the Puente Hills Significant Ecological Area and to the San Gabriel River.
7. Demonstrate environmentally sustainable design and practices.	**Yes**. This Alternative would meet this objective by emphasizing native habitat enhancement and adhering to LEED sustainable building design criteria in all structures.

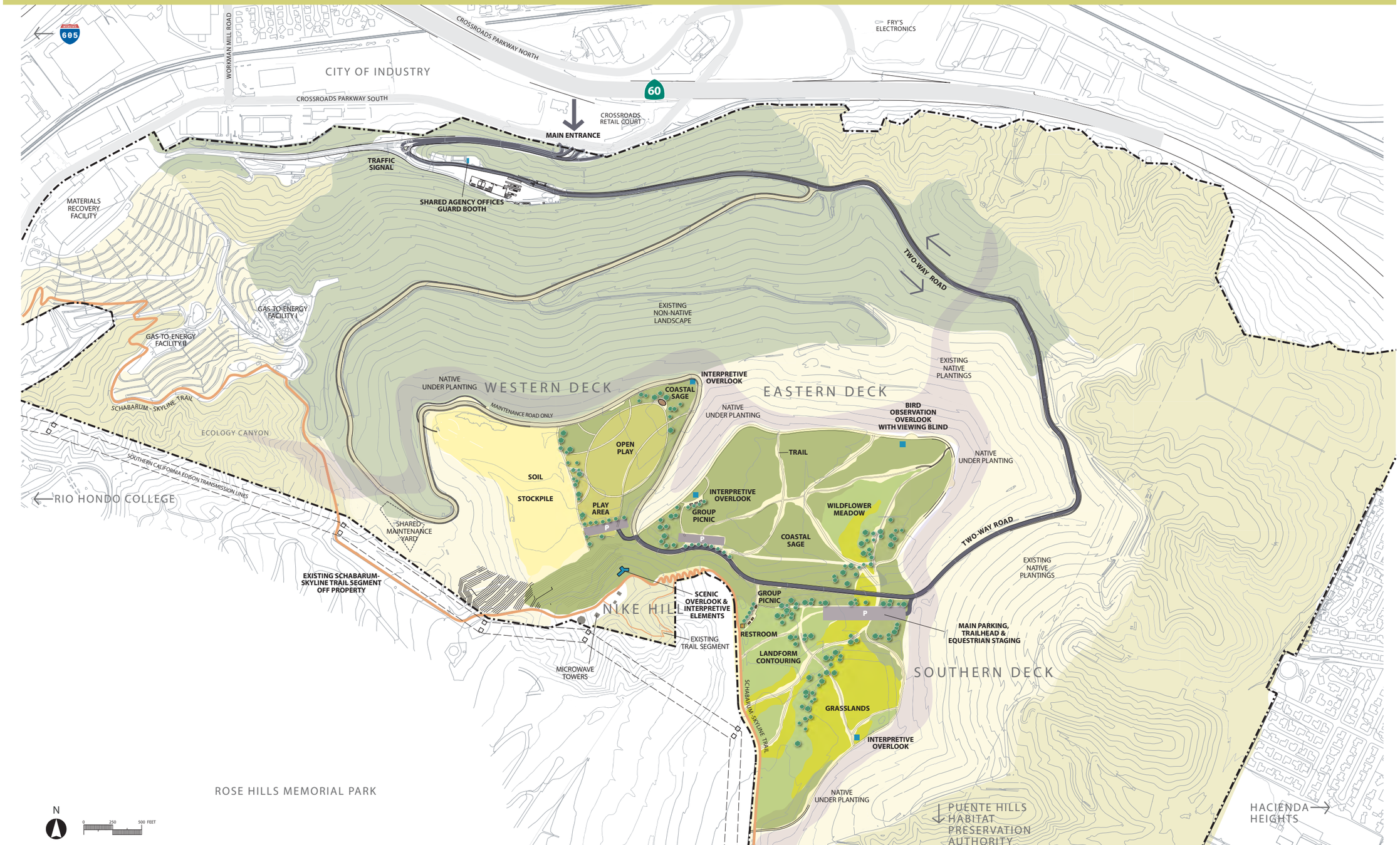
PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
8. Provide multi-modal, universal access and circulation into and through the park to the extent feasible.	**No**. This Alternative would not meet this objective, due to lower intensity development and resultant demand for and absence of an internal park shuttle and deletion of elements including the trail lift, stair climb, ADA-compliant multi-use trail, limiting park access to automobiles and those fit enough to climb park hillsides.
9. Incorporate design elements for education and interpretation on the park's unique landfill history and natural environmental features.	**Yes**. This Alternative would meet this objective due to the inclusion of interpretive exhibits at overlooks throughout the park, and a bird observation overlook.
10. Provide a captivating trail experience within the park which also alleviates the overuse and degradation of the adjacent trail network.	**Yes**. This Alternative would partially meet this objective by providing new trails within the park, connecting to the existing Schabarum-Skyline Trail; however, reduced trail development combined with the elimination of stair climbs and other dynamic recreational amenities would provide fewer, less compelling trail recreation opportunities than the Proposed Project.
11. Balance development of park facilities with landfill maintenance activities to protect public safety, water quality and meet the Sanitation Districts' regulatory requirements.	**Yes**. This Alternative would meet this objective because the proposed park facilities would be compatible with the Sanitation Districts' on-going maintenance responsibilities.
12. Balance multiple project objectives in a manner that considers the complex site constraints, park needs of the overall region, and the competing interests and needs of adjacent entities.	**No**. This Alternative would not balance the park needs of the greater San Gabriel Valley community with the competing interests and needs of local entities due to the limited variety of park facilities and focus primarily on ecological goals and expanded habitat and limited passive recreation.

4.3.1.2 Description

Under the Low Build Alternative, development of the diverse mix of passive and active recreational facilities under the Proposed Project would be eliminated in favor of a strong emphasis on passive recreation and habitat enhancement. Compared to the Proposed Project, the Low Build Alternative would substantially decrease recreational

development and park infrastructure, including reductions in the sizes and functions of buildings, reduced transportation diversity, changes in the park internal road network, and elimination of most active recreational features. This emphasis on lower intensity development and the reduced variety of recreational opportunities in the park would also result in substantial declines in the number of park visitors and the diversity of user groups when compared to the Proposed Project. The components of the Low Build Alternative are summarized in this section and illustrated in Figure 4-1.

Low-Build Alternative



Puente Hills Landfill
PARK MASTER PLAN

Figure 4-1 Low Build Alternative

THIS PAGE INTENTIONALLY LEFT BLANK

Park Facilities and Structures

Compared to the Proposed Project, the Low Build Alternative would substantially decrease development of park structures, such as reductions in the sizes and functions of some buildings, including the Visitor Center, Maintenance & Operations buildings, and scenic overlook structures and functions. The number of public restrooms would also be reduced from 4 to 1 under this Alternative due to anticipated reduced park visitation. This one public restroom would be located on the Southern Deck near the trailhead and a group picnic area, and would be installed as park development is phased over time (see Section 4.3.1.3, Phasing).

Entry Plaza and Park Entrance

Under the Low Build Alternative, the Entry Plaza would no longer serve as a key focal point of visitor activities. Under this Alternative, this area would instead serve as the park entrance and would support administrative uses, but would not support visitor serving facilities or serve as a transit and information hub for park users. The park entrance in this Alternative would include 5,600 sf of offices for Sanitation Districts and County of Los Angeles Department of Parks and Recreation (DPR) staff. A staffed guard house would provide security services to monitor the park during operating hours.

Major changes to the Entry Plaza under this Alternative would include the elimination of the Visitor Center, the trail lift, and associated parking and pedestrian/vehicular circulation areas. The elimination of internal park shuttles and a Visitor Center shuttle stop would also decrease development and substantially alter the level and nature of visitor activity in this area. Implementation of this Alternative would reduce structural development at this location to 5,600 sf from 8,600 sf under the Proposed Project.

Circulation and Parking

The Low Build Alternative would include major changes to the park's proposed road system, the transportation system for park visitors, and parking strategy. Under this Alternative, the approximately 20-foot wide one-way loop road extending for 4 miles throughout the park would be replaced by an approximately 40-foot wide two-way road of approximately 3 miles in length. This road would traverse the arboretum and slopes of the Eastern Deck to provide access to the proposed new main parking lot on the Southern Deck (Parking Lot E), as well as Parking Lots C and D, which would remain similar to the Proposed Project. This road would traverse the north and east-side of the park, through the Western Deck along the buttress, and down the westerly edge of the property to connect with Workman Mill Road near the MRF, providing a secondary park access point. The two-way configuration of this road would preclude installation of the road shoulder loop trail due to limited available space and bordering gas collection pipes. Unlike the Proposed Project, this Alternative would have no offsite parking and no shuttle service throughout the park. In addition, under this Alternative, the trail lift would not be constructed. Instead of a roundabout at the park entrance, this Alternative would include installation of a traffic signal at the site entrance.

Under this Alternative, the park would be accessed largely by private automobile as the internal park shuttle system and trail lift would not be included. The shuttle and trail lift systems would not be sustainable or required given substantially lower park visitation

levels forecast under this Alternative. Transit-dependent park visitors would access the park using regional transit with a route and stop outside the park entrance.

Overall available parking would slightly increase under this Alternative to 220 spaces located in the new Main Parking Lot E on the Southern Deck (150 spaces), as well as the Parking Lots D (30 spaces) located on the Eastern Deck, and C (40 spaces) on the southern edge of the Western Deck.

Maintenance & Operations Area

Under this Alternative, uses of the Maintenance and Operations (M&O) area would be entirely administrative with no public access to the M&O area. The M&O area would support a 1,300 sf building with maintenance offices shared by DPR and the Sanitation Districts, and no public restrooms or parking would be provided. This would be a minor reduction of 350 sf of structure when compared to the Proposed Project.

Nike Hill and Scenic Overlook

Under the Low Build Alternative, the role and intensity of use of Nike Hill would be substantially reduced when compared to the Proposed Project. Similar to the Proposed Project, a scenic overlook would be constructed atop Nike Hill to project out over the hillside and provide sweeping views across the park and to more distant points, but given lower park visitation under this Alternative, the viewpoint improvement would be reduced in size to 1,000 sf from 6,000 sf. Under this Alternative, Nike Hill would not serve as a transportation hub for park visitors using the trail lift and supporting facilities, and, as such, public restrooms, a mini café, and staff offices would not be provided. Expansive interpretive and visitor serving space included in the Proposed Project would also be omitted in favor of a simpler overlook.

Under the Low Build Alternative, Nike Hill View would serve as a quiet view platform rather than a busy hub of diverse active and passive recreational activities under the Proposed Project.

Further, Nike Hill would not serve as a jumping off point for zip line or slide users or as a destination for users of a stair climb and switchback trail on the north facing buttress slopes, as those more active facilities would also not be included in the Low Build Alternative. Similarly, the ADA-accessible trail on the buttress slopes would be omitted, as no access would be provided to the site from the north or west. Instead, access to the overlook would be provided via an ADA-accessible reach of the Schabarum-Skyline Trail with parking available at the new Main Parking Lot on the Eastern Deck approximately 0.25 mile to the east.

Multi-Use Trails and Existing Trail Enhancement

Under the Low Build Alternative, development of multi-use trails would be limited to existing landfill decks with no trail access proposed from the park entry to the upper elevation decks. Instead, trails within the park would begin primarily at the new 150-space main parking lot on the Southern Deck that would serve as the park's main trailhead and equestrian staging area. In addition, as with the Proposed Project, Parking Lots C and D located along the northern toe of Nike Hill and the buttress area would continue to provide 70 spaces and be linked to the trail system.

From the Main Parking Lot trailhead (Parking Lot E), 2.75 miles of top deck multi-purpose trails and 3 miles of internal trails and paths would provide a scenic trail experience for pedestrians, equestrians, and mountain bikers. The Schabarum-Skyline Trail would remain in its current location and would not be relocated as planned under the Proposed Project. Total trail mileage of 5.75 miles under this Alternative would be 8 miles less than the Proposed Project's 13.75 miles of trail development, with deletion of the road shoulder and the switchback and inner loop trails as the main source of reductions in trail length.

Like the Proposed Project, existing trails would be upgraded to support multiple user groups and would connect the top decks to each other, leading park users to the Western Deck play area and overlooks throughout the park. New internal trails would meander through the grasslands, wildflower meadow, coastal sage, and picnic areas of the park. These park trails would all include upgraded trail wayfinding signage, and a few would link up with the existing regional Schabarum-Skyline Trail that runs along the southwestern border of the park. The Schabarum-Skyline Trail may also accommodate access from the Workman Mill Staging Area, although lease negotiations with SCE would be required to secure Workman Mill Staging Area parking.

Educational and Interpretive Elements

Similar to the Proposed Project, interpretive exhibits and signage describing the natural history of the area and interpretation of the landfill would be incorporated into the multiple interpretive and scenic overlooks around the park. Under this Alternative, four interpretive overlook areas, as well as a scenic overlook with interpretive elements at Nike Hill, would be installed throughout the top decks, as opposed to seven interpretive elements under the Proposed Project. A bird observation overlook with a viewing blind would also be installed on the Eastern Deck, and ideal locations for wildlife observation would be marked along trails. Areas of the park and landfill slopes would be preserved and/or enhanced to provide more animal

Additional interpretive elements would be installed, as exemplified by a view from Nike Hill to the San Gabriel Mountains National Monument with a superimposed example of mountain peak identification and interpretation (sign credit: Yosemite National Park).

habitat. This Alternative would especially encourage park visitor education regarding resident and migrating species, including deer, coyote, mountain lion, rabbit, hawks, insects, lizards, and pollinators.

Recreation Opportunities

Recreation opportunities under this Alternative would be limited to low intensity, nature-focused activities for both children and adults. Similar to the Proposed Project, the Low Build Alternative would also provide children's play areas, picnic spots, and limited special events capabilities; however, these features would be implemented at a smaller scale so as to uphold the ecology goal of this Alternative. Children's nature play with nature materials and loose parts (i.e. sticks, rocks, log rounds, fabric, crates, ropes, etc.) is an ideal program for this park, but must remain flexible in its use of any top deck area for many years due to the settling of the landfill. Group picnic areas planted with trees and vegetation to provide buffer and shade would be located near the Main Parking Lot on the Southern Deck, and on the Eastern Deck in this Alternative.

Interaction and protection of nature would be a central focus under the Low Build Alternative with natural elements.

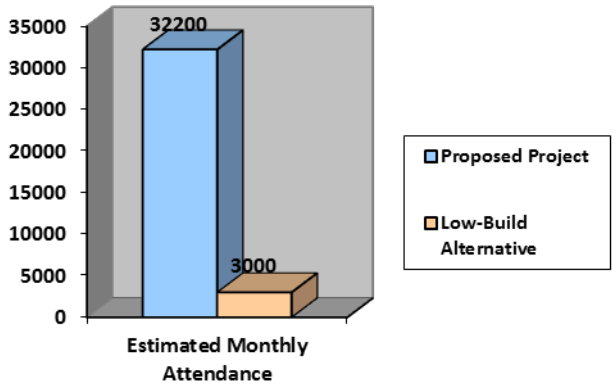
Landscaping

Under this Alternative, the planting throughout the park would be similar to that of the Proposed Project and consist mainly of California natives with the inclusion of drought tolerant non-natives in areas difficult to establish planting to actively replace and replant park areas in need of patching. This Alternative would have a much larger focus than the Proposed Project on providing habitat enhancement and native planting areas in all areas of the park to promote resident wildlife populations. Similar to the Proposed Project, disturbed top decks and the buttress area would be revegetated and existing nonnative slopes would be underplanted with native plants to enhance the wildlife corridor. Expanded plant communities, including coastal sage scrub, grasslands with different heights of grasses, oak woodlands, and a wildflower meadow, would be established and emphasized on the top decks under this Alternative, especially on the Eastern and Southern Decks instead of recreation areas and structures proposed by the Proposed Project. Habitat enhancement planting and monitoring would be identified by signage throughout the park. However, this Alternative would not include a native plant nursery, as most revegetation would be accomplished through hydroseeding. This Alternative would not include the Proposed Project's landscaping elements of planting hedgerows to define park spaces or undulate topography on the top decks for habitat

enhancement, but would rather maintain and enhance the open space nature of the park.

Operations and Security

Under this Alternative, the elimination of all active recreational facilities and establishment of reduced recreational opportunities are anticipated to result in substantial reductions in park visitation. Monthly park attendance is projected to fall from an estimated 32,200 under the Proposed Project to 3,000 under this Alternative at full build-out. Like the Proposed Project, this Alternative would include security fencing and gating. Unlike the Proposed Project, this Alternative would not include a park security office and staff at the top decks, but would have park security staff at the administration office at the park entrance. Unlike the Proposed Project, this Alternative would not include a performance space, which accounts for a 2,000 to 5,000 decrease in estimated park attendance from the Proposed Project.



The Low Build Alternative would be anticipated to attract a much lower number of visitors monthly to the park due to fewer offered amenities.

4.3.1.3 Phasing

Similar to the Proposed Project, the Low Build Alternative would include Phase I, which would occur in the years 1 through 5, Phase II, which would occur in the years 6 through 20, Phase III, which would occur in the years 21 through 30, and Phases IV through VI, which would occur after the first 30 years. The first three phases would be the major development phases over the first 30 years, with the last three phases being reevaluated in 2043. In the first 10 years, basic park infrastructure development would occur on the Western Deck and selected non-fill areas. This infrastructure would be substantially less under the Low Build Alternative as development on the Western Deck would only include the Nike Hill scenic overlook, one interpretive overlook, and a coastal sage and play area, compared to the variety of recreational areas and structures of the Proposed Project. The additional phases in park development would be implemented when the parklands on the Eastern and Southern Decks are more stable.

Future substantial changes in Phase III and onward may be subject to additional environmental review. Programmatic analysis allows these potential changes to be made more easily.

4.3.2 High Build Alternative

4.3.2.1 Purpose and Intent

With the High Build Alternative, the park would be developed at a higher level than the Proposed Project, focusing on establishing varied and active recreational amenities and opportunities for the public to gain access to and interact with the park. Under this Alternative, the focus on a variety of active and passive recreational uses would substantially increase both the number of visitors to the park and the diversity of user groups as shown in Table 4-3.

Table 4-3. Changes in Major Improvements Under the High Build Alternative

RECREATION FACILITIES AND USES	PROPOSED PROJECT	HIGH BUILD ALTERNATIVE
Traffic Circle	Yes	Yes
Park Entry Plaza	8,600 sf	8,600 sf
Trail Lift	Yes	Yes
Maintenance & Operations Area	1,650 sf	1,650 sf
Buttress Area Buildings	No	8,000 sf
Road Circulation	One-way 4 mile long loop road, approx. 20 ft wide	Two-way 4 mile long loop road, approx. 20 ft wide
Parking	5 small parking lots, 200 parking spaces	6 parking lots, 600 parking spaces
Nike Hill Scenic Overlook	6,000 sf	12,000 sf
Anticipated Monthly Visitation	32,200 visitors	51,350 visitors
Miles of Trail Development	13.75	13.75
Running Loops	Yes	Yes
Frisbee Golf Area	No	Yes
Bike Skills Area	8 acres	25 acres
Bike Rentals	Yes	Yes
Performance Space	Yes	Yes (larger; nighttime events)
Public Restrooms	4	5
Picnic Areas	4	7
Interpretive/Overlook Areas	7	9
Dog Park	Yes	Yes
Dog Agility Training Area	No	Yes
Slides	2	5
Zip Lines	Yes	Yes
Stair Climbs	Yes	Yes
Flare Tower Structure	Yes	Yes
Temporary Art Installation	Yes	Yes; larger
Plant Nursery	Yes	Yes
Pedestrian Planted Overcrossing	Yes	Yes
West Side Pedestrian Bridge	Yes	Yes

The goal of this Alternative would be to maximize the amount of passive and active recreational amenities to enable greater public enjoyment of this County regional park. Although this Alternative does not include sports fields and other high-intensity active recreational facilities, it explores a variety of recreation-focused options which may fulfill the project objectives though are not considered within the Proposed Project, along with

tradeoffs that accompany these options. Enhanced recreational development options and buildout which may meet both recreational and ecological goals are examined and proposed within this Alternative. The High Build Alternative would partially meet a number of Project objectives as discussed in Table 4-4 below.

Table 4-4. High Build Alternative Project Objectives

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
1. Develop a "Park For All" that offers diverse, healthy, passive, and active recreational experiences and programming for visitors of all ages, abilities, interests and backgrounds.	**Yes.** This Alternative would provide an accessible regional "Park For All" as it would include a variety of recreational experiences, open to visitors of varying levels of abilities and interests.
2. Develop a regional destination park which uniquely reflects the site's history, urban-wildland location, scale and topography.	**Yes.** This Alternative would achieve this objective by providing a regional park that would celebrate and reflect its location in a unique area of the Puente Hills, while addressing habitat enhancement and connectivity.
3. Develop a range of active and passive amenities to meet varied recreational demands and provide outdoor fitness opportunities to help address national trends related to inactivity, obesity and nature-deficit disorder.	**Yes.** This Alternative would provide active and passive amenities due to its high variation of recreational opportunities and accessible transit options to the park trailhead.
4. Attract diverse, new audiences, particularly underrepresented or disadvantaged populations, to inspire connection to outdoor activities, nature, and environmental stewardship.	**Yes.** This Alternative would attract diverse new audiences, particularly underrepresented or disadvantaged populations, due to its high variation of recreation activities and opportunities for encouraging environmental stewardship.
5. Integrate active recreational facilities with natural habitats to enhance and sustain both the recreational and ecological functions of the park.	**No.** While this Alternative would integrate active recreational facilities with natural habitats, increased recreational facilities and programs may affect the desired future ecological functions of the park as a wildlife corridor.

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
6. Promote and support wildlife movement and habitat connectivity through the Puente Hills Significant Ecological Area (SEA), the Rio Hondo College Wildlife Sanctuary SEA and the San Gabriel River.	**No.** This Alternative would not fully meet this objective as the amount of large areas of undisturbed habitat would decrease. While the Alternative would enhance the wildlife corridor by providing areas of undisturbed habitat, underplanting nonnative slopes with native plants, and including a planted pedestrian bridge, the Alternative would introduce a variety of physical improvements which may limit use of the wildlife corridor.
7. Demonstrate environmentally sustainable design and practices.	**Yes.** This Alternative would meet this objective by adhering to LEED sustainable building design criteria in all structures.
8. Provide multi-modal, universal access and circulation into and through the park to the extent feasible.	**Yes.** This Alternative would meet this objective by including a two-way loop road, a multi-use trail, parking lots at the bottom and top of the hill, shuttles, and a trail lift.
9. Incorporate design elements for education and interpretation on the park's unique landfill history and natural environmental features.	**Yes.** This Alternative would meet this objective through the high level of amenities and visitor use. Inclusion of interpretive exhibits at overlooks throughout the park would address this objective.
10. Provide a captivating trail experience within the park which also alleviates the overuse and degradation of the adjacent trail network.	**Yes.** This Alternative would meet this objective by providing multiple new trails throughout the park complimented by a variety of recreational amenities.
11. Balance development of park facilities with landfill maintenance activities to protect public safety, water quality and meet the Sanitation Districts' regulatory requirements.	**Yes.** This Alternative would meet this objective by including only park facilities that can be sustained in conjunction with the Sanitation Districts on-going maintenance responsibilties, and by including a shared Sanitation Districts and County Parks and Recreation staff and administration offices at the entrance to the park.

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
12. Balance multiple project objectives in a manner that considers the complex site constraints, park needs of the overall region, and the competing interests and needs of adjacent entities.	**Yes.** This Alternative would balance local and regional needs by providing park amenities and associated infrastructure, taking into consideration the existing landfill site constraints. This alternative has the potential for greater conflicts with adjacent land uses than with the Proposed Project, particularly during high use days.

4.3.2.2 Description

Under the High Build Alternative, development of the diverse mix of passive and active recreational facilities under the Proposed Project would be enhanced by more active facilities and increases in allowable uses. Compared to the Proposed Project, the High Build Alternative would substantially increase recreational development and park infrastructure, including enlargement in the sizes and functions of buildings, the addition of more active and passive recreational features, and the broadening of allowable programs such as night performances. This emphasis on development to support more active uses and the increased variety of recreational opportunities in the park would also result in substantial increases in the number of park visitors and the diversity of user groups when compared to the Proposed Project. As with the Proposed Project, the High Build Alternative would include ADA-accessible facilities. The components of the High Build Alternative are summarized in this section and illustrated in Figure 4-2.

THIS PAGE INTENTIONALLY LEFT BLANK

High-Build Alternative

Puente Hills Landfill
PARK MASTER PLAN

Figure 4-2 High Build Alternative

THIS PAGE INTENTIONALLY LEFT BLANK

Park Facilities and Structures

Compared to the Proposed Project, the High Build Alternative would increase development of park infrastructure, including increases in the sizes and functions of some buildings such as the Nike Hill scenic overlook and the buttress area. The number of public restrooms would also be increased from four to five under this Alternative due to anticipated increases in park visitation. Minor structural development needed to support expanded facilities such as additional slides would also occur.

Entry Plaza and Park Entrance

Under the High Build Alternative, the Entry Plaza and park entrance would have similar construction and amount of structural development as the Proposed Project, and also continue to serve as a key focal point of visitor activities, serving as a transit and information hub for park users. Similar to the Proposed Project, this Alternative would include an 8,600 sf Visitor Center and shared administration building with public restrooms and security lighting. Also similar to the Proposed Project, this Alternative would include a 1,000 sf trail lift base structure at the Entry Plaza, with associated pedestrian and vehicular circulation improvements.

Circulation and Parking

Under this Alternative, demand for vehicular access to the park would increase due to added facilities and increases in recreational programs, and the park road system would be designed to accommodate the higher demand for vehicle access. Under this Alternative, the approximately 20-foot wide one-way loop road extending 4 miles throughout the park would be replaced by a 20-foot wide two-way loop road extending the same distance. The two-way configuration of this road would cause difficulties in installation of the road shoulder loop multi-use trail due to limited available space and bordering gas collection pipes. Similar to the Proposed Project, this Alternative would include options for the park shuttle, trail lift, and vehicle, pedestrian, and equestrian access to the park trailhead and deck trails.

Similar to the Proposed Project, a trail lift potentially similar to this gondola would be installed under the High Build Alternative to facilitate pedestrian transport between the base of the hill and the Skyline Promenade.

Access to the park would be similar to the Proposed Project, and designed to provide access for transit-dependent visitors. Similar to the Proposed Project, this Alternative would include an additional bus stop at the park entrance to improve the estimated 10-minute, 0.6 mile walk from the nearest existing bus stop to the park entrance. Also similar to the Proposed Project, two park shuttle routes would be incorporated, including an arrival/departure shuttle and a park shuttle loop. The Entry Plaza associated with the Visitor Center would provide queuing areas for shuttle drop-off, bus loading and unloading, and park visitors. The arrival/departure shuttle would stop at an off-site

parking lot, the nearest bus stop, and the Entry Plaza, completing an approximate 3 mile loop. The park shuttle loop would stop at the Entry Plaza, M&O Area, bottom of Nike Hill, Western Deck, Eastern Deck, Southern Deck, and the Flare Site, completing an approximate 5 mile loop. Personal vehicle circulation would be generally similar to the Proposed Project, but roads and circulation would be designed to accommodate increased visitation. Entry Plaza and road enhancements would be similar to the Proposed Project, including installation of a roundabout and associated alignment of the park road. However, entrance modification may also require additional road lanes, crosswalks, and associated signalization beyond the Proposed Project to accommodate the traffic increase. Also unlike the Proposed Project, the High Build Alternative would implement a two-way full loop park road for park users, which would allow two-way vehicular access to the Western, Eastern, and Southern Decks, instead of a one-way full loop as indicated for the Proposed Project. An independent one-way ingress and egress lane on the eastern access road would be included for future funeral procession use, also included within the Proposed Project.

This Alternative would have more accommodation for personal vehicle parking than the Proposed Project. Similar to the Proposed Project, this Alternative would have off-site parking opportunities with shuttle service. The Alternative would also include six parking areas with 600 total parking spaces, unlike the Proposed Project's five smaller parking areas with 200 total parking spaces. Additionally, the shuttles under this Alternative would provide parking transport services for nighttime performance events and special events.

As addressed previously, ADA compliant ramps, a trail lift, pedestrian bridges, and trail enhancements would be included under this Alternative to facilitate pedestrian circulation within the park. A parking area at the Entry Plaza would be utilized for the trail lift loading, for park patrons using the stair climb to the Western Deck, and other fitness activities. Additionally, park users would be able to access all the top deck areas throughout the park from the park loop road.

Maintenance & Operations Area

At the M&O Area, this Alternative would include a 1,650 sf shared maintenance and office building with public restrooms, along with a public parking lot with security lighting, similar to that described within the Proposed Project.

Buttress Area

Unlike the Proposed Project, the buttress area between the M&O Area and Nike Hill would include greater development to enable increased public and park staff accessibility in areas adjacent to the top decks and center of the park area. This Alternative would include 8,000 sf of staff and ranger offices, multi-purpose rooms, an elevator, and security lighting at building entrances. Like the Proposed Project, this Alternative would also include relocation of the Schabarum-Skyline Trail onto Sanitation Districts property; however, the trail portion would be situated on a series of cantilevered decks and platforms as opposed to ground level.

Unlike the Proposed Project, the buttress between the Maintenance & Operations Area and Nike Hill would be developed with an 8,000 sf staff office and multi-purpose room building as conceptually depicted here connected to the Skyline Promenade for hosting conferences, events, and park personnel.

Nike Hill and Scenic Overlook

Under this Alternative, Nike Hill and the adjacent buttress area would become a more developed area of park facilities and activities, with the scenic overlook, trail lift top structure, mini café, staff office, and restrooms being expanded from 6,000 sf under the Project, to approximately 12,000 sf. This facility would include a Skyline Promenade with the scenic overlook, constructed to extend out over the hillside with increased educational and interpretive components. Similar to the Proposed Project, Nike Hill would serve as a jumping off point for zip line or slide users and as a destination for users of a stair climb and switchback trail on the north facing buttress slopes, along with the ADA-accessible trail on the buttress slopes.

Additional Structures

Like the Proposed Project, the trail lift would be stayed by two support structures through the western region of the park, connecting the Entry Plaza and Nike Hill. This Alternative would also include the Project's west side pedestrian bridge structure between the Schabarum-Skyline Trail and the loop roadside trail, passing beneath the trail lift route.

Unlike the Proposed Project, expanded pedestrian facilities, a café, and a parking lot would be included at the Flare Site location under the High Build Alternative.

On the top decks, unlike the Proposed Project, this Alternative would include a 1,300 sf restroom structure on the Eastern Deck. A 1,300 sf restroom structure would be installed on the Southern Deck similar to the Proposed Project. Between the Eastern and Southern Decks, this Alternative would also include the Proposed Project's

planted pedestrian overcrossing over the loop road. Unlike the Proposed Project, this Alternative would not keep any existing soil stockpile area permanently open on the Western Deck. Instead, temporary/seasonal art installations would be held on top of the Western Deck stockpile intermittently as use of the stockpile would continue to be needed for ongoing landfill repairs. Similar to the Proposed Project, this Alternative would include the Proposed Project's Flare Tower Structure Café and/or educational and recreational area, which would cover an area of approximately 12,000 sf.

Multi-Use Trails and Existing Trail Enhancement

Under the High Build Alternative, development of multi-use trails would be similar to the Proposed Project. The amount of trail network improvement would be similar to the Proposed Project at approximately 13.75 miles of trail development. Key trail heads would include the Entry Plaza, the trail lift landing on Nike Hill, and the parking lot on the Southern Deck. Similar to the Proposed Project, the Entry Plaza trailhead would provide access to the arboretum stair climb and the 4-mile long loop road shoulder trail. The Nike Hill trailhead would provide access to upper elevation reaches of the Schabarum-Skyline Trail and park access loop road shoulder loop trails as well as the inner loop trail. The southeastern parking lot on the Southern Deck would serve as a trailhead and equestrian staging area. From this trailhead, 4 miles of loop road trail, 3.25 miles of top deck trails, 2 miles of internal trail, and 3 miles of top deck paths would be accessible.

Similar to the Proposed Project, approximately 13.75 miles of multi-use trails and stair climbs would be developed, connecting the top decks, Entry Plaza, and Schabarum-Skyline Trail.

Also similar to the Proposed Project, existing trails would be upgraded to support multiple uses (e.g., hiking, mountain biking, and equestrian use). However, installation of a two way road under this Alternative may affect design of the road shoulder loop trail as limited space along some segments may require either relocation of gas lines and/or placing segments of this trail on hillsides. This Alternative would also include installation of a pedestrian accessible overcrossing that would enable park users to walk between the Southern and Eastern Deck areas. A stair climb installed between the Eastern and Western Decks would also enhance accessibility along the proposed inner loop trail. These park trails would all include upgraded trail wayfinding signage, and a few would link up with the existing regional Schabarum-Skyline Trail, including a half mile relocation of the Schabarum-Skyline Trail to connect along the southwestern border of the park.

To accommodate regional trail users coming from the north and east who may not want to be a part of the vehicular traffic at the park entry, a safe, multi-purpose ADA-compliant ramp and trail into the site from the front access road to the Visitor Center

and Entry Plaza would be implemented. Further, segments of the Schabarum-Skyline Trail and buttress area trail would be ADA accessible.

Educational and Interpretive Elements

Similar to the Proposed Project, interpretive exhibits and signage describing the natural history of the area and interpretation of the landfill would be incorporated into the multiple interpretive and scenic overlooks around the park. Under this Alternative, nine interpretive elements would be installed, as opposed to seven under the Proposed Project. Similar to the Proposed Project, a bird observation overlook with a viewing blind would be installed on the Eastern Deck, and locations for wildlife observation would be marked along trails. Additionally, areas of the park and landfill slopes would be preserved and/or enhanced to provide more wildlife habitat.

Recreation Opportunities

Similar to the Proposed Project, nature play for young children would remain flexible in its use of the top deck area for many decades. And as the park would encourage child fitness, additional focuses would include waste stream awareness, the history of the San Gabriel Valley and the Puente Hills, wildlife education, and native plant nursery growing.

Active Park Elements

Similar to the Proposed Project, this Alternative would include two zip lines, four stair climbs, a bike rental area, and a plant nursery/growing area. Under this Alternative, five slides would be installed instead of two slides under the Proposed Project, the bike skills areas would be increased to 25 acres from 8 under the Proposed Project, and bicycle access on the top decks would be increased. An Eastern Deck open play area for frisbee golf and programmed day-sport or fitness events would be added. A dog agility training area would also be included, enabling the park to host an additional type of event which would result in associated increases in visitors, noise, and traffic.

Performance Space

Under this Alternative, the proposed performance space would be increased in size and become more of a regional events center to accommodate larger day-time festivals and performances than the Proposed Project, with operations also expanded to include evening concerts, plays, and other events. As with the Proposed Project, such events would be supported with mobile

The High Build Alternative would allow larger concerts than the Proposed Project within the performance space area on the Western Deck, with up to 20,000 attendees. Portable stages, lighting, restrooms, and food services would be accommodated in support of larger events.

sanitation facilities (e.g., towed in porta-potties) as well as mobile vendors for food and beverages. The performance area would be laid out and managed to accommodate from 5,000 to 20,000 visitors for an event. Events of 10,000 people would conform to the County ordinance, which calls for promoters to request a County threat assessment at least 120 days before any planned large-scale event. If the assessment team determines that there is a strong probability that loss of life or harm to the participants could occur, then the promoter will be required to work with County staff on an action plan to manage health and safety concerns.

Night performances would be allowed lighting, with potential disturbance to wildlife minimized through siting and design as well as thorough site cleanup and policing. Parking for such large events would be managed through the use of remote parking areas, valet parking services, and shuttles.

Passive Park Elements

Similar to the Proposed Project, this Alternative would include an equestrian staging area, running trail loops, equestrian trail loops, a loop road access trail, an ADA trail access from Crossroads Parkway South to the Visitor Center, and an ADA-accessible trail to the Nike Hill overlook. Under this Alternative, the number of picnic areas would be increased to seven compared to four under the Proposed Project. Picnic areas would be located near parking areas for family use and planted to provide buffer and shade as available. Other passive elements would include nine interpretive/overlook areas instead of seven, relocation of the Schabarum-Skyline Trail to Sanitation Districts property, and an Eastern Deck open play area.

Landscaping

Increased fencing, controlled access, informational packets, guard booths, and security presence would protect biological resources and the public from hazards and off limit areas.

Under this Alternative, landscaping would be similar to the Proposed Project and consist mainly of California natives, with the inclusion of drought tolerant nonnatives in areas difficult to establish planting on to actively replace and replant park areas in need of patching. Disturbed top decks and the buttress area would be revegetated, and existing nonnative slopes would be underplanted with native plants to enhance the wildlife corridor. The Eastern and Southern Decks would contain designated areas for grasses, poppy fields, a native plant nursery, and a pedestrian planted overcrossing. This Alternative would also include the Proposed Project's landscaping elements of planting hedgerows to define park spaces and undulating topography on the top decks for habitat enhancement. The extent of habitat plant communities including coastal sage scrub, grasslands, oak woodlands, and wildflower meadows would not be as widespread or integral to this Alternative's implementation as the Proposed Project, which would reduce the potential to maintain and enhance the open space nature of the surrounding park. Nevertheless,

habitat enhancement planting opportunities and monitoring would be identified throughout the park.

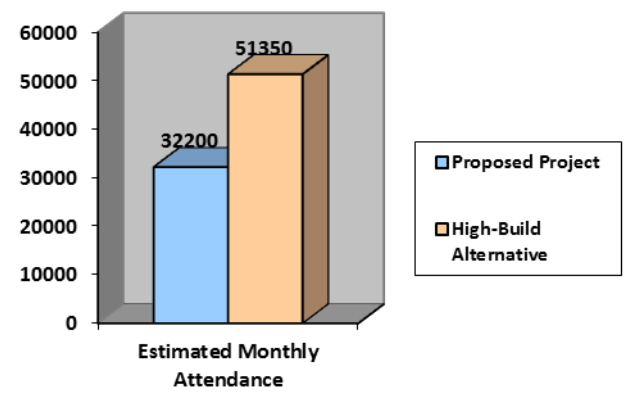
Operations and Security

The High Build Alternative would be anticipated to attract a substantially higher number of visitors to the park, due to increased recreational amenities offered to the public as well as an expanded performance venue. The inset chart and Table 4-5 below shows a representation of the estimated difference between this Alternative and the Proposed Project.

Table 4-5. Estimated Monthly Attendance for Proposed Recreation Uses at Puente Hills Landfill Park

RECREATION USES	PROPOSED PROJECT	HIGH BUILD ALTERNATIVE
Running loops with mile markers	3,500	3,500
Exercise terrace	5,000	5,000
Stair climbs	5,600	5,600
Play areas	1,500	1,500
Picnic areas	2,100	4,000
Performance space	2,000-5,000	5,000-up to 20,000
Bike rental	700	700
Dog park (and agility training area)	2,500	3,500
Slides	1,500	2,500
Zip line	2,800	2,800
Flare tower climb	1,500	1,500
Temporary art installation	500	750
Total estimated monthly attendance	**32,200**	**51,350**

Under this Alternative, the expansion of recreation facilities, parking, and increased performance space would transform the Puente Hills Landfill Park into a more full service park designed to meet the recreational and outdoor activity needs of a broader and more diverse segment of the San Gabriel Valley community. This Alternative would most clearly fulfill the project objective for the park to become a key destination in the San Gabriel Valley, while continuing to provide large areas for habitat enhancement and maintenance/enhancement of wildlife habitat.



The High Build Alternative would be anticipated to attract a higher number of visitors to the park.

Similar to the Proposed Project, this Alternative would include security fencing and gating, directed and

controlled public access to each park area, and programmed events. There would be a safety first education packet available at the Visitor Center to park visitors using the park, a park security staff stationed at the buttress area, and guard booth at the entry Visitor Center. Park security would limit unauthorized public access to unmonitored, off-limits maintenance roads, gas pipes, slopes, smoking in the park, and gas combustion hazard associated with the Sanitation Districts' environmental control systems.

4.3.2.3 Phasing

Similar to the Proposed Project, the High Build Alternative would include Phase I, which would occur in the years 1 through 5, Phase II, which would occur in the years 6 through 20, Phase III, which would occur in the years 21 through 30, and Phases IV through VI, which would occur after the first 30 years. The first three phases would be the major development phases over the first 30 years, with the last three phases being reevaluated in 2043. In the first 10 years, basic park infrastructure would occur on the Western Deck and non-fill areas. This infrastructure would be substantially more under the High Build Alternative, as development on the Western Deck would include a greater number and larger area of recreational uses and structures than the Proposed Project. The additional phases in park development would be implemented when the parklands on the Eastern and Southern Decks are more stable.

Future substantial changes in Phase III and onward may be subject to additional environmental review. Programmatic analysis allows these potential changes to be made more easily.

4.3.3 No Project Alternative

CEQA requires that the No Project Alternative be analyzed in an EIR. In accordance with Section 15126.6(e)(3)(B), the No Project Alternative consist of an analysis of the circumstance under which the project does not proceed.

With the No Project Alternative, the proposed Puente Hill Landfill Park Master Plan would not be implemented. No project-specific trails or access infrastructure would be constructed and no park development would occur. The Schabarum-Skyline Trail would remain available for hiking and equestrian use in its current location. This Alternative would not meet the ecological and passive recreational goals of the County or provide varied recreational opportunities to meet the needs of diverse user groups in the local and regional area (Table 4-6). The terms of the Amended Setback and Easement Agreement between the Sanitation Districts and Rose Hills, including the terms of the Draft Easement attached to that Agreement as Exhibit I, regarding the future Rose Hills Memorial Park access road would continue to be in place.

Table 4-6. No Project Alternative Project Objectives

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
1. Develop a "Park For All" that offers diverse, healthy, passive, and active recreational experiences and programming for visitors of all ages, abilities, interests and backgrounds.	**No.** This Alternative would not provide an accessible regional "Park For All".
2. Develop a regional destination park which uniquely reflects the site's history, urban-wildland location, scale and topography.	**No.** This Alternative would not develop a regional park, losing the opportunity to provide public access to the site's history, urban-wildland location, scale, and topography.
3. Develop a range of active and passive amenities to meet varied recreational demands and provide outdoor fitness opportunities to help address national trends related to inactivity, obesity and nature-deficit disorder.	**No.** This Alternative would not provide any active or passive recreational amenities.
4. Attract diverse, new audiences, particularly underrepresented or disadvantaged populations, to inspire connection to outdoor activities, nature, and environmental stewardship.	**No.** This Alternative would not provide a connection to outdoor activities, nature, and environmental stewardship. This opportunity would be lost to all residents, including underrepresented or disadvantaged populations.
5. Integrate active recreational facilities with natural habitats to enhance and sustain both the recreational and ecological functions of the park.	**No.** This Alternative would not include recreational facilities or the creation of natural habitats.
6. Promote and support wildlife movement and habitat connectivity through the Puente Hills Significant Ecological Area (SEA), the Rio Hondo College Wildlife Sanctuary SEA and the San Gabriel River.	**No.** This Alternative would not support regional wildlife movement or habitat connectivity.
7. Demonstrate environmentally sustainable design and practices.	**No.** No environmentally sustainable facilities or programs would be implemented.
8. Provide multi-modal, universal access and circulation into and through the park to the extent feasible.	**No.** This Alternative does not include public access to the site.

PROJECT OBJECTIVE	ABILITY FOR ALTERNATIVE TO ACHIEVE OBJECTIVE
9. Incorporate design elements for education and interpretation on the park's unique landfill history and natural environmental features.	**No.** This Alternative would not include the opportunity for public education and interpretation of the site's unique history and natural environmental features.
10. Provide a captivating trail experience within the park which also alleviates the overuse and degradation of the adjacent trail network.	**No.** This Alternative would not include new trails. Existing trails would be required to absorb demand from increasing regional population. Use of the Schabarum-Skyline Trail would remain.
11. Balance development of park facilities with landfill maintenance activities to protect public safety, water quality and meet the Sanitation Districts' regulatory requirements.	**No.** This Alternative would not include shared Sanitation Districts and County Parks and Recreation staff and administration offices at the entrance to the park.
12. Balance multiple project objectives in a manner that considers the complex site constraints, park needs of the overall region, and the competing interests and needs of adjacent entities.	**No.** This Alternative would not meet local and regional need for recreation facilities.

The Sanitation Districts would continue to monitor, inspect, maintain, and repair the existing environmental control systems including the landfill's final cover, surface water drainage system, landscape and irrigation, groundwater quality protection system, landfill gas recovery system, and fire control measures. In addition, the MRF and the Sanitation Districts Puente Hills Field Office would remain.

Heavy construction equipment, including graders, scrapers, dump trucks, loaders, and water trucks, would continue to operate to repair any cracks in the final cover and maintain the closed landfill. The soil stockpile would continue to be accessed for repair and maintenance activities. Settlement of the landfill surface would continue as the trash beneath decomposes. The rate of settlement would be greater in some areas than others, causing differential settlement. The majority of the settlement is expected to occur over the next 30 years, however, some settlement would continue into the future.

The side slope and top deck final covers would continue to be vegetated and irrigated for erosion control purposes. Inspection and maintenance of the irrigation system would be routinely performed in addition to the storm drainage system. The landfill gas recovery system would continue to be routinely monitored, inspected, maintained, and repaired. The collected gas would continue to be combusted at the Puente Hills Landfill Gas-to-Energy Facility. The three gated access points along the eastern boundary of the site at Gale, Los Robles, and Orange Grove Avenues would continue to be used by landfill employees for ongoing maintenance and monitoring purposes.

4.4 ALTERNATIVES IMPACTS ANALYSIS

4.4.1 Low Build Alternative

Under the Low Build Alternative, the park would be developed for passive recreational uses without the varied and active recreational facilities included in the Proposed Project. This alternative would focus more on establishing passive open space and habitat areas rather than on the provision of diverse recreational opportunities. This alternative would emphasize habitat enhancement, native flora and fauna, nature education and programs, trails, scenic overlooks, and interpretation to a substantially greater extent than the Proposed Project.

4.4.1.1 Aesthetics

The Low Build Alternative emphasizes passive open spaces and habitats rather than developing diverse recreational amenities. For example, structures that could potentially incrementally affect visual resources, such as the trail lift, would not be included in this Alternative. This Alternative would cater to passive recreational activities such as hiking and wildlife watching. Therefore, the Low Build Alternative would result in similar aesthetic impacts compared to the Proposed Project, with some limited reduction in visual change due to elimination of active features such as the trail lift and reductions in other development on Nike Hill. However, such visual changes were found not to be adverse due to consistency with existing Nike Hill features (e.g., microwave/radio towers, lattice towers associated with SCE transmission lines, and two water storage tanks).

4.4.1.2 Air Quality

As the Low Build Alternative would include mainly passive uses, the construction-related impacts would be slightly less than those associated with the Proposed Project. The Low Build Alternative's construction-source emissions would not conflict with the Basin AQMP. This Alternative would comply with all applicable SCAQMD construction-source emission reduction rules and guidelines, and construction-source emissions would not cause or substantively contribute to violation of CAAQS or NAAQS. Therefore, construction-related impacts from the Low Build Alternative would be less than significant.

The Proposed Project's operational emissions would not exceed the SCAQMD regional emissions thresholds. Therefore, because the Low Build Alternative would result in less operational emissions than the Proposed Project, the Low Build Alternative would result in a less than significant regional air quality impact.

The Low Build Alternative would result in less traffic on local roadways than the Proposed Project. Therefore, similar to the Proposed Project, no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the ongoing use of the park under the Low Build Alternative.

Similar to the Proposed Project, odor emissions from the Low Build Alternative would be limited to the construction phase, and would be temporary, short-term, and intermittent in nature. Construction odors would not result in persistent impacts that would affect

substantial numbers of people. Therefore, potential odor impacts from the Low Build Alternative would be less than significant.

4.4.1.3 Biological Resources

Overall the Low Build Alternative would include fewer developed areas, provide more limited vehicular access within the project area, and would provide less of a human disturbance than the Proposed Project. The Low Build Alternative features one-way ingress and egress while the Proposed Project includes a one-way full loop park road. Like the Proposed Project, this Alternative includes access on the eastern side for the proposed Rose Hills roadway easement.

The Low Build Alternative provides less park amenities which are included in the Proposed Project including passive elements such equestrian loops, running trail loops, ADA access, and dog park area, as well as active elements including slides, zip lines, stair climbs, bike skills area, and bike rental.

The Low Build Alternative features a 1,000 sf plaza on Nike Hill and scenic overlook while the Proposed project increases the plaza to 6,000 sf as well as including 2,000 sf trail lift top structure, mini café, staff office, and restrooms. Additional pedestrian overcrossing and bridge structures would also be developed under the Proposed Project along with a one to two-acre plant nursery.

When compared to the Proposed Project, the Low Build Alternative would have fewer indirect impacts to sensitive species, nesting birds, and local wildlife movement. Therefore, under this Alternative, impacts to biological resources would be reduced when compared to the Proposed Project.

4.4.1.4 Cultural, Tribal, and Paleontological Resources

Impacts to cultural, tribal, and paleontological resources from the Low Build Alternative would be the same as for the Proposed Project as most development would be confined to landfill decks or previously disturbed slopes. Impacts would be less than significant with mitigation.

4.4.1.5 Geology and Soils

The Low Build Alternative emphasizes passive open spaces and habitats rather than developing diverse recreational amenities. For example, structures that could be affected by seismic events, such as the trail lift, would not be included in this alternative. However, office structures would still be constructed, which could be affected by strong ground shaking, landfill settling, and clay soils. Soil erosion would also occur, but at a lower level, during construction and use of park amenities. Impacts would be less than significant with the implementation of Mitigation Measure G-1.

4.4.1.6 Greenhouse Gas

Impacts associated with GHG emissions under the Low Build Alternative would be similar to those discussed for the Proposed Project. The Low Build Alternative would likely result in unmitigated emissions of greater than 3,000 metric tons of CO_2e per year for GHG emissions (which is the SCAQMD draft screening threshold for GHG emissions).

The Low Build Alternative would be required to implement Mitigation Measures GHG-1 through GHG-5; however, GHG-related impacts would remain significant following mitigation. There is no feasible mitigation measure that would effectively reduce emissions from mobile and construction sources to less than significant levels. Therefore, GHG-related impacts are considered to be significant and unavoidable under the Low Build Alternative.

4.4.1.7 Hazards and Hazardous Materials

With the Low Build Alternative, impacts from potential landfill gas collection in buildings and structures and the potential for worker exposure to contaminated groundwater is similar to the Proposed Project. Impacts would be less than significant with mitigation. Impacts from potential conflicts between landfill activities and systems and park activities and systems and fire hazards would be similar to those described for the Proposed Project (less than significant with mitigation), but would be slightly less because fewer areas would be developed.

4.4.1.8 Hydrology and Water Quality

Under this alternative, the elimination of all active recreational facilities and reduced recreational opportunities are anticipated to result in substantial reductions in park visitation. Monthly park attendance is projected to fall from an estimated 32,200 under the Proposed Project to 3,000 under this Alternative.

Even though this Alternative would create a regional park with less intensive recreational uses, hydrological impacts are expected to be similar to those described for the Proposed Project. Both the Proposed Project and the Low Build Alternative would encompass a similar footprint within the landfill. Both alternatives would be constrained by the existing environmental control systems at the closed landfill and the regulatory requirements the Sanitation Districts is under to manage the closed landfill. As such, the impact analysis presented above for the Proposed Project is expected to be applicable to the Low Build Alternative.

4.4.1.9 Land Use and Planning

Despite the passive nature of this Alternative, a recreational use of the site would still be developed. The Low Build Alternative would be consistent with the County Zoning Ordinance, land use designation, and would not conflict with Hillside Management Area criteria. The Low Build Alternative would only develop approximately half of the Western Deck (eastern half). No proposed improvements would occur near Ecology Canyon. The Southern Deck would only be developed with grasslands, an interpretive overlook, group picnic area, and walking paths connecting to the Schabarum-Skyline Trial. Due to the less intensive nature of development under this alternative, conflicts with the Conceptual SEA are not anticipated. With this Alternative, the proposed Rose Hills Memorial Park easement would have fewer impacts on the planned park use of the project site compared the Proposed Project. Due to the fewer amenities that would be provided within the Southern Deck, fewer park users and active recreational activities would use the Southern Deck and less conflicts would occur.

4.4.1.10 Noise

Similar to the Proposed Project, construction of the Low Build Alternative would result in less than significant noise impacts to sensitive receptors in the project area.

The Low Build Alternative would create noise levels lower than the analyzed worst-case scenario (the High Build Alternative). According to the Traffic Impact Analysis (Fehr & Peers 2016), the Low Build Alternative would generate 2,106 trips less than the worst-case scenario. Accordingly, operational traffic noise impacts would be considered less than significant.

4.4.1.11 Public Services

This alternative would cater to passive recreational activities, such as hiking and wildlife watching. The presence of construction staff during buildout would be shortened because of the development of fewer areas. Since the Low Build Alternative lacks most facilities, it is anticipated that visitation per month would be significantly less than the Proposed Project (i.e., 3,000 vs 32,200). Therefore, the Low Build Alternative would result in less public service impacts than the Proposed Project.

4.4.1.12 Recreation

Despite the passive nature of this alternative, the site would still be developed for recreational use. Due to the lack of a wide range of amenities to meet the diverse needs of park users, the facility constructed under the Low Build Alternative would essentially serve as an expanded trailhead for the existing regional trails network. Therefore, the Low Build Alternative has a greater potential, compared to the Proposed Project, to result in an increase in the use of existing neighborhood and regional parks or other recreational facilities in the project vicinity. These impacts would be greater on adjacent trails, such as the Schabarum-Skyline Trail and Habitat Authority trails, and would be lower on more distant recreation areas such as Whittier Narrows. The physical deterioration of recreational facilities in the project area would depend on the facility's capacity to serve additional users and management of those facilities. The physical effect on the environment from the Low Build Alternative is anticipated to be greater than the effects described for the Proposed Project in this Draft PEIR.

With the Low Build Alternative, impacts from incompatible uses from the proposed Rose Hills Memorial Park access road would be similar to those described for the Proposed Project. Although development would be less intense at the top of the Southern Deck than with the Proposed Project, safety impacts during high use times of the road would be the same, and north-south access across the Southern Deck would be restricted with Alternative Alignments 1 and 2. With Alignment 3, the active and passive recreation areas of the Southern Deck would be avoided and impacts would be less than significant. Mitigation Measures T-1 through T-6 would reduce impacts to a less than significant level.

4.4.1.13 Transportation and Circulation

This alternative would develop the park primarily for passive recreational use. The varied and active recreational facilities included in the Proposed Project and High-Build Alternative would not be developed. With a focus on establishing passive open spaces

and habitat areas, the Low-Build Alternative would provide limited passive recreational uses that would substantially reduce the number of visitors, including the diversity of user groups, to the proposed park.

This alternative is expected to generate approximately 585 net daily trips, 23 (12 inbound, 11 outbound) trips in the morning peak hour, and 47 (24 inbound, 23 outbound) trips in the evening peak hour. The estimated trip generation of this alternative is 75 percent lower than that of the Proposed Project in each of the analyzed peak hours. Potential conflicts with the proposed roadway easement for Rose Hills Memorial Park would be less than the Proposed Project due to decreased park users and park amenities. Impacts would be less than significant with the incorporation of Mitigation Measures T-1 through T-6.

4.4.1.14 Utilities and Service Systems

Impacts to utility systems for the Low Build Alternative are anticipated to be less than the impacts described for the Proposed Project due to the lower level of development that would occur under this Alternative. Under this Alternative, approximately half of the Western Deck and all of the Eastern and Southern Decks would be developed. Only the eastern two-way road would be used for park access. Under this Alternative, the elimination of all active recreational facilities and reduced recreational opportunities are anticipated to result in substantial reductions in park visitation. Monthly park attendance is projected to fall from an estimated 32,200 under the Proposed Project to 3,000 under this Alternative. Less development and lower park attendance numbers would result in lower wastewater, water, drainage system capacity, and energy requirements. It could also be expected that due to the lack of diverse recreational opportunities a lower number of people would visit the park. This in turn would result in lower water needs and a lower amount of trash generated during park operation.

4.4.2 High Build Alternative

With the High Build Alternative, the park would be developed at a higher level than the Proposed Project, focusing on establishing varied and active recreational amenities and opportunities for the public to gain access and interaction with the park.

4.4.2.1 Aesthetics

With the High Build Alternative, aesthetic impacts to scenic vistas, views from trails, and scenic resources within a state scenic highway are expected to be similar to the Proposed Project. However, due to the higher intensity development under this Alternative, the impact to the visual character of the project site is expected to be incrementally greater than the Proposed Project. The park would continue to be dominated by large areas of landscaped passive uses, but areas of more active development would be included. This Alternative would include more park elements for both passive and active recreational activities. For example, this alternative would include a Frisbee golf area, approximately 25 acres of bike skills area, five slides, and the development of approximately 8,000 sf of building space on the buttress. The inclusion of such elements under this alternative is not expected to change the nature of impacts to visual resources as described for the Proposed Project and the Low Build Alternative. All alternatives would substantially alter the existing visual character of the

site compared to existing conditions; however, the High Build Alternative would be dominated by more active recreational facilities which could potentially result in a higher contrast with the surrounding natural environment. The higher contrast would be a result of more manmade structures with geometric shapes (e.g., slides; zip lines). Furthermore, this Alternative includes festivals with estimated attendance of 5,000 to 20,000 people. Festivals could potentially occur at night requiring the use of lighting. Therefore, this alternative would increase potential for impacts on the nighttime views in the area. However, the location of the proposed concert venue within the "bowl" of the Western Deck would limit light spillover. It should also be noted that there are no sensitive land uses adjacent or in the vicinity of the performance space.

4.4.2.2 Air Quality

Construction-related air quality impacts under the High Build Alternative would be similar to those for the Proposed Project. Similar to the Proposed Project, the High Build Alternative's construction-related emissions would not exceed regional thresholds nor the applicable Localized Significance Thresholds established by the SCAQMD.

In addition, the High Build Alternative's construction-source emissions would not conflict with the Basin AQMP. This alternative would comply with all applicable SCAQMD construction-source emission reduction rules and guidelines, and construction-source emissions would not cause or substantively contribute to violation of CAAQS or NAAQS.

The worst-case summer or winter VOC, NOx, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions generated by the High Build Alternative long-term operations are summarized below in Table 4-7. This table shows that the High Build Alternative's emissions would not exceed the SCAQMD regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the High Build Alternative.

Table 4-7. Unmitigated Regional Operational Pollutant Emissions for the High Build Alternative[1]

High Build Alternative						
	Pollutant Emissions (pounds/day)					
Activity	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	2.39	0.00	0.07	0.00	0.00	0.00
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	5.22	11.79	53.59	0.23	14.58	4.11
Total Emissions	**7.61**	**11.79**	**53.67**	**0.23**	**14.58**	**4.11**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	no	no	no	no	no	no

[1] Source: CalEEMod Version 2013.2.2

[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment. Emissions for consumer products = EF x building area. The default EF in CalEEMod for this area is 1.98 x 10^-5 lbs/SF/day. Building area for the project is 30,950 SF. Therefore, (1.98 x 10^-5 lbs/SF/day) x 30,950 SF = 0.61281 lbs/day. Overall area sources (lbs/day)= 1.6233 + 0.61281+ 0.00293 = 2.24 lbs/day. Building area for the high build Alt is 40,250 SF. Therefore, (1.98 x 10^-5 lbs/SF/day) x 40,250 SF = 0.79695 lbs/day. Overall area sources (lbs/day) = 1.5839 + 0.79695 + 0.00661 = 2.39 bs/day.

[3] Energy usage consists of emissions from on-site natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

The traffic impact analysis showed that the High Build Alternative would generate 2,691 trips per day, which is slightly more than the Proposed Project. The intersection of Peck Road and Rooks Road has a High Build Alternative – Cumulative Plus Project PM peak hour volume of 1,315 vehicles, which is the highest traffic volume located in the project area. Because this intersection is substantially less than the 100,000-vehicle threshold, no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the ongoing use of the park under the High Build Alternative.

Similar to the Proposed Project, odor emissions from the High Build Alternative would be limited to the construction phase, and would be temporary, short-term, and intermittent in nature. Construction odors would not result in persistent impacts that would affect substantial numbers of people. Therefore, potential odor impacts from the High Build Alternative would be less than significant.

4.4.2.3 Biological Resources

The High Build Alternative would include additional development, provide additional vehicular access within the project area, and would create an increased human disturbance compared to the Proposed Project. The High Build Alternative features a two-way full loop park road while the Proposed Project includes a one-way full loop park road.

The High Build Alternative would include both day and nighttime performances and events (requiring additional lighting) with estimated attendance up to 20,000 people per event while the Proposed Project would support only day-time regional festivals/performances. Furthermore, the High Build Alternative provides for increased park amenities and structures including passive elements such as more picnic and interpretive/overlook areas and a dog agility training area. This Alternative includes an increase in the number active elements such as slides and a bike skills area expanded from 8 acres in the Proposed Project to 25 acres.

When compared to the Proposed Project the High Build Alternative would overall create additional indirect impacts to sensitive species, nesting birds, and local wildlife movement, including the addition of nighttime noise and lighting. Therefore, under this Alternative, impacts to biological resources would be increased when compared to the Proposed Project.

4.4.2.4 Cultural, Tribal, and Paleontological Resources

Impacts to cultural, tribal, and paleontological resources from the High Build Alternative would be the same as for the Proposed Project. Impacts would be less than significant with implementation of the same mitigation measures as the Proposed Project.

4.4.2.5 Geology and Soils

This Alternative would include more park elements for both passive and active recreational activities, including additional restroom structures and an additional staff office building and ranger station. These structures could be affected by strong ground shaking, landfill settling, and clay soils. Impacts would be similar to those described for

the Proposed Project, but more development would occur that would be affected by these hazards. Impacts would be less-than-significant with the implementation of Mitigation Measure G-1.

4.4.2.6 Greenhouse Gas

Impacts associated with GHG emissions under the High Build Alternative would be greater than those discussed for the Proposed Project. The High Build Alternative would result in unmitigated emissions of 5,448.13 $MTCO_2e$ per year (Table 4-8), which is greater than the SCAQMD draft screening threshold of 3,000 metric tons of CO_2e per year.

The High Build Alternative would be required to implement Mitigation Measures GHG-1 through GHG-5 from this EIR; however, GHG-related impacts would remain significant following mitigation, similar to the Proposed Project. There is no feasible mitigation measure that would effectively reduce emissions from mobile and construction sources to less than significant levels. Therefore, GHG-related impacts are considered to be significant and unavoidable under the High Build Alternative.

Table 4-8. Opening Year (2035) Unmitigated Greenhouse Gas Emissions for the High Build Alternative[1]

HIGH BUILD ALTERNATIVE						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	BIO-CO_2	NONBIO-CO_2	CO_2	CH4	N2O	CO_2E
Area Sources[2]	0.00	0.02	0.02	0.00	0.00	0.02
Energy Usage[3]	0.00	60.44	60.44	0.00	0.00	60.68
Mobile Sources[4]	0.00	2,898.86	2,898.86	0.08	0.00	2,900.49
Solid Waste[5]	1.95	0.00	1.95	0.12	0.00	4.37
Water[6]	0.00	422.75	422.75	0.02	0.00	424.41
Construction[7]	0.00	2,056.22	2,056.22	0.09	0.00	2,058.17
Total Emissions	1.95	5,438.29	5,440.24	0.31	0.00	**5,448.13**
					SCAQMD Draft Screening Threshold	3,000
					Exceeds Threshold?	Yes

[1] Source: CalEEMod Version 2013.2.2
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

With regard to GHG plan consistency, Year 2010 unmitigated emissions for the High Build Alternative (worst-case; full buildout) are shown in Table 4-9, and Year 2020 mitigated emissions for the High Build Alternative (worst-case; full buildout) are shown in Table 4-10. As shown in Table 4-10, the High Build Alternative's Year 2020 mitigated emissions provide a reduction of 18 percent from 2010 baseline High Build Alternative emissions (refer to Section 3.7.5 for mitigation measure to be applied to the High Build

Alternative). Therefore, with incorporation of mitigation, the High Build Alternative would meet the requirements of the CCAP, and the High Build Alternative would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG.

Table 4-9. Baseline (2010) Project-Related Greenhouse Gas Emissions[1]

HIGH BUILD ALTERNATIVE						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	BIO-CO_2	NONBIO-CO_2	CO_2	CH_4	N_2O	CO_2E
Area Sources[2]	0.00	0.02	0.02	0.00	0.00	0.02
Energy Usage[3]	0.00	60.44	60.44	0.00	0.01	60.68
Mobile Sources[4]	0.00	3,718.24	3,718.24	0.24	0.00	3,723.38
Solid Waste[5]	1.95	0.00	1.95	0.12	0.00	4.37
Water[6]	0.00	422.75	422.75	0.02	0.00	424.41
Construction[7]	0.00	2,056.22	2,056.22	0.09	0.00	2,058.17
Total Emissions	1.95	6,257.67	6,259.62	0.47	0.01	**6,271.02**

[1] Source: CalEEMod Version 2013.2.2 year 2010 unmitigated emissions
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.
[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

Table 4-10. Year (2020) Mitigated Project-Related Greenhouse Gas Emissions[1]

HIGH BUILD ALTERNATIVE						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	BIO-CO2	NONBIO-CO_2	CO_2	CH_4	N_2O	CO_2E
Area Sources[2]	0.00	0.02	0.02	0.00	0.00	0.02
Energy Usage[3]	0.00	60.44	60.44	0.00	0.00	60.68
Mobile Sources[4]	0.00	2,709.51	2,709.51	0.10	0.00	2,711.66
Solid Waste[5]	0.49	0.00	0.49	0.03	0.00	1.09
Water[6]	0.00	338.20	338.20	0.02	0.00	339.52
Construction[7]	0.00	2,056.22	2,056.22	0.09	0.00	2,058.17
Total Emissions	0.49	5,164.39	5,164.88	0.24	0.00	**5,171.14**
Percent Reduction Requirement from LA County GHG CAP						11%
Project's Percent reduction from Baseline						18%
Meets Reduction Requirement?						Yes

[1] Source: CalEEMod Version 2013.2.2 year 2020 Mitigated emissions
[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
[3] Energy usage consist of GHG emissions from electricity and natural gas usage.
[4] Mobile sources consist of GHG emissions from vehicles.

HIGH BUILD ALTERNATIVE						
	GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)					
CATEGORY	BIO-CO2	NONBIO-CO_2	CO_2	CH_4	N_2O	CO_2E

[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
[7] Construction GHG emissions based on a 30 year amortization rate.

4.4.2.7 Hazards and Hazardous Materials

With the High Build Alternative, impacts from potential landfill gas collection in buildings and structures and the potential for worker exposure to contaminated groundwater is similar to the Proposed Project. Impacts would be less than significant with mitigation. Impacts from potential conflicts between landfill activities and systems and park activities and systems and fire hazards would be similar to those described for the Proposed Project (less than significant with mitigation), but would be slightly more because additional areas would be developed.

4.4.2.8 Hydrology and Water Quality

With the High Build Alternative, the park would be developed at a much higher level than the Proposed Project, focusing on establishing varied and active recreational amenities and opportunities for the public to gain access and interaction with the park. Under this alternative, visitation is anticipated to increase from 32,200 people per month from the Proposed Project to 51,350 people per month.

This alternative would create a regional park with more intensive recreational uses; therefore, hydrological impacts are expected to be greater than those described for the Proposed Project due to increased demand for water and wastewater services from increased park attendance.

4.4.2.9 Land Use and Planning

With the High Build Alternative, the park's capacity would be developed at a much higher level than the Proposed Project, focusing on establishing varied and active recreational amenities and opportunities for the public to gain access and interaction with the park. The High Build Alternative would be consistent with the County Zoning Ordinance, land use designation, and would not conflict with Hillside Management Area criteria. The High Build Alternative would develop a multi-use trail along the western two-way loop road as described for the Proposed Project. The multi-use trail would connect to the Schabarum-Skyline Trail near the eastern ridge of Ecology Canyon. A picnic area would be developed on the western half of the Western Deck. This picnic area would be approximately 1,200 feet east of Ecology Canyon. The performance space would be constructed in the eastern half of the Western Deck. A row of trees between the performance and picnic areas would separate the spaces and help buffer noise and light sources from events. The Sanitation Districts' M&O Yard is located approximately 800 feet to the southeast of Ecology Canyon. A ridge separates the M&O Yard from Ecology Canyon blocking potential noise and light impacts. The Proposed Project would construct an approximately 1,650-square foot building to serve as the shared maintenance and operations space for the regional park and Sanitation Districts

operations. The continued use of this area as a maintenance and operations yard would be compatible with Ecology Canyon. Impacts would be less than significant.

The Southern Deck would be developed with a bike skills area, picnic area, and a native plant nursery. Due to the more intensive nature of development proposed by the High Build Alternative, conflicts with the Conceptual SEA are anticipated due to the increase human presence next to habitat.

With this Alternative, the proposed Rose Hills Memorial Park easement would have a higher level of impacts on the planned park use of the project site compared to the Proposed Project. With the High Build Alternative, the Southern Deck would be developed with a bike skills area. This proposed use would introduce a greater amount of park users on bicycles in the same area where Rose Hills Memorial Park traffic would be routed through. Potential traffic conflicts may occur from these two user groups. As such, it is anticipated that the conflicts described for the Proposed Project between park users and Rose Hills Memorial Park traffic would occur on a more frequent basis.

4.4.2.10 Noise

Sensitive receptors that may be affected by High Build Alternative operational noise include the residences to the east, west, and south and the elementary schools to the east. The proposed park is anticipated to operate during daytime hours (with some performance events occurring in the evening), which falls within the City's/County's daytime allowable hours of 7 A.M. to 10 P.M. for noise limits.

The High Build Alternative represents the worst-case scenario, which was analyzed in detail in Section 3.11 of this PEIR, with the exception of the increased capacity of the performance space. Future operational noise levels from the Proposed Project (which includes typical live concert events at the amphitheater with approximately 2,000 people) are expected to range from 21.8 to 41.6 dBA Leq at the evaluated sensitive noise receptors. Noise associated with project operations will not exceed the City of Industry's most strict exterior daytime standard of 50 dBA. The High Build Alternative could include occasional day and night live concert events at the on-site amphitheater with up to 20,000 people. Typical noise sources from a concert include sound systems (powered speakers), the crowd, and electric generators. Louder noise levels are usually associated with sound systems. Therefore, maximum noise levels generated by an event would be more influenced by the use of sound systems than the number of people attending the event. As such, noise levels generated by special events with up to 20,000 people for the High Build Alternative would be similar to special events with approximately 2,000 for the Proposed Project.

Assuming an exterior to interior noise reduction of 20 dBA (with windows closed), the anticipated interior noise level at the nearby sensitive receptors would range between 1.8 to 21.6 dBA. This anticipated noise level would be below the most strict nighttime 40 dBA standard (based on the City's thresholds; the County's most strict nighttime standard is 45 dBA). Therefore, like the Proposed Project, operation of the High Build Alternative would be considered less than significant as it relates to interior noise.

4.4.2.11 Public Services

With the High Build Alternative, service level needs for fire protection, sheriff protection, and other public services are expected to be similar to the Proposed Project. This alternative would include more park elements for both passive and active recreational activities. However, this alternative includes festivals with estimated attendance of 5,000 to up to 20,000 people. Festivals of this size could require a substantially greater presence of emergency services than on normal operational days (days without festivals).

The LASD estimates that at full build out of the High Build Alternative (51,350 visitors per month) four deputies, four security officers, and one Sergeant per shift (day and night) would be required to provide law enforcement services to the park. The early morning shift may require additional Parks Bureau personnel depending on the phasing and construction schedule. The need for four additional patrol vehicles and office space at the park security office was also identified (LASD 2016a). These staffing estimates are preliminary based on the number of anticipated visitors and may be adjusted due to deployment of patrol deputies based on seven days a week with a relief factor. Implementation of Mitigation Measure PS-1 through PS-5 would reduce these impacts to a less than significant level.

4.4.2.12 Recreation

Under this Alternative, the park is designed to be a regional destination offering a wide range of amenities to meet the diverse needs of park users. Therefore, it is anticipated that the majority of park users that visit the park would remain in the park. Impacts from the increase in the use of existing neighborhood and regional parks or other recreational facilities as a result of the High Build Alternative are anticipated to be less than significant.

The High Build Alternative would be developed within the same footprint as the Proposed Project. However, it would be developed with more active recreational amenities. As such, it is anticipated that the physical effect on the environment to be similar to the effects described for the Proposed Project in this Draft PEIR.

With the High Build Alternative, impacts from incompatible uses from the proposed Rose Hills Memorial Park access road would be similar to those described for the Proposed Project. Development would be more intense on the Southern Deck than with the Proposed Project, and safety impacts during high use times of the road would also be more intense, and north-south access across the Southern Deck would be restricted with Alternative Alignments 1 and 2. In addition, there would be conflicts with the Schabarum-Skyline Trail. Mitigation Measures T-1 through T-6 would reduce impacts to less than significant. With Alternative Alignment 3, the active and passive recreation areas of the Southern Deck would be avoided and impacts would be less than significant with Mitigation Measures T-1 through T-6.

4.4.2.13 Transportation and Circulation

Under this alternative, the park would be developed to provide a variety of recreation focused land uses that would maximize the amount of both active and passive park

amenities. Compared with the Proposed Project, the enhanced recreational development options provided in the High-Build Alternative would increase the number of visitors to the proposed park.

The trip generation for the High-Build Alternative would be 15 percent greater than that of the Proposed Project based on projections provided by the Los Angeles County Department of Parks and Recreation (DPR) during the analyzed morning and evening peak hours. This alternative is expected to generate approximately 2,691 net daily trips, 108 (54 inbound, 54 outbound) trips in the morning peak hour, and 215 (108 inbound, 107 outbound) trips in the evening peak hour. The same methodology as the Proposed Project was used for the High-Build Alternative. Project-generated traffic on existing and future volumes under the High-Build Project Alternative was analyzed to determine potential traffic impacts on the surrounding street system. The traffic impact analysis compared the projected LOS at each study intersection under Existing plus Project conditions with the Existing conditions and Cumulative plus Project conditions with Cumulative Base conditions as described below.

Existing plus Project Traffic Level of Service and Impact Analysis

The Existing plus Project traffic volumes were analyzed to determine the projected V/C ratios and LOS for each intersection. All intersections were found to operate at LOS D or better with the addition of project traffic. After applying the Los Angeles County and City of Industry significant impact criteria, it was determined that the High Build Project Alternative would not significantly impact traffic at the study locations under Existing (2016) plus Project conditions.

Cumulative Base Conditions and Cumulative (2035) plus Project Traffic Conditions and Impact Analysis

The year 2035 Cumulative Base peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. The Cumulative (2035) plus Project peak hour traffic volumes were analyzed to determine the projected future operating conditions with the addition of the proposed project traffic. All but one of the study intersections analyzed in the traffic study are projected to continue operating at LOS D or better. The exception is the intersection of Peck Road & Pellissier Place, which is projected to operate at LOS E in the AM peak hour. No significant traffic impacts would result from the High Build Project Alternative under Cumulative (2035) plus Project conditions.

Regional Transportation Impact Analysis

CMP Freeway and Arterial Intersection Analysis

According to the High Build Alternative trip generation and trip distribution estimates, the High-Build Alternative would add fewer than 150 peak hour vehicles to the nearest CMP freeway monitoring locations and fewer than 50 peak hour vehicles to the nearest arterial monitoring intersection. Therefore, CMP freeway and arterial intersection analyses are not required, and impacts to the CMP monitoring system would be considered less than significant.

State Highway Systems Analysis

Based on the HCM analysis, all analyzed ramp intersections are projected to operate at LOS D or better. A less than significant impact would occur.

CMP Transit Impact Analysis

Using the methodology described for the Proposed Project and assuming an even distribution, the estimated increase in transit trips equates to one to two new riders per bus per hour. Impacts would be less than significant.

Internal Circulation System and Emergency Access

Impacts related to the internal circulations system, design features, emergency access, multi-modal transportation, and the proposed Rose Hills Memorial Park roadway easement would be the same as the Proposed Project for Phases I, II, and Future Phases. A less than significant impact would occur with the implementation of Mitigation Measures T-1 through T-6.

Performance Events

The High-Build Alternative includes events of up to 20,000 people. These events would result in impacts to the internal and external circulation systems and emergency access during such events. Impacts to emergency services would be less than significant with the implementation of Mitigation Measures PS-1 through PS-4 from Section 3.12, Public Services of this EIR and Mitigation Measures T-2 and T-6.

Construction

Construction impacts would be the same as those described for the Proposed Project. A Construction TMP will be in place to reduce temporary construction-related impacts to a less than significant level (Mitigation Measure T-6).

4.4.2.14 Utilities and Service Systems

With the High Build Alternative, impacts to utility systems are anticipated to be more than the impacts described for the Proposed Project due to the higher level of development that would occur. A more intensive development would result in greater wastewater, water, drainage system capacity, and energy requirements. It could also be expected that due to the diverse recreational opportunities, a higher number of people would visit the park. This in turn would result in greater water and wastewater needs and a greater amount of trash generated during park operation. As such, utility impacts under this alternative are anticipated to be greater than the Proposed Project.

4.4.3 No Project Alternative

4.4.3.1 Aesthetics

With the No Project Alternative, no trails or access infrastructure would be constructed and no park development would occur. The Sanitation Districts would continue to operate at the landfill and closure activities would continue. These activities would

decrease over time as the landfill ages. Visual resources, such as scenic vistas of the San Gabriel Mountains and Valley from the landfill, would not be readily accessible to the public. The existing industrial character of the site would remain.

4.4.3.2 Air Quality

The No Project Alternative would not result in the construction or operation of a park at the project site. Therefore, air quality impacts would not occur under this Alternative. Air quality emissions associated with landfill maintenance activities would continue.

4.4.3.3 Biological Resources

For purposes of this analysis, the No Project Alternative is the continuation of the existing uses on the project site, which consist of landfill maintenance activities and undeveloped and natural open space. No facilities would be developed under this Alternative, and no park activities would occur on the project site. As such, impacts to biological resources would be related to ongoing landfill maintenance activities and would be less than significant.

4.4.3.4 Cultural, Tribal, and Paleontological Resources

The No Project Alternative would not result in impacts to historical, archaeological, tribal, or paleontological resources.

4.4.3.5 Geology and Soils

With the No Project Alternative, no trails or access infrastructure would be constructed and no park development would occur. The Sanitation Districts would continue to operate at the landfill. Management of the landfill and closure activities would continue. These activities would decrease over time as the landfill ages (approximately 30 years). Landfill infrastructure has already been constructed to comply with seismic and geotechnical stability requirements according to Title 27 of the CCR. No impact would occur.

4.4.3.6 Greenhouse Gas

The No Project Alternative would not result in the construction or operation of a park at the project site. Therefore, no GHG-related impacts would occur under this Alternative. GHG emissions associated with landfill maintenance activities would continue.

4.4.3.7 Hazards and Hazardous Materials

With the No Project Alternative, post-closure maintenance of the landfill and its environmental systems would continue, but no park-related amenities would occur. No impact would occur.

4.4.3.8 Hydrology and Water Quality

With the No Project Alternative, no trails or access infrastructure would be constructed and no park development would occur. The Sanitation Districts would continue to operate at the landfill. Management of the landfill and closure activities would continue. These activities would decrease over time as the landfill ages. Hydrological conditions as they exist would continue.

4.4.3.9 Land Use and Planning

No potential land use inconsistencies would occur as no land use changes are anticipated.

4.4.3.10 Noise

The No Project Alternative would not result in the construction or operation of a park at the project site. Therefore, no noise-related impacts would occur under this Alternative. Noise associated with landfill maintenance activities would continue.

4.4.3.11 Public Services

Public services, such as fire protection and sheriff protection, would be required at a level similar to the present day service ratio. Population growth at the existing site is not expected and the existing industrial character of the site would remain.

4.4.3.12 Recreation

Existing recreational facilities in the project area would continue to be limited to the Schabarum-Skyline Trail and the trails within the Habitat Authority Preserve. The need for a regional park would not be met and the associated beneficial impacts of providing improved recreational facilities, particularly for underserved and disadvantaged populations, would not occur. The Rose Hills Memorial Park access road would be constructed somewhere on the landfill property. Impacts related to incompatible uses with park visitors and amenities would not occur. The future construction and operation of the proposed Rose Hills Memorial Park access road would continue to be subject to the terms of the Amended Setback and Easement Agreement.

4.4.3.13 Transportation and Circulation

Under the No Project Alternative, the Proposed Project would not occur. The MRF would continue existing operations, Sanitation Districts' post-closure landfill operations would continue, and per the Easement Agreement between Rose Hills Memorial Park and Sanitation Districts, a roadway easement through the landfill property would be maintained for future cemetery operations.

Under this Alternative, there would be no new park-related trips generated to or from the project site. Existing and planned uses would generate trips. No traffic impacts would occur under this Alternative, as no new development and associated vehicle trips would occur on the project site.

4.4.3.14 Utilities and Service Systems

With the No Project Alternative no trails or access infrastructure would be constructed and no park development would occur. The Sanitation Districts would continue to operate at the landfill. Management of the landfill and closure activities would continue. These activities would decrease over time as the landfill ages. No impact to utility systems would occur.

4.5 COMPARISON OF ALTERNATIVES

Table 4-11 provides a comparison of anticipated impacts of the alternatives with the Proposed Project. Table 4-12 provides a comparison of project objectives across all alternatives and the Proposed Project.

Table 4-11. Comparison of Impacts for Alternatives with Proposed Project

CATEGORY	LOW BUILD	HIGH BUILD	NO PROJECT
Aesthetics	O	✚	–
Air Quality	–	O	–
Biological Resources	–	✚	–
Cultural, Tribal, and Paleontological Resources	O	O	–
Geology and Soils	–	O	–
Greenhouse Gas	O	✚	–
Hazards and Hazardous Materials	O	O	–
Hydrology and Water Quality	O	✚	–
Land Use and Planning	–	✚	–
Noise	–	✚	–
Public Services	–	✚	–
Recreation	✚	O	–
Transportation and Circulation	–	✚	–
Utilities and Service Systems	–	✚	–

Notes:
✚ = Impacts would be greater than the Proposed Project
O = Impacts would be similar to the Proposed Project
– = Impacts would be less than the Proposed Project

Table 4-12. Comparison of Project Objectives by Alternative

PROJECT OBJECTIVE	PROPOSED PROJECT	LOW BUILD	HIGH BUILD	NO PROJECT
1. Develop a "Park For All" that offers diverse, healthy, passive, and active recreational experiences and programming for visitors of all ages, abilities, interests and backgrounds.	Y	N	Y	N

PROJECT OBJECTIVE	PROPOSED PROJECT	LOW BUILD	HIGH BUILD	NO PROJECT
2. Develop a regional destination park which uniquely reflects the site's history, urban-wildland location, scale and topography.	Y	Y	Y	N
3. Develop a range of active and passive amenities to meet varied recreational demands and provide outdoor fitness opportunities to help address national trends related to inactivity, obesity and nature-deficit disorder.	Y	N	Y	N
4. Attract diverse, new audiences, particularly underrepresented or disadvantaged populations, to inspire connection to outdoor activities, nature, and environmental stewardship.	Y	N	Y	N
5. Integrate active recreational facilities with natural habitats to enhance and sustain both the recreational and ecological functions of the park.	Y	N	N	N
6. Promote and support wildlife movement and habitat connectivity through the Puente Hills Significant Ecological Area (SEA), the Rio Hondo College Wildlife Sanctuary SEA and the San Gabriel River.	Y	Y	N	N

PROJECT OBJECTIVE	PROPOSED PROJECT	LOW BUILD	HIGH BUILD	NO PROJECT
7. Demonstrate environmentally sustainable design and practices.	Y	Y	Y	N
8. Provide multi-modal, universal access and circulation into and through the park to the extent feasible.	Y	N	Y	N
9. Incorporate design elements for education and interpretation on the park's unique landfill history and natural environmental features.	Y	Y	Y	N
10. Provide a captivating trail experience within the park which also alleviates the overuse and degradation of the adjacent trail network.	Y	Y	Y	N
11. Balance development of park facilities with landfill maintenance activities to protect public safety, water quality and meet the Sanitation Districts' regulatory requirements.	Y	Y	Y	N
12. Balance multiple project objectives in a manner that considers the complex site constraints, park needs of the overall region, and the competing interests and needs of adjacent entities.	Y	N	Y	N

Notes: Y = meets objective; N = does not meet objective

4.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines require that an EIR identify the environmentally superior alternative. The No Project Alternative would be the environmentally superior alternative because it would avoid all impacts associated with the Proposed Project. However, the No Project Alternative would not meet any of the project objectives. According to the CEQA Guidelines, if the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives. All build alternatives (Proposed Project, Low Build, and High Build) would have impacts that are less than significant or less than significant with mitigation, with the exception of climate change impacts. For all build alternatives, greenhouse gas emissions would be significant and unavoidable. Therefore, the Proposed Project has been identified as the environmentally superior alternative because no other alternatives would avoid the significant, unmitigable impact to climate change. In addition, the Proposed Project would result in beneficial impacts to recreation, aesthetics, and open space, and meet all of the project objectives.

SECTION 5.0 OTHER CEQA CONSIDERATIONS

5.1 CUMULATIVE IMPACTS

5.1.1 Definition and Approach

This section discusses the cumulative effects of the Proposed Project. Section 15130(e) of the CEQA Guidelines requires a discussion of cumulative impacts of a project "when the project's incremental effect is cumulatively considerable." The CEQA Guidelines, Section 15355, defines a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulatively considerable impacts are defined in Section 15065(c) of the CEQA Guidelines as the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

Section 15130(b) of the CEQA Guidelines states, "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness."

To analyze the cumulative impacts of the project in combination with other expected future growth, the amount and location of growth expected to occur must be predicted. Section 15130(b) of the CEQA Guidelines allows two methods of prediction:

Either:

1. *A list of relevant past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or*

2. *A summary of projections contained in adopted general plan or related planning document or in a prior adopted or certified environmental document that described or evaluated regional or area-wide conditions contributing to the cumulative impact.*

For the purpose of this PEIR, a combined project list (a) and projections (b) approach was used due to the long-term nature of the Proposed Project. Phases I and II would occur in the near term, which allows analysis with a project list approach, whereas the remaining phases would occur after 20 years, and up to 75 years, and a projections approach was used. As individual projects in future phases after Phase II are implemented in the future, project-specific cumulative impacts (if any) would be disclosed in subsequent-tier CEQA documentation.

5.1.2 List of Relevant Past, Present, and Probable Future Projects

Table 5-1 contains a list of cumulative projects in the project area that have been used for the Phase I and II cumulative impact analysis. A description of local agency projections, which are used for future phases, are also included in this section after Table 5-1.

Table 5-1. Cumulative Projects

NO.	ADDRESS	CITY	DESCRIPTION	SIZE
1	12851 Crossroads Parkway South	City of Industry	Office building	77,250 square feet
2	3718 Capitol Avenue	City of Industry	Warehouse	36,666 square feet
3	2231 Parkway Drive	El Monte	Subdivision	9 dwelling units
4	2728 Durfee Ave	El Monte	Office building with a showroom	1,625 square feet
5	1330 9th Avenue	La Puente	Church sanctuary and bell tower	22,248 square feet
6	635 S 6th Avenue	La Puente	Truck wash facility	4 wash stalls
7	2808 Workman Mill Road	Whittier	Puente Hills Materials Recovery Facility (PHMRF)	1,540 tons per day
8	2500-2520 Pellissier Place	City of Industry	Puente Hills Intermodal Transfer Facility	17.2 acres
9	3888 Workman Mill Road	Whittier	Rose Hills Memorial Park - Existing	1,224 acres
			Rose Hills Memorial Park - Expansion Area	176 acres
			Rose Hills Memorial Park - with Incremental Growth	1,400 acres

5.1.3 San Gabriel Valley Growth Projections

The Proposed Project includes infrastructure and recreational amenities built over several decades at the closed Puente Hills Landfill in unincorporated Los Angeles County. One small portion of the project is located within the City of Industry. The project site is located in the San Gabriel Valley surrounded by the following cities and communities: City of South El Monte to the northwest, the cities of Industry and La Puente to the north, the unincorporated community of Hacienda Heights to the east, the City of Whittier to the south, and the City of Pico Rivera to the west. Unincorporated areas are under the jurisdiction of Los Angeles County. The cumulative impacts analysis area is the San Gabriel Valley, unless otherwise noted for a specific resource. The San Gabriel Valley is a geographical valley on the easternmost portion of Los Angeles County bordered by the San Gabriel Mountains to the north, the San Jose and Chino Hills to the east, the San Rafael and Puente Hills to the south, and the San Rafael Hills to the

west. The General Plans for these jurisdictions were reviewed as part of the plan approach for this cumulative impacts analysis (CEQA Guidelines §15130(b)(1)(b)).

The Southern California Association of Governments (SCAG) forecasts that from 2008 to 2035, the San Gabriel Valley will add 319,000 more people. To accommodate this population increase, the San Gabriel Valley will need to add 85,000 new households (SCAG 2012). This growth will occur in a geographical area that is largely built out. With a growing population, there will be an increase demand to preserve existing open spaces and to develop more recreational opportunities. General Plans from the region address open space issues and generally encourage the preservation of open spaces and the increased development of recreational facilities (please refer to the recreation section of this PEIR [Section 3.13]). The Proposed Project would help meet the increased demand for open spaces and recreational opportunities that would result from projected population growth in the San Gabriel Valley.

5.1.4 Cumulative Impacts Analysis

5.1.4.1 Aesthetics

The San Gabriel Valley is largely built out with single- and multi-family residential, commercial, and industrial land uses. Few remaining vacant and open spaces remain in the valley. Growth and development in the San Gabriel Valley will continue to occur as the few remaining vacant parcels are developed and as underutilized parcels are redeveloped. This continued urbanization of the San Gabriel Valley would result in changes that can potentially affect visual resources and the visual character of the valley.

Current projects in the vicinity of the project site that have the potential to combine with Proposed Project impacts to result in cumulative impacts include the Rose Hills Memorial Park expansion and the Sanitation Districts Waste by Rail System (Sanitation Districts 2016). Rose Hills Memorial Park is currently expanding the area available for interments within their property boundaries. The area of expansion is generally south of Nike Hill and west of the Southern Deck. The proposed Rose Hills Memorial Park easement through the project site would provide access to the areas under development by Rose Hills Memorial Park. Visual impacts related to this expansion include hillside grading and removal of oak trees. The Sanitation Districts is currently developing the Puente Hills Intermodal Facility that would serve as the dedicated intermodal yard located just north of the Puente Hills MRF. The Puente Hills Intermodal Facility is a component of the Sanitation Districts Waste by Rail System. Once online, waste would be transported via train to the Mesquite Regional Landfill. The Puente Hills Intermodal Facility is located in an industrial area. The Proposed Project would add visual contrast, green space, and native landscaping to a currently barren former landfill site, and would provide opportunities for the public to enjoy views of the San Gabriel Valley. The Proposed Project is not expected to contribute considerably to a cumulative impact to aesthetics because impacts would be beneficial or less than significant. Cities in the San Gabriel Valley and the County have development and design standards with which projects must comply to avoid or mitigate visual impacts. Development and design review of individual projects by individual cities or the County would prevent the potential for adverse visual impacts so that aesthetic impacts do not become cumulatively significant.

5.1.4.2 Air Quality

Cumulative projects include local development, as well as general growth within the project area. As with most development, the greatest source of emissions associated with the Proposed Project is from mobile sources, which travel well out of the local area. The project area is out of attainment for both ozone and particulate matter (PM_{10}). Construction and operation of cumulative projects would further degrade the local air quality, as well as the air quality of the Basin. The greatest cumulative impact on the quality of regional air cell would be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality would be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. Therefore, the Proposed Project would not have a considerable contribution to the significant cumulative impact to air quality.

5.1.4.3 Biological Resources

The cumulative setting for biological resources includes the bioregions within the San Gabriel Valley. Development associated with implementation of the PHLPMP could contribute to the ongoing loss of natural lands and sensitive habitat in the area, which currently provide habitat for a variety of species. Cumulative development would result in the conversion of existing biological habitat to urban recreational use. However, the PHLMP, in addition to regional, state and federal regulations, includes policies and measures that would mitigate impacts to biological resources associated with Proposed Project. Implementation of the Proposed Project has the potential to result in impacts to a wide range of special-status species and sensitive natural habitat.

A wide range of mitigation measures that must be implemented in order to reduce impacts to special-status species and sensitive natural habitat are described in Section 3.4, Biological Resources of this PEIR. Those mitigation measures identify the regulatory roles of agencies such as the CDFW and the USFWS in issuing permits and providing guidance regarding species and habitat avoidance. The implementation of the range of mitigation measures required by the Proposed Project would reduce impacts to biological resources to a less than significant level because there would be no net loss of biological habitat. As such, this is considered a less than cumulatively considerable impact, and no additional mitigation measures beyond those identified are required.

5.1.4.4 Cultural, Tribal, and Paleontological Resources

There are no known cultural resources on the project site. In the event that cultural or paleontological resources are encountered during construction, implementation of Mitigation Measures CR-1 through C-4 would reduce impacts to a less than significant level. Impacts to tribal cultural resources would be mitigated with implementation of Mitigation Measures TCR-1 and TCR-2.The Projects' contribution to potential cumulative impacts to cultural, tribal, and paleontological would also be less than significant as application of these mitigation measures would reduce project impacts to less than significant. While other planned, pending, or approved projects may lead to damage to

cultural, tribal, or paleontological resources in the region, application of Mitigation Measures CR-1 through CR-4 and TCR-1 and TCR-2 would mitigate the Project's contribution to such impacts. Further, it is anticipated that similar mitigation measures would be implemented for projects in surrounding jurisdictions that may affect cultural, tribal, or paleontological resources.

5.1.4.5 Geology and Soils

The Sanitation Districts will continue to maintain and operate the environmental systems and other elements at the landfill at the same time park amenities would be constructed and used by the public. Additionally, the Nike Hill slope buttress stabilization project will be constructed as part of the general landfill closure and maintenance requirements. These systems have been designed according to CCR Title 27 standards, which require landfills, including environmental control systems and slope designs, to be designed to withstand the MPE without damage to the foundation or to the structures that control leachate, surface drainage or erosion, or gas (27 CCR §20370). An MPE is defined as the maximum earthquake that is likely to occur during a 100 year interval. The PHLPMP features that would be included on the landfill, and in particular on the soil buttress and other steep slopes, have been designed in a manner to minimize effects to slope stabilization and erosion. Mitigation Measure G-1 would ensure that the site-specific geotechnical environment, including how landfill fill has settled and would continue to settle, is considered in the design of individual projects as the phased implementation of the PHLPMP is moved forward. Projects outside of the landfill boundary would not affect landfill maintenance and operations activities. Therefore, the Proposed Project, in combination with continued operations and maintenance activities at the landfill, would not result in a considerable contribution to a significant cumulative impact.

Geology and soils impacts are considered site-specific; therefore, the development of a project would not alter geologic events or soil types at another project site. Seismic events are regional in nature and affect large areas as opposed to individual project sites. Strong ground-shaking hazards caused by earthquakes could lead to the damage of buildings and infrastructure within the Proposed Project as well as the surrounding areas. The impacts from strong ground shaking are not unlike the impacts in other areas of the region and additional projects would not increase these impacts.

Site-specific geologic hazards such as slope stability and site-specific soil hazards such as erosion and expansive soils would be addressed by the geotechnical investigations required at each individual project site. These investigations would identify the geologic and seismic characteristics on a site and provide recommendations to ensure structural integrity for any proposed buildings or infrastructure. Compliance with these recommendations would assure impacts from geology and soils on the Proposed Project would not be cumulatively significant. The Proposed Project would not increase substantial adverse effects, including the risk of loss, injury, or death, to people or structures due to geologic or soil hazards. With compliance to the County Building Code and incorporation of Mitigation Measure G-1, cumulative impacts would be less than significant.

5.1.4.6 Greenhouse Gas

The Proposed Project would result in significant and unavoidable impacts related to GHG emissions, even with the implementation of mitigation measures. The vast majority of GHG emissions would be related to construction and mobile sources (visitor traffic). Although construction activities would be temporary in nature, traffic related to the Proposed Project would continue throughout operation of the park, and would increase over time as the park is built out. With continued growth in the region, the number of vehicle trips would also likely increase with population growth. It is noted, however, that federal regulations require the car manufacturers reduce GHG emissions from vehicles. Nonetheless, the increase in the total number of vehicles, as well as construction emissions, in the project area is anticipated to result in a significant cumulative impact associated to GHG emissions.

As stated in Section 3.7 of this PEIR, the County adopted the *Unincorporated Los Angeles County Community Climate Action Plan 2020 (CCAP)* in August 2015. The CCAP includes a GHG reduction target of at least 11 percent below 2010 levels by 2020, consistent with AB 32. The CCAP also identifies 26 local actions as part of a comprehensive GHG emissions reduction program to reduce emissions from both existing and new development within the County. As shown in Table 3.7-3 of the Greenhouse Gas section of this PEIR, the Proposed Project's Year 2020 mitigated emissions provide a reduction of 17 percent from 2010 baseline Proposed Project emissions (refer to Table 3.7-4). With incorporation of mitigation, the Proposed Project would meet the requirements of the CCAP, and the Proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHG emissions. Therefore, the Proposed Project would not have a considerable contribution to the significant cumulative impact with regard to GHG emissions.

5.1.4.7 Hazards and Hazardous Materials

Hazards and hazardous materials impacts related to the Proposed Project are generally related to park construction and maintenance. These impacts can include the exposure of construction workers and the public to hazardous materials that may be encountered or used during construction and maintenance activities, in particular, hazards that are related to construction on the fill areas of the closed landfill. Project-level impacts would be less than significant with mitigation. Hazards related to construction on the fill areas would not occur on off-site properties because the existing environmental control systems at the landfill contain hazards to the landfill property. Therefore, the Proposed Project would not have a considerable contribution to a cumulative impact.

5.1.4.8 Hydrology and Water Quality

Overall hydrology and water quality impacts associated with project implementation are related to earthmoving (grading) associated with construction. Earthmoving activities would increase the potential for erosion and sedimentation down gradient from the site.

Drainage patterns would not be significantly altered with the Proposed Project, and would conform to the requirements of landfill maintenance. With implementation of regional drainage plans, cumulative impacts on drainage and flood control would be less

than significant. The cumulative impacts on water quality can be reduced through proper landscaping design and maintenance methods, adherence to waste disposal requirements, and implementation of NPDES BMPs.

5.1.4.9 Land Use and Planning

As discussed in the land use section, the Proposed Project would not have significant and unavoidable impacts on land use. The Proposed Project, in conjunction with other future developments, would not increase the intensity of land uses in the area, as the area is already predominantly developed.

Current projects in the vicinity of the project site include the Rose Hills Memorial Park expansion and the Sanitation Districts Waste by Rail System. Rose Hills Memorial Park is currently expanding the area available for interments within their property boundaries. The area of expansion is generally south of Nike Hill and west of the Southern Deck. The proposed Rose Hills Memorial Park easement through the project site would provide access to the areas under development by Rose Hills Memorial Park. The Sanitation Districts is currently developing the Puente Hills Intermodal Facility that would serve as the dedicated intermodal yard located just north of the Puente Hills MRF. The Puente Hills Intermodal Facility is a component of the Sanitation Districts Waste by Rail System. Once online, waste would be transported via train to the Mesquite Regional Landfill. The Puente Hills Intermodal Facility is located in an industrial area; therefore, no land use impacts are anticipated.

When considered with existing, proposed, approved, and reasonably foreseeable development in the region, implementation of the Proposed Project has the potential to contribute to cumulative but not considerable impacts due to increased recreational use. The projects would be consistent with the areas general plan and zoning designations, and the current uses would continue.

5.1.4.10 Noise

The Proposed Project would not result in significant impacts related to noise after implementation of mitigation. The Proposed Project would be noisiest during construction. Operational noise associated with the Proposed Project would be limited as the Proposed Project would not result in a substantial increase to vehicles in the project area. Because noise-related impacts during the construction phase of the Proposed Project would be in compliance with the City's/County's construction noise regulations, as well as temporary and short-term, the Proposed Project would not have a considerable contribution to a cumulative impact with regard to noise.

5.1.4.11 Public Services

The Proposed Project would not result in a significant cumulative impact to public services. LASD and LACFD have sufficient stations and equipment to support additional facilities and users in the region. In addition, this project and any other projects in the County would be required to comply with the applicable County regulations and state laws pertinent to public services. Each future development must also address site-specific public service issues according to County standards, including law enforcement

recovery costs. Therefore, the Proposed Project and any future project would have a less than significant cumulative impact on public services.

5.1.4.12 Recreation

Growth and development in the San Gabriel Valley and Los Angeles County would lead to increases in the resident population and would generate an increase in demand for recreational open space and park facilities. This demand would be met by the existing and proposed facilities, such as those included in this Proposed Project and other expanded parks and recreational facilities in the County. A beneficial impact would occur. The Proposed Project would contribute to regional open space connectivity and would help meet the goals of the General Plan's Conservation and Natural Resources Element and Parks and Recreation Element, resulting in a beneficial cumulative impact.

5.1.4.13 Transportation and Circulation

To evaluate the potential impacts of the Proposed Project on the local street system, estimates of future traffic conditions both with and without the project for cumulative (2035) conditions were developed. First, estimates of traffic growth were developed for the study area to forecast future conditions without the project, representing cumulative base conditions. The cumulative base traffic projections reflect growth in traffic from two primary sources: traffic generated by specific projects in, or in the vicinity of, the study area (cumulative projects), and background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area.

Cumulative Projects Trip Generation

Cumulative Base traffic forecasts include the effects of specific projects, called related projects, expected to be implemented in the vicinity of the project site prior to the build-out date of the Proposed Project. Information on related projects in this area was obtained from Los Angeles County, and the cities of Industry, Whittier, and El Monte. A total of nine cumulative projects were identified in the study area. Trip generation estimates for the related projects were calculated using a combination of previous study findings and trip generation rates contained in *Trip Generation, 9th Edition* (Institute of Transportation Engineers [ITE] 2012).

Cumulative Base Conditions and Cumulative (2035) plus Project Traffic Conditions

The year 2035 Cumulative Base peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. The Cumulative (2035) plus Project peak hour traffic volumes were also analyzed to determine the projected future operating conditions with the addition of the Proposed Project traffic.

All but one of the study intersections analyzed in the traffic study are projected to continue operating at LOS D or better. The exception is the intersection of Peck Road and Pellissier Place, which is projected to operate at LOS E in the AM peak hour. It should be noted that this intersection would still operate at LOS E without the Proposed

Project in 2035. The Proposed Project would not considerably contribute to the cumulative traffic impacts.

Cumulative (2035) plus Project Intersection Impacts

After applying the Los Angeles County and City of Industry significant impact criteria, it was determined that the Proposed Project would not significantly impact future traffic conditions at the study intersection locations under the full build-out analysis scenario. A less than significant impact would occur.

Cumulative (2019) plus Project Intersection Impacts

In the Proposed Project's opening year (2019), construction of the planned park would be in the early stages of development. Because full development of the proposed park was found to result in less-than-significant traffic impacts in 2035, it is concluded that partial development of the proposed park in its opening year (2019) would also result in less than significant traffic impacts.

5.1.4.14 Utilities and Service Systems

The Proposed Project is expected to result in an increase of wastewater, stormwater, and solid waste generation and in an increase in water and energy needs at the project site. However, such increases are anticipated to be met by existing and the construction of new utility systems (i.e., new drainage system, use of solar panels). Therefore, the Proposed Project would not result in significant adverse impacts to utility systems.

The Proposed Project, along with cumulative projects in the region, would be required to comply with utility regulations as discussed in Section 3.15, Utilities of this EIR. Furthermore, other cumulative projects would need to address site specific utility issues to County standards, such as the Proposed Project. Therefore, the Proposed Project in combination with other cumulative projects would have a less than significant impact on utility systems.

5.2 GROWTH-INDUCING IMPACTS

The CEQA Guidelines Section 15126.2(d) require that an EIR "discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth-inducing impacts can occur in a variety of ways, including the construction of new homes and businesses, and the extension of urban services, such as utilities and improved roads, to previously undeveloped areas.

The Puente Hills Landfill Park Master Plan is not expected to generate growth. The construction of the individual phased project elements would result in an increase in short-term construction jobs; however, it is anticipated that this minor temporary increase in local jobs would be accommodated from the local labor force. Implementation of the Proposed Project would create a small amount of new jobs related to the maintenance and operation of the proposed facilities and staffing associated with the up to 25 special events per year. It is anticipated that these jobs can

be filled from the local labor force, and that new workers would not move to the area to support the expansion of recreational facilities.

The Proposed Project would offer a 25-mile radius service area primarily serving the County of Los Angeles along with small portions of Orange County, San Bernardino County, and Riverside County. The Proposed Project would provide the surrounding communities with a regional park destination and add to the existing recreational opportunities in the area, including the Habitat Authority Preserve, Whittier Narrows Recreation Area, Duck Farm Park, San Gabriel River and Rio Hondo Bicycle Paths, Santa Fe Dam Recreation Area, Peck Road Water Conservation Park, and the amenities developed as part of the Emerald Necklace. The Emerald Necklace is a 17-mile interconnected network of bikeways, multi-use trails, parks, greenways, and bridges along the Rio Hondo and San Gabriel River. The regional recreational system of parks and trails includes the cities of Irwindale, Arcadia, Baldwin Park, El Monte, South El Monte, Whittier, Montebello, Monrovia, Rosemead, and the surrounding communities.

The Project would meet the diverse needs of Los Angeles County and would provide enhanced active and passive park and recreation activities for all users. The 25-mile service radius of the Proposed Project includes two of the fastest growing regions in the state: the Los Angeles metropolitan area and the Inland Empire. The park would be located in an area of historically underserved minority populations. The population within five miles of the proposed park is 70 percent Hispanic, 19 percent Asian, and 9 percent white. The age profile is fairly even surrounding the park, with no one or two age groups dominating. The Proposed Project has been planned for recreational activities that support all age groups equally from young children to seniors (Withers & Sandgren 2015). The Proposed Project would therefore serve an existing community with an established labor force and would result in less than significant growth-inducing impacts.

5.3 SIGNIFICANT IRREVERSIBLE EFFECTS

The CEQA Guidelines require that an EIR identify and focus on significant environmental effects, including significant irreversible environmental changes that would be caused by the project should the project be implemented.

The CEQA Guidelines Section 15126.2(c) states that “uses of nonrenewable resources during the initial and continued phases of the Proposed Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area), generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitment of resources should be evaluated to assure that such current consumption is justified.”

Implementation of the Proposed Project would result in an irretrievable commitment of renewable and nonrenewable resources including land, water, energy resources, and construction materials. As land is developed and redeveloped in the region, the commitment of these resources to this project removes these resources from other uses. However, the amount of resources to be committed is not considered to be significant

given the nature of the project site, which limits development opportunity, the size of the project and the availability of the resources in the project area.

5.4 UNAVOIDABLE SIGNIFICANT ADVERSE EFFECTS

The CEQA Guidelines section 151262(b) require that the EIR "describe any significant impacts, including those which can be mitigated but reduced to a level of insignificance. Where there are impacts that cannot be alleviated without proposing an alternative design, their implications and the reason why the project is being proposed, notwithstanding their effect, should be described."

Based on the analysis in Section 3.0 of this PEIR, implementation of the Proposed Project would have significant effects that would be mitigated to a less than significant level with the implementation of the mitigation measures prescribed in this PEIR except for greenhouse gases. Although the Proposed Project would be required to implement Mitigation Measures GHG-1 through GHG-5 of this PEIR, GHG-related impacts would remain significant. There is no feasible mitigation measure that would effectively reduce emissions from mobile and construction sources to less than significant levels. Therefore, GHG-related impacts are considered to be significant and unavoidable for the Proposed Project.

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 6.0 AGENCIES AND PERSONS CONSULTED

County of Los Angeles Community and Municipal Services, Chief Executive Office

County of Los Angeles Department of Parks and Recreation

County of Los Angeles Department of Public Works

County of Los Angeles Department of Regional Planning

County of Los Angeles Department of Public Health

County of Los Angeles Fire Department

Gabrieleño Band of Mission Indians – Kizh Nation

Los Angeles County Sheriff's Department

Sanitation Districts of Los Angeles County

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 7.0 REFERENCES

AES

2011 Hydrologic Modeling of Alternative Final Cover Performance, Puente Hills Landfill Top Deck Final Cover.

AMEC

2014 Evaluation and Stabilization of Western Nike Slopes at the Puente Hills Landfill.

Bean, Lowell John and Charles R. Smith

1978 Gabrielino. In *Handbook of North American Indians, Volume 8, California*, edited by R.F. Heizer, pp. 538-549. Smithsonian Institution, Washington DC.

[CADPR] California Department of Parks and Recreation

2002 California Recreational Trails Plan Phase 1. June.

[CAL FIRE] California Department of Forestry and Fire Protection

2007 Fact Sheet: California's Fire Hazard Severity Zones

[CA Groundwater] California Groundwater

2016 Sustainable Groundwater Management Act (SIGMA). Available at http://groundwater.ca.gov/legislation.cfm. Accessed April 22.

[CalRecycle] California Department of Resources Recycling and Recovery

1997 History of California Solid Waste Law 1985-1989. http://www.calrecycle.ca.gov/Laws/Legislation/calhist/1985to1989.htm Accessed April 22, 2016.

2016 Solid Waste Information System. Available at http://www.calrecycle.ca.gov/SWFacilities/Directory/. Accessed on April 28, 2016.

2016 Closure/Post Closure of Disposal Sites. Accessed at: http://www.calrecycle.ca.gov/swfacilities/Closure/Plans/default.htm. Accessed April 15, 2016.

[Caltrans] California Department of Transportation

2002 Guide for the Preparation of Traffic Impact Studies.

2009 Traffic Noise Analysis Protocol for New Highway and Reconstruction Projects. October.

2016a California Scenic Highway Program. Available at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm. Accessed on January 5, 2016.

2016b Caltrans Today. Accessed at http://www.dot.ca.gov/hq/paffairs/about/today.htm, June 18, 2016.

[CBSC] California Building Standards Commission

2016 Codes. http://www.bsc.ca.gov/codes.aspx. Accessed April 22.

[CDC] California Department of Conservation, California Geological Survey

2007a Special Publication 42, Fault-Rupture Hazard Zones in California.

2007b Alquist-Priolo Earthquake Fault Zoning Act. Available at http://www.conservation.ca.gov/cgs/codes/prc/Pages/chap-7-5.aspx Accessed April 1, 2016.

2007c Seismic Hazards Zonation Program, Seismic Hazards Mapping Act. *Seismic Hazards Mapping Fact Sheet.*

[CDFW] California Department of Fish and Wildlife

2015a California Natural Diversity Database (CNDDB) RareFind for El Monte, Baldwin Park, Azusa, La Habra, Whittier, South Gate, Los Angeles, Pasadena, and Mt. Wilson USGS 7.5-Minute Quadrangles California. Sacramento, CA, CDFW Biogeographic Data Branch.

2015b California State Wildlife Action Plan, 2015 Update: A Conservation Legacy for Californians. edited by Armand G. Gonzales, Junko Hoshi and Prepared with assistance from Ascent Environmental. Sacramento, CA.

CDFW 2016. "Habitat Connectivity Planning for Fish and Wildlife." https://www.wildlife.ca.gov/Conservation/Planning/Connectivity.

[CNPS] California Native Plant Society

2015. CNPS Inventory of Rare and Endangered Plants for El Monte, Baldwin Park, Azusa, La Habra, Whittier, South Gate, Los Angeles, Pasadena, and Mt. Wilson USGS 7.5-Minute Quadraangles California. CNPS.

Cooper, Daniel S.

2000 "Breeding Landbirds of a Highly Threatened Open Space: The Puente-Chino Hills, California." *Western Birds* 31 (4):213-234.

[CWC] California Water Commission

2013 Update on Status of Urban Water Management Plans.

Crain & Associates

2011 Forest Lawn Memorial Park – Hollywood Hills Master Plan Environmental Impact Report.

Crooks, K., and M. Sanjayan, eds.

2006 South Coast Missing Linkages: Restoring Connectivity To Wildlands In The Largest Metropolitan Area In The United States, Connectivity Conservation: Cambridge University Press.

[DPW] Los Angeles County Department of Public Works

2008 Building and Safety Division / Land Development Division. *Grading Guidelines.*

2011 Very High Fire Hazard Severity Zone Plan Review List.

2012 County of Los Angeles Countywide Integrated Waste Management Plan, 2011 Annual Report.

2015 Methane Package. Updated April 09.

2016 Sewer Maintenance. http://dpw.lacounty.gov/smd/smd/. Accessed April 22.

[DRP] Los Angeles County Department of Regional Planning

2015 Los Angeles County Department of Regional Planning General Plan. http://planning.lacounty.gov/sea/proposed.

2016a "Rio Hondo College Wildlife Sanctuary SEA." Los Angeles County Department of Regional Planning. http://planning.lacounty.gov/view/rio_hondo_college_wildlife_sanctuary_sea/

2016b. "SEA Program - Modifications (2013 - 2015)." Los Angeles County Department of Regional Planning. http://planning.lacounty.gov/sea_update/info.

[DWR] California Department of Water Resources

2004 San Gabriel Valley Groundwater Basin, California Groundwater Bulletin 118. February 27, 2004.

2016 Sustainable Groundwater Management. Available at http://www.water.ca.gov/groundwater/sgm/. Accessed on May 5, 2016.

[ECORP] ECORP Consulting, Inc.

2015a Agronomy Report, Puente Hills Landfill Park Project.

2015b Biological Technical Report for the Puente Hills Landfill Park Los Angeles County California. Dated August 11, 2015, prepared for Withers and Sandgren.

2015c Cultural Resources Survey for the Puente Hills Regional Park Master Plan. Prepared for Department of Parks and Recreation County of Los Angeles. ECORP Consulting, Inc., Santa Ana.

Elliott, David, and Paul Stapp.

2008. Effects of a purpose-built underpass on wildlife activity and traffic-related mortality in southern California: The Harbor Boulevard Wildlife Underpass. Department of Biological Science, California Statue University, Fullerton.

[EPA] United States Environmental Protection Agency

1981 Office of Noise Abatement and Control, Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise. Revised July.

1974 Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. EPA/ONAC 550/9-74-004. March.

2004 Understanding the Safe Drinking Water Act.

2016a Resource Conservation and Recovery Act (RCRA) Overview. https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview . Accessed on 4/15/16.

2016b Summary of the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund). https://www.epa.gov/laws-regulations/summary-comprehensive-environmental-response-compensation-and-liability-act . Accessed on 4/15/16.

2016c Summary of the Toxic Substances Control Act. https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act. Accessed on 4/15/16

Fehr & Peers

2016 Transportation Analysis Report Puente Hills Landfill Park Master Plan. June.

Geomatrix Consultants, Inc.

2005 Geotechnical Investigation of the Nike Slopes at the Puente Hills Landfill, Whittier, CA.

Haas, Chris, and Kevin Crooks

1999. Carnivore Abundance & Distribution Throught the Puente/Chino Hills. California State Polytechnic University, Pomona

Holland, R.F.

1986. "Title." Nongame-Heritage Program, Sacramento, California.

[ICC] International Code Council

2015 California, State Adoptions. Available at http://www.iccsafe.org/gr/Pages/CA.aspx Accessed April 1.

Industry, City of

2014 General Plan Safety Element. June 12.

2014a General Plan Update Draft EIR for the City of Industry, State Clearinghouse No. 2011031090. February.

2014b General Plan. Adopted June 12.

2016 City of Industry Facts. http://www.cityofindustry.org/?p=about-the-city . Accessed April 22.

Kunzman Associates, Inc.

2016a Puente Hills Landfill Park Master Plan – Air Quality, Global Climate Change, and Health Risk Assessment Impact Analysis. May 4.

2016b Puente Hills Landfill Park Master Plan Noise Impact Analysis. May 3.

[LACDPR] County of Los Angeles Department of Parks and Recreation

2016 Puente Hills Landfill Park Master Plan

[LACFD] County of Los Angeles Fire Department

2011 Fuel Modification Plan Guidelines

2016 Fire Station Listings – Los Angeles County Fire Department. Available at http://www.fire.lacounty.gov/fire-station-listings/. Accessed on April 19, 2016.

[LARWQCB] Los Angeles Regional Water Quality Control Board

1994 Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties.

Los Angeles, County of

2011 County of Los Angeles Trails Manual. May 2011.

2012 Bicycle Master Plan. Final Plan – March 2012.

2014a Los Angeles County General Plan Update Draft Environmental Impact Report. State Clearinghouse 2011081042. June.

2014b County of Los Angeles Park Design Guidelines and Standards. June.

2014c Low Impact Development Standards Manual. Department of Public Works. February.

2015 Los Angeles County General Plan. Adopted October 6, 2015.

2016a Whittier Narrows Recreation Area. Available at http://parks.lacounty.gov/wps/portal/dpr/Parks/Whittier_Narrows_Recreation_Area. Accessed on April 25, 2016.

2016b Santa Fe Dam Recreation Area. Available at http://parks.lacounty.gov/wps/portal/dpr/Parks/Santa_Fe_Dam_Recreational_Area. Accessed on April 25, 2016.

2016c Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment. May 9.

[LASD] Los Angeles County Sherriff's Department

2016a Personal communication. Beatriz Bahena, Los Angeles County Sheriff's Department, Contract Law Enforcement Bureau. June 20 and 21, 2016.

2016b Los Angeles County Sheriff's Department – Patrol Divisions. Available at http://shq.lasdnews.net/content/uoa/EPC/LASD_Jurisdiction.pdf. Accessed on April 19, 2016.

Los Angeles County Oak Woodlands Habitat Conservation Strategic Alliance

2011 Oak Woodlands Conservation Management Plan. Plan dated May 2011, prepared for The County of Los Angeles.

LSA

2005 2005 Rodent Survey of the Puente Hills Landfill Native Habitat Preservation Authority Lands.

2007 Resource Management Plan Puente Hills Landfill Native Habitat Preservation Authority.

McCawley, William

1996 *The First Angelinos: the Gabrielino Indians of Los Angeles*. Malki Museum Press, Morongo Indian Reservation, Banning, California.

Merenlender, A.M.

2007. "Large scale planning for connectivity." Transactions of the Western Section of the Wildlife Society 43:8-10.

[Metro] Los Angeles County Metropolitan Transportation Authority

2016 Congestion Management Program. Accessed at: https://www.metro.net/projects/congestion_mgmt_pgm/, June 17, 2016.

Moore lacofano Goltsman

2006 A Common Thread Rediscorvered The San Gabriel River Corridor Master Plan.

Moratto, Michael J.

1984 *California Archaeology*. Academic Press, Inc., Orlando.

[MSGB Watermaster] Main San Gabriel Basin Watermaster

2016 Main San Gabriel Basin Watermaster Report on Preliminary Determination of Operating Safe Yield for 2016-17 through 2020-21. April 6.

National Research Council

1987 (U.S.) Committee for Guidelines for Paleontological Collecting. Paleontological Collecting. National Academies Press, Washington D.C.

Ninyo & Moore

2016 Geotechnical Feasibility Evaluation, Puente Hills Landfill Park Master Plan Project. April.

2015 Hazardous Materials Assessment of Puente Hills County Regional Park Master Plan Project. July.

[OPR] California Governor's Office of Planning and Research

2003 State of California General Plan Guidelines.

[PACE] Pacific Advanced Civil Engineering, Inc.

2016 Grading, Drainage, and Utility Plan Report. Puente Hills Engineering Design Report. March.

Penrod, K., R. Hunter, and M. Merrifield

2001 "Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings." Missing Linkages: Restoring Connectivity to the California Landscape, San Diego, CA.

Peters, Bill

2009 Baldwin: Successful rancher; Big-time Bon-vivant; Founder of Arcadia. Arcadia Weekly. October 26.

Remington, Stephanie

2006. Bat Surveys of the Puente Hills (Whittier Hills, Hacienda Heights, LA Habra Heights, and Rowland Heights.

San Diego Association of Governments

2002 (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region.

[Sanitation Districts] Sanitation Districts of Los Angeles County

2001 Continued Operation of the Puente Hills Landfill, Volume 1: Draft Environmental Impact Report. June.

2011 Final Postclosure Maintenance Plan.

2014 Twenty-Fifth Annual Status Report on Recycled Water Use.

2016a Waste-by-Rail. Available at http://www.lacsd.org/solidwaste/wbr/default.asp. Accessed April 28, 2016.

2016b Personal communication. Adriana Raza, Will Serve Program, Facilities Planning Department, Sanitation Districts of Los Angeles County. June 20, 2016.

Sawyer, John, Todd Keeler-Wolf, and Julie M. Evens.

2009. *A Manual of California Vegetation, Second Edition*. Second ed. Sacramento, California: California Native Plant Society.

Scauzillo, Steve

2016. "How a former Puente Hills oil field became a lush home for wildlife and a well-known bobcat." *San Gabriel Valley Tribune*. http://www.sgvtribune.com/environment-and-nature/20160508/how-a-former-puente-hills-oil-field-became-a-lush-home-for-wildlife-and-a-well-known-bobcat.

[SCAG] Southern California Association of Governments

2016 2016-2040 RTP/SCS. Accessed at: http://scagrtpscs.net/pages/default.aspx, on June 17, 2016.

2012 Benefits of the 2012–2035 RTP/SCS for San Gabriel Valley Council of Governments (COG). Accessed at: http://www.scag.ca.gov/Documents/LosAngelesSGV.pdf, June 17, 2016.

[SCAQMD] South Coast Air Quality Management District

2008 Final Localized Significance Threshold Methodology. Revised.

Science Applications International Corporation

1994 Paleontological Resources: A Key to Unlocking the Past. Prepared for Edwards Air Force Base, Lancaster, California.

[SGVWC] San Gabriel Valley Water Company

2016 San Gabriel Valley Water Company History. http://www.sgvwater.com/about/ Accessed April 28, 2016.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler

2010 California Essential Habitat Connectivity Project: A Strategy for Conserving a Connnected California Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

[SWRCB] State Water Resources Control Board

2016a San Gabriel River Watershed. Available at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/Water_Quality_and_Watersheds/san_gabriel_river_watershed/summary.shtml. Accessed on April 26, 2016.

2016b California's Areas of Special Biological Significance. Available at http://www.swrcb.ca.gov/water_issues/programs/ocean/asbs_map.shtml. Accessed on April 26, 2016.

Transportation Research Board

2000 Highway Capacity Manual.

[USFWS] United States Fish and Wildlife Service

1918 Migratory Bird Treaty Act. Section 16 of the U.S. Code (703-712), as amended 1989.

2007 Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*); Final Rule. In *Federal Register*, edited by U.S. Department of the Interior: USFWS.

[W&S] Withers and Sandgren, Ltd.

2015a Demographic, Recreation, Park Trends and Needs Report. County of Los Angeles Puente Hills Landfill Park. August 26.

2015b Site Analysis Report. Puente Hills Landfill Park Master Plan. September 8.

[WCA] Watershed Conservation Authority

2007 Duck Farm Final Initial Study and Mitigated Negative Declaration. July.

Wilkman, John

1999 E. J. Lucky Baldwin. Biographies. The Historical Society of Southern California. http://socalhistory.org/biographies/e-j-lucky-baldwin.html

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 8.0 LIST OF PREPARERS

County of Los Angeles Department of Parks and Recreation

Kathy King, AICP, LEED AP, Chief of Planning
Michelle O'Connor, Project Manager/Section Head, Land Management and Compliance
Clement Lau, AICP, Departmental Facilities Planner II
Julie Yom, AICP, Park Planner

Withers & Sandgren Ltd. (Master Plan)

Jan Sandgren, LEED AP, Principal
Lacey Withers, ASLA, Principal, Landscape Architect
Bryan Matsumoto, Landscape Designer
Patty Nalle, Landscape Architect

ECORP Consulting, Inc. (PEIR preparation)

Jesus "Freddie" Olmos, PEIR Project Manager
Alfredo Aguirre, AICP, PEIR Deputy Project Manager
Jerry Aguirre, Associate Environmental Scientist
Wendy Blumel, Senior Archaeologist
David Carr, Senior Biologist
Brian Fedrow, MSJ, Production Manager/Technical Editor
Laura Hesse, Editor/Document Production Specialist
Roger Mason, Ph.D., RPA, Principal Archaeologist
Shannan Schaffer, Biologist
Anne Surdzial, AICP, QA/QC, Director of CEQA/NEPA Services
Lisa Westwood, RPA, Director of Cultural Resources
Melissa Whittemore, Senior Environmental Scientist

AMEC Foster Wheeler (PEIR support, Alternatives, and Planning)

Dan Gira, Program Manager
Erika Leachman, Environmental Planner

Fehr & Peers (Traffic)

Netai Basu, Associate
Vy Nguyen, Transportation Planner

Kunzman Associates, Inc. (Air Quality, Greenhouse Gas, Noise)

Carl Ballard, LEED, GA, Principal
Mike Dickerson, INCE, Senior Associate
Roma Stromberg, Senior Associate
Katie Wilson, Senior Associate

Urban Crossroads (Traffic)

Haseeb Qureshi, Senior Associate
Carleton Waters, Principal

Ninyo & Moore (Geology and Soils)

Summer J. Hansen-Rooks, Project Environmental Scientist
Michael Putt, Principal Geotechnical Engineer

PACE Advanced Water Engineering (Hydrology/Water Quality)

Andy Komor, MS, PE
Jonathan Howse, Project Engineer

Lehrer Architects

Nerin Kadribegovic, AIA
Michael Lehrer, Principal AIA

HILLWORKS

David Hill, Principal ASLA, LEED
Kelly Homan, Associate
Will Nix, Designer

SECTION 9.0 ACRONYMS AND ABBREVIATIONS

ACRONYM	MEANING
$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
AB52	Assembly Bill 32
ADA	Americans with Disabilities Act
ADTs	average daily traffic volumes
AF	acre feet
AM	morning
amsl	above mean sea level
ANSI	American National Standards Institute
AP Act	Alquist-Priolo Earthquake Fault Zoning Act
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
BP	Before Present
C_2F_6	hexafluoroethane
C2H6	ethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CADPR	California Department of Parks and Recreation
Cal EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release and Prevention Program
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling Recovery formerly the California Integrated Waste Management Board
Caltrans	California Department of Transportation
CAN	Candidate for federal listing
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCAP	Community Climate Action Plan 2020
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CF_3CH_2F	HFC-134a
CF_4	tetrafluoromethane
CFCs	chlorofluorocarbons
CFGC	California Fish and Game Code
CH_3CHF_2	HFC-152a
CH_4	methane
CHF_3	HFC-23

ACRONYM	MEANING
CIWMP	Countywide Integrated Waste Management Plan
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	Los Angeles County Department of Parks and Recreation
County Building Code	Title 26 of the Los Angeles Code of Ordinances, also known as, the County of Los Angeles Building Code
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSMD	Consolidated Sewer Maintenance District
CUP	Conditional Use Permit
CWA	Clean Water Act
CWC	California Water Code
CY	cubic yards
dB	decibels
dB(A) or dBA	decibels using A-weighted measurements
dbh	diameter at breast height
DPH	Los Angeles County Department of Public Health
DPM	Diesel particulate matter
DPR	Los Angeles County Department of Parks and Recreation
DPW	Department of Public Works
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
EAP	Emergency Action/Fire Prevention Plan
EIR	Environmental Impact Report
END	Federally listed, endangered
EPA	Environmental Protection Agency
FED	Functional Equivalent Document
FP	fully protected
Ft	feet
GCCOG	Gateway Cities Council of Governments
GHG	greenhouse gas
GWP	global warming potential
Habitat Authority	Puente Hills Habitat Preservation Authority
HFCs	hydrofluorocarbons
HSWA	Hazardous and Solid Waste Amendments
I-10	Interstate 10
I-210/SR-210	Interstate/State Route 210
I-605	Interstate 605
IBC	International Building Code
ICU	Intersection Capacity Utilization
IPCC	International Panel on Climate Change
ITE	Institute of Transportation Engineers
JPA	Joint Powers Agreement
kV	kilovolt
LACDPW	Los Angeles County Department of Public Works

ACRONYM	MEANING
LACFD	Los Angeles County Fire Department
LASD	Los Angeles County Sheriff's Department
LCFS	Low Carbon Fuel Standard
LCRS	Leachate Collection and Removal System Liquid Collection and Removal System
Ldn	Day-Night Average Noise Level
LDR	Land Disposal Restrictions
LID	low impact development
LOS	level of service
M	Magnitude on the Richter Scale
M&O	Maintenance & Operations
Master Plan	Puente Hills Landfill Park Master Plan
MBTA	Migratory Bird Treaty Act Los Angeles County Metropolitan Transportation Authority (Metro)
Metro	Los Angeles County Metropolitan Transportation Authority
mg/L	milligrams per liter
MLD	Most Likely Descendants
MPE	Maximum Probable Earthquake
mph	miles per hour
MPO	Metropolitan Planning Organization
MRF	Materials Recovery Facility
MS4s	Municipal Separate Storm Sewer Systems
msl	mean sea level
$MTCO_2e$	metric tons of carbon dioxide equivalent
mw	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NIMS	National Incident Management System
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OAERP	Operational Area Emergency Response Plan
OEM	Los Angeles County Office of Emergency Management
OES	Office of Emergency Services
OPR	Governor's Office of Planning and Research
O-S	Open Space
OS-PR	Open Space parks and Recreation
OSY	Operating Safe Yield
OWCMP	Los Angeles County Oak Woodlands Conservation Management Plan
Pb	lead
PCBs	polychlorinated biphenyls
PEIR	Program Environmental Impact Report
PERG	Puente Hills Energy Recovery from Gas
PFCs	perfluorocarbons
PHIMF	Puente Hills Intermodal Facility
PHLPMP	Puente Hills Landfill Park Master Plan

ACRONYM	MEANING
PM	evening, particulate matter
PM_{10}	particulate matter less than 10 micrometers in diameter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
ppb	parts per billion
ppm	parts per million
ppt	parts per trillion
PPV	peak particle velocities
PRC	California Public Resources Code
Proposed Project	Puente Hills Landfill Park Master Plan
PV	photovoltaic
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RHC	Rio Hondo College
RHCC	Rio Hondo Community College
ROGs	reactive organic gases
ROW	right-of-way
RRP	Recycling and Reuse Plan
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board, Los Angeles Region
Sanitation Districts	Sanitation Districts of Los Angeles County
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SB 97	Senate Bill 97
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Archaeological Information Center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
SEA	Significant Ecological Area
SEMS	Standardized Emergency Management System
SERAs	Sensitive Environmental Resource Areas
sf	square-foot
SF_6	sulfur hexafluoride
SGM	Sustainable Groundwater Management
SGMA	Sustainable Groundwater Management Act
SGVWC	San Gabriel Valley Water Company
SIP	State Implementation Plan
SOx	Sulfur Dioxide
SPCC	Spill Prevention Control and Countermeasures
SR-60	State Route 60
SRAs	Source Receptor Areas
SSC	Species of Special Concern
SWAP	State Wildlife Action Plan
SWPPP	Storm Water Pollution and Prevention Plan
SWRCB	State Water Resource Control Board
T/L	transmission lines
TACs	toxic air contaminants
TDS	total dissolved solids

ACRONYM	MEANING
Tg	teragram
THR	Federally listed, threatened
TIA	Transportation Impact Analysis
Title 24	California's Energy Efficiency Standards for Residential and Nonresidential Buildings
Title 31	Los Angeles County Green Building Standards Code
TMP	Traffic Management Plan
TPD	tons per day
TSCA	Toxic Substances Control Act
UNFCCC	United Nations' Framework Convention on Climate Change
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
V/C	volume-to-capacity
VOC	volatile organic compounds
WDR	Water Discharge Requirements
WL	Watch List

THIS PAGE INTENTIONALLY LEFT BLANK

County of Los Angeles
Department of Parks and Recreation
Planning & Development Agency
510 S. Vermont Avenue
Los Angeles, California 90020