

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 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/Traffic
- ◆ 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 Emerald Necklace is described.
- ◆ **Regulatory Setting**
 - Relevant federal, state, and local regulations pertaining to each issue area.
- ◆ **Thresholds of Significance**
 - Relevant thresholds of significance as identified by CEQA or other relevant standard.
- ◆ **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, impacts from the implementation of the Proposed Project are discussed at a program level. The Emerald Necklace Implementation Plan – Phase I would be implemented as funding becomes available. Priority projects would include those at the Quarry Clasp followed by those located in the Whittier Narrows area. All projects have been discussed at the program level. Prior to implementation, when greater detail is known, projects will go through another CEQA review process. Projects will be examined in light of the Program EIR to determine whether an additional environmental document must be prepared.

3.2 AESTHETICS

This section describes the environmental setting for aesthetic and visual resources, including the existing site conditions and regulatory setting. Impacts on aesthetic and visual resources are analyzed at the program level and mitigation measures are identified that would reduce these impacts.

The Initial Study for the Proposed Project determined that there are no designated scenic highways near the Proposed Project (Caltrans 2012). Thus, the Proposed Project would not affect scenic resources within a state scenic highway. This issue is not discussed further in this section.

3.2.1 Environmental Setting

3.2.1.1 Regional Visual Setting

The San Gabriel Valley is characterized by a largely 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. Despite the largely built out/urban character of the valley several prominent open spaces remain in the valley area 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/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. Both rivers come to their closest point to each other in the Whittier Narrows Recreation Area.

3.2.1.2 Local Visual Setting

Quarry Clasp

The Quarry Clasp is located at the northern point of the Emerald Necklace within the cities of Irwindale, Arcadia, and El Monte and the County of Los Angeles. This area is developed with single family residential, commercial, industrial, and mining (quarries) land uses. Scenic views in the area include the San Gabriel Mountains to the north.

1. Quarry Clasp Park Development

This project would be located at the southeast corner of the intersection of Clark Street and Durfee Avenue within the City of Arcadia. The project site is composed of both undeveloped and developed land. The undeveloped portions of the project site include ruderal vegetation and ornamental trees. The developed portions of the site include concrete driveway aprons and temporary trailer structures. Adjacent land uses include single family residential, commercial, industrial, and mining land uses.

2. Quarry Clasp Multi-Use Trail and Bicycle Paths

This linear project runs along the northern and eastern edges of the Foothill Transit facility, the southern edge of the Hanson Quarry, and along the south side of Clark Street within the cities of Irwindale, Arcadia, El Monte, and the County of Los Angeles. This area is mainly composed of commercial, industrial, and quarry land uses with a small portion containing single family residential.

Commercial, industrial, and quarry land uses can be found at both the western and eastern extents of the project site. The commercial and industrial areas can be characterized as developed sites with warehouse type structures, paved driveways and parking lots, and landscaped areas containing ornamental vegetation. Portions of the proposed trail would parallel the edge of the quarry. The quarry edges can be characterized as sparsely vegetated areas with berms and chain link fences. The proposed trail would also be partially located on the south side of Clark Street where single family residential land uses can be found between Cogswell Road and Durfee Road. At the western extent, the proposed trail would be located at the edge of Hanson Quarry until it terminates at the San Gabriel River Trail, which is located on top of the San Gabriel River levee.

3. Peck Road Signalized Crossing

This project would be located on Peck Road within the City of Arcadia. Peck Road is currently a four lane road with dedicated left turn pockets in both the north and south directions. Ornamental vegetation is present at both the northwest and northeast corners of the intersection.

4. Rio Hondo Multi-Use Trail and Class I Bicycle Path Connection in Peck Road Water Conservation Park

This linear project would be located along the eastern edge of the Peck Road Water Conservation Park within the County of Los Angeles and the cities of Arcadia and Monrovia. This area is disturbed and is largely devoid of vegetation. Developed commercial land uses are located to the east of the proposed trail and Peck Road Water Conservation Park is located to the west. This project underwent separate CEQA review and is included here to add to the description of the local setting in the Quarry Clasp project area.

Whittier Narrows

The Whittier Narrows area is located at the southern end of the Emerald Necklace within unincorporated areas of Los Angeles County. This area is composed of recreational and agricultural land uses. Scenic views in the area include the San Gabriel Mountains, Legg Lake, San Gabriel River, and Rio Hondo to the north and the Puente Hills to the south and southeast.

5. Class I Bicycle Path on Rosemead Boulevard to Legg Lake

This linear project would be located on the east side of Rosemead Boulevard from the intersection at San Gabriel Boulevard and Durfee Avenue to the southwest corner of Legg Lake. The project location includes shoulder areas of Rosemead Boulevard and surrounding agricultural and recreational land uses. The surrounding agricultural land uses include active

agricultural crops and areas along the shoulder of Rosemead Boulevard that are largely devoid of vegetation along with sparse ruderal vegetation. Shoulder areas along Legg Lake are composed of ornamental shrubs, trees, and grass areas.

6. Class IV Bikeway from El Bosque del Rio Hondo to Lincoln Avenue on San Gabriel Boulevard

This linear project would be located on the north side of San Gabriel Boulevard from the end of the northern section of the Rio Hondo bicycle path to Lincoln Avenue. In this area San Gabriel Boulevard is composed of a four lane road with unpaved sidewalks. This road spans the Rio Hondo, which remains a natural stream bed in this area. Riparian vegetation occurs on both the north and south sides of San Gabriel Boulevard.

7. Class I Bicycle Path from the Rio Hondo to Legg Lake through the Southern California Edison Easement

This linear project would be located along the north side of the Southern California Edison (SCE) transmission line easement in the southwest corner of the Whittier Narrows Recreation Area. This area includes both developed and undeveloped parkland. Land uses surrounding the site include agricultural, industrial, and infrastructure. Agricultural land uses include nurseries and croplands. Infrastructure land uses include water transfer, flood control, and electrical power facilities. The project site west of Rosemead Boulevard along the SCE transmission line corridor was previously leased to a nursery.

8. Pellissier Village Multi-Use Trail from State Route 60 to Peck Road Bridge

This linear project would be located along the eastern bank of the San Gabriel River from south of SR-60 to south of the Peck Road Bridge. In this area the San Gabriel River is reinforced by levees and has a soft channel bottom allowing for the growth of vegetation and recharge of groundwater. There is currently an existing informal soft surface trail with an underpass at the Peck Road Bridge along the majority of the project location. The properties bordering the project area are a combination of recreational and commercial uses. Horse ranches and undeveloped recreational lands are located on the western and northern boundary of the project site. Nurseries and commercial land uses are found to the south and east of the site. The medium density residential neighborhood of Pellissier Village borders the project site to the southeast.

9. Pellissier Bridge at Blackwill Arena Staging Area

This project would be located just south of the Peck Road Bridge and north of the Zone 1 Diversion Structure at Lario Creek. The project area contains infrastructure facilities and river natural areas. Adjacent to the project location is Blackwill Arena Staging Area, the Whittier Narrows Equestrian Center, and light industrial and residential development.

San Jose Creek

The San Jose Creek area is located at the southeastern side of the Emerald Necklace within unincorporated areas of Los Angeles County (Avocado Heights and Bassett) and the City of

Industry. This area is built out with residential, commercial, and infrastructure land uses. Open spaces in the area include the California Country Club golf course and the Duck Farm.

10. Multi-Use Trail and Bridge Connections

This project would be located on both the San Gabriel River and San Jose Creek. The project site extends west down from San Jose Creek to the confluence of the San Gabriel River in the southeastern portion of the Emerald Necklace, north of SR-60. In the project area both river channels are reinforced by grouted rock levees with a soft bottom channel allowing the growth of vegetation and recharge of groundwater. There are several land use types adjacent to the project site including agricultural, infrastructure, residential, and commercial land uses.

11. Multi-Use Trail from San Jose Creek to the Duck Farm on the San Gabriel River

The project would be located along the San Gabriel River from approximately the location of the proposed San Gabriel River Multi-Use Bridge, north of the confluence of San Jose Creek, to the Phase 1 portion of the Duck Farm. In this area the San Gabriel River is reinforced by levees with a soft bottom channel allowing the growth of vegetation and recharge of groundwater. A paved Los Angeles County Flood Control District maintenance road is located between the San Gabriel River and the Duck Farm. The Duck Farm Phase 1 is currently under construction and is expected to be completed in spring 2018. Adjacent land uses include agricultural, recreational, and infrastructure uses.

Westside

The Westside area is located along the western side of the Emerald Necklace within unincorporated areas of Los Angeles County and the cities of Rosemead, El Monte, and South El Monte. This area is built out with residential, commercial, and manufacturing land uses.

12. Alhambra Wash from State Route 60 to the Garvey Community Center

This linear project would be located at the southwest corner of the Emerald Necklace paralleling the Rio Hondo starting at SR-60 and then heading north towards the Garvey Community Center. The project site is composed of different land uses types including recreational, open space, infrastructure, manufacturing, commercial, and residential land uses.

Recreational use areas include a golf course to the west of the Rio Hondo and athletic fields to the east. The golf course and athletic fields contain grassy areas and mature ornamental trees. Open space areas include a segment of the Rio Hondo, which remains a natural stream channel with riparian vegetation, and the scour pools at the Alhambra Oasis where the Alhambra Wash terminates. Infrastructure use areas include transportation and flood control facilities. From approximately Rush Street to the north, the Rio Hondo exists as a channelized stream. In this area a paved levee maintenance road parallels the river. Manufacturing and commercial land uses are located west of the Rio Hondo at the north end of the project site near the Garvey Community Center. These areas are composed of developed sites with warehouse type buildings, paved parking lots, and ornamental vegetation. Single-family residential land uses occur to the west of the proposed trail at the south end of the project site near SR-60.

13. Rosemead Boulevard Access Ramp

This project would be located where Rosemead Boulevard crosses the Rio Hondo. This area contains transportation and flood control infrastructure. Adjacent land uses are predominantly residential mixed with commercial along Garvey Avenue and Rosemead Boulevard. The project site would be located on the east side of Rosemead Boulevard along the road embankment. This area contains a sidewalk, ornamental vegetation, and commercial buildings abutting the road embankment.

14. Rosemead Boulevard Underpass

This project would be located where Rosemead Boulevard crosses the Rio Hondo. This area contains transportation and flood control infrastructure. Adjacent land uses are predominantly residential mixed with commercial along Garvey Avenue and Rosemead Boulevard. There is an existing access maintenance road that parallels the Rio Hondo through the project area. Vegetation in the project area consists of ruderal vegetation along the infrastructure facilities.

15. Multi-Use Trail from Rosemead Boulevard to Valley Boulevard

This linear project would be located on the western side of the Rio Hondo from Rosemead Boulevard to Valley Boulevard. The project site contains a paved levee maintenance road, transportation, and flood control infrastructure.

16. Interstate 10 Freeway Underpass Improvements

This project would be located where I-10 crosses the Rio Hondo adjacent to the western levee of the river. The project site contains transportation and flood control infrastructure and is devoid of vegetation. Adjacent land uses are predominantly commercial, single family residential, with a small pocket of open space. There is an existing underpass which provides access beneath I-10 for maintenance vehicles.

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 Highway 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

County of Los Angeles 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 Element 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). 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 2015a).

City of Arcadia General Plan

The City of Arcadia's General Plan sets forth goals and policies related to aesthetics and scenic resources that would be applicable to the Proposed Project in the Parks, Recreation, and Resources Element and in the Resource Sustainability Element. The Parks, Recreation, and Resources Element establishes that trees along Arcadia's boulevards and residential neighborhoods create an urban forest that enhances the aesthetic quality of the City. A goal included in this element is to ensure that trees continue to make a significant contribution to Arcadia's character. Furthermore, the Resource Sustainability Element states that the San Gabriel Mountain foothills are an integral part of Arcadia's identity; they provide environmental wildlife habitat, and aesthetic and recreational value. Goals and policies are provided to balance the use of hillside properties with respect to the natural environment and property rights (City of Arcadia 2010).

City of El Monte General Plan

The City of El Monte's General Plan includes goals and policies related to aesthetics and scenic resources that would be applicable to the Proposed Project in the Parks and Recreation Element and in the Community Design Element. The Parks and Recreation Element includes Goal PR-4 that is aimed to provide the City of El Monte with a lush network of greenways, linear parks, and community forest that enhances property values, public health, aesthetics, and quality of life. The Community Design Element includes Policy CD-6.9 that is aimed to improve the riverfront experience along the Rio Hondo River through the installation of Emerald Necklace Vision projects (City of El Monte 2011).

City of Industry General Plan

The City of Industry's General Plan does not include goals or policies related to aesthetics and scenic resources that would be applicable to the Proposed Project (City of Industry 2014). However, the City of Industry's 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.

City of Irwindale General Plan

The City of Irwindale General Plan's Community Development Element addresses issues related to urban design. The City's urban design goal is to move beyond the "quarry image" and make the City a more desirable place to live, work, and invest (City of Irwindale 2008). To achieve this goal the General Plan includes several policies in the Community Development Element (Policies 13 through 17). These policies promote quality design in the review and approval of

commercial and industrial development through the application of the commercial and industrial design guidelines.

City of Rosemead General Plan

The City of Rosemead's General Plan includes goals and policies related to aesthetics and scenic resources that would be applicable to the Proposed Project in the Resource Management Element. Goal 2 of this element is aimed to increase greenspace throughout the City to improve community aesthetics, encourage pedestrian activity, and provide passive cooling benefits (City of Rosemead 2010).

City of South El Monte General Plan

The City of South El Monte's General Plan does not include goals or policies related to aesthetics and scenic resources that would be applicable to the Proposed Project (City of South El Monte 2000).

3.2.3 Thresholds of Significance

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

- ◆ Have a substantial adverse effect on a scenic vista;
- ◆ Substantially degrade the existing visual character or quality of the site and its surroundings; 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

3.2.4.1 Scenic Vista, Visual Character, Light and Glare

<i>Threshold:</i>	<i>Would the project have a substantial adverse effect on a scenic vista?</i>
<i>Threshold:</i>	<i>Would the project substantially degrade the existing visual character or quality of the site and its surroundings?</i>
<i>Threshold:</i>	<i>Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?</i>

Quarry Clasp

1. Quarry Clasp Park Development

The Quarry Clasp Park would be developed as a trailhead area with parking space for approximately five horse trailers and five cars, bicycle racks, a drinking fountain, a restroom facility, a viewing and seating plaza, two interpretive signs, and approximately a one acre turf area. The remaining area of the project site would be planted with native trees and shrubs.

Development of this park would not obstruct views of the San Gabriel Mountains to the north. Therefore, no impacts to scenic vistas would occur. During construction, views of construction equipment, building materials, stockpiles, and construction debris would be visible to adjacent property owners and people working in area businesses. However, this impact would be temporary and end at the completion of construction. Even though the project site is currently undeveloped, the surrounding properties are built out with residential and commercial land uses; therefore, the development of this park would not contrast with the visual environment of the area. Any proposed lighting would be directed downward to minimize light spillover effects on surrounding properties. Impacts would be less than significant.

2. Quarry Clasp Multi-Use Trail and Bicycle Paths

The Quarry Clasp Multi-Use Trail and Bicycle Paths Project would result in the development of a multi-use trail and a bicycle path along the southern edge of the Hanson Quarry and through Clark Street. Development of the multi-use trail and bicycle paths would not obstruct views of the San Gabriel Mountains to the north. No impacts to scenic vistas would occur. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to adjacent property owners, people working in area businesses, and people traveling through area streets. However, this impact would be temporary and end at the completion of construction. During operation, visible elements of the multi-use trail and bicycle path would include striped pavement, signage, fencing, and ornamental vegetation. These visible elements would be visually compatible with the surrounding land uses. No significant changes to the visual environment would occur; therefore, impacts to the visual character of the area would be less than significant. Any proposed lighting would be directed downward to minimize light spillover effects on surrounding areas. Impacts would be less than significant.

3. Peck Road Signalized Crossing

Impacts associated with the construction and operation of the Peck Road signalized crossing would be similar to the impacts described previously for Project 2. Impacts would be less than significant.

Whittier Narrows

5. Class I Bicycle Path on Rosemead Boulevard to Legg Lake

Development of a Class I bicycle path on Rosemead Boulevard would not obstruct views of the San Gabriel Mountains, Legg Lake, or other natural areas in the Whittier Narrows, such as the Rio Hondo and the San Gabriel River. No impacts to scenic vistas would occur. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to people traveling through area streets and users of recreation facilities in the area. However, this impact would be temporary and end at the completion of construction. During operation, visible elements of the Class I bicycle path would include striped pavement, signage, fencing, and ornamental vegetation. These visible elements would be visually compatible with the surrounding land uses. No significant changes to the visual environment would occur; therefore, impacts to the visual character of the area would be less than significant. Impacts would be less than significant.

6. Class I Bicycle Path from El Bosque del Rio to Lincoln Avenue on San Gabriel Boulevard

Impacts associated with the development of a Class I bicycle path from El Bosque del Rio to Lincoln Avenue on San Gabriel Boulevard would be similar to the impacts described for Project 5. Impacts would be less than significant.

7. Class I Bicycle Path from the Rio Hondo to Legg Lake through the Southern California Edison Easement

The Class I bicycle path from the Rio Hondo to Legg Lake through the Southern California Edison easement would consist of a 12-foot wide asphalt bicycle path designed to Caltrans Highway Design Manual standards and American Association of State Highway and Transportation Officials (AASHTO) Guidelines. Visual impacts associated with the development of this Class I bicycle path would be similar to the impacts described for Project 5. A less than significant impact would occur.

8. Pellissier Village Multi-Use Trail from State Route 60 to Peck Road Bridge

Impacts associated with the development of a multi-use trail from SR-60 to the Peck Road Bridge would be similar to the impacts described for Project 5. During operation, visible elements of the multi-use trail would include a 5-foot wide hardened decomposed granite path with 6-inch colored concrete curbing on both sides paralleling the back side of a soft surface equestrian trail and ADA compliant concrete and metal ramps constructed on both the north and south sides of the Peck Road Bridge. The proposed ramps would be approximately 4-feet wide with metal railings. These visible elements would be compatible with the existing transportation and flood control infrastructure of the area. Therefore, impacts to the visual character of the area would be less than significant.

9. Pellissier Bridge at Blackwill Arena Staging Area

The proposed Pellissier Bridge at Blackwill Arena Staging Area would be located on the San Gabriel River south of the existing Peck Road Bridge and north of the Zone 1 diversion structure at Lario Creek. The proposed bridge would be approximately 540 feet long and 15 feet wide and built with bridge piles anchored into the river levee. Bridge materials would be concrete and steel. Metal fencing measuring 54 inches tall, for equestrian fencing, would be attached to the bridge. In this area the San Gabriel River is reinforced by levees but the channel bottom is soft allowing riparian vegetation to grow. Development of the bridge structure would partially block views of the San Gabriel River to recreation facility users in the area; however, the San Gabriel River and the San Gabriel Mountains would continue to be visible from various vantage points. Impacts to scenic vistas would be less than significant. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to people traveling on Peck Road and users of recreation facilities in the area. However, this impact would be temporary and end at the completion of construction. During operation, the visual character of the area would change from the removal of existing vegetation and the addition of the bridge structure. The determination of whether this change would degrade the visual character of the project site or its surroundings is subjective. One person may prefer a more natural setting while another may enjoy the presence of such bridge in a natural setting. As such, the development of the proposed bridge may be considered a positive impact by one

person but not another. Visual impacts to the project setting from the bridge structure can be minimized by designing a structure with minimal visual contrast that is complimentary with the surrounding area. Impacts to the visual character of the area would be less than significant with the implementation of Mitigation Measure A-1. Any proposed lighting would be directed downward to minimize light spillover effects on surrounding areas. Impacts would be less than significant.

San Jose Creek

10. Multi-Use Trail and Bridge Connections

This project includes two multi-use bridges (one located over San Jose Creek and the other over the San Gabriel River), a Class I bicycle path, and a soft surface equestrian trail connecting the two bridges to the San Gabriel River Trail and the San Jose Creek Bike Path. Development of the bridge structures would partially block views of the San Gabriel River and San Jose Creek to recreation facility users in the area; however, the San Gabriel River, San Jose Creek, and the San Gabriel Mountains would continue to be visible from various vantage points. Impacts to scenic vistas would be less than significant. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to people traveling on area roads and highways and to users of recreation facilities in the area. However, this impact would be temporary and end at the completion of construction. During operation, the visual character of the area would change from the removal of existing vegetation and the addition of the bridge structures. The determination of whether this change would degrade the visual character of the project site or its surroundings is subjective. As such, the development of the proposed bridges may be considered a positive impact by one person but not another. Visual impacts to the project setting from the bridge structures can be minimized by designing the structures with minimal visual contrast that are complimentary with the surrounding area. Impacts to the visual character of the area would be less than significant with the implementation of Mitigation Measure A-1. Visible elements of the equestrian trail and bicycle path would include a soft surface trail, striped pavement, signage, fencing, and ornamental vegetation. These visible elements would be visually compatible with the surrounding land uses. Any proposed lighting would be directed downward to minimize light spillover effects on surrounding areas. Impacts would be less than significant.

11. Multi-Use Trail from San Jose Creek to the Duck Farm on the San Gabriel River

Development of the multi-use trail from San Jose Creek to the Duck Farm along the east bank of the San Gabriel River would not obstruct views of the San Gabriel Mountains and the San Gabriel River. No impacts to scenic vistas would occur. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to adjacent property owners, people working in area businesses, and users of recreation facilities in the area. However, this impact would be temporary and end at the completion of construction. During operation, visible elements of the multi-use trail would include signage, fencing, and ornamental vegetation. These visible elements would be visually compatible with the surrounding land uses. No significant changes to the visual environment would occur; therefore, impacts to the visual character of the area would be less than significant. Impacts would be less than significant.

Westside

12. Alhambra Wash from State Route 60 to the Garvey Community Center

This Proposed Project would develop a multi-use trail from SR-60 to the Garvey Community Center along the eastern edge of the Whittier Narrows Golf Course. An informal trail already exists in parts of the project area. Development of this multi-use trail would not include structures that could obstruct views of the Rio Hondo, which remains a natural channel through part of the project area, the San Gabriel Mountains, or of the Whittier Narrows Golf Course. No impact to scenic vistas would occur. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to people using the recreational facilities in the area, people traveling on SR-60 and area streets, and people working in area businesses. However, this impact would be temporary and end at the completion of construction. During operation, visible elements of the multi-use trail would include a natural soil compacted trail, double rail wooden fencing, and ornamental vegetation. These visible elements would be visually compatible with the surrounding land uses. No significant changes to the visual environment would occur; therefore, impacts to the visual character of the area would be less than significant. Impacts would be less than significant.

13. Rosemead Boulevard Underpass

Development of the Rosemead Boulevard Underpass would not obstruct scenic views of the San Gabriel Mountains to the north. During construction views of construction equipment, building materials, stockpiles, and construction debris would be visible to people using the recreational facilities in the area, people traveling on area streets, and people working in area businesses. However, this impact would be temporary and end at the completion of construction. During operation, visible elements would include a widened trail with decomposed granite for trail tread. These visible elements would be compatible with the existing transportation and flood control infrastructure of the area. No significant changes to the visual environment would occur; therefore, impacts to the visual character of the area would be less than significant. Impacts would be less than significant.

14. Rosemead Boulevard Access Ramp

Development of the Rosemead Boulevard access ramp would result in similar visual impacts to the impacts described for Project 13. Impacts would be less than significant.

15. Multi-Use Trail from Rosemead Boulevard to Valley Boulevard

Development of a multi-use trail from Rosemead Boulevard to Valley Boulevard would result in similar visual impacts to the impacts described for Project 12. Impacts would be less than significant.

16. Interstate 10 Freeway Underpass Improvements

Development of the I-10 underpass improvements would result in similar visual impacts to the impacts described for Project 13. A less than significant impact would occur.

3.2.5 Mitigation Measures

- A-1:** Project structures shall be designed to reduce visual contrast with the project's surroundings by repeating forms, colors, lines and textures of the project's location. This can be achieved by using materials and color schemes that blend with the natural landscape and vegetation.

3.2.6 Residual Impacts After Mitigation

After implementation of the above mitigation measure, the Proposed Projects would result in less than significant impacts to visual resources.

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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 and regulatory settings with regard to air quality. An air quality impact analysis report was completed for the Proposed Project (Urban Crossroads, Inc. 2016a). The technical report is provided in Appendix B and summarized below.

3.3.1 Environmental Setting

The project site is located in the South Coast Air Basin (Basin) within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is an approximately 6,745-square-mile area and includes portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The Basin is bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east.

This section provides an overview of the existing air quality conditions in the project area and region.

3.3.1.1 Regional Climate

The regional climate has a substantial influence on air quality in the Basin. In addition, temperature, humidity, precipitation, sunshine, and wind influence the air quality.

The annual average temperatures throughout the Basin vary from the low- to mid-60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the Basin shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the Basin, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the Basin have recorded maximum temperatures of greater than 100°F.

Although the climate of the Basin can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of the Basin's climate. Humidity restricts visibility in the Basin, and the conversion of sulfur dioxide (SO₂) to sulfates is heightened in air with relatively high humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the Basin is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease as distance from the coast increases.

More than 90 percent of the Basin's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the Basin with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the Basin; the remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant

radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, and on the longest day of the year, there are approximately 14.5 hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late fall to early spring rainy season, the Basin is subjected to wind flows associated with traveling storms moving through the region from the northwest. This period also brings five to 10 periods of strong, dry offshore winds (locally termed the “Santa Anas”) each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the Basin is known as the “Catalina Eddy,” a low-level, cyclonic (counterclockwise) flow centered over Santa Catalina Island, which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal areas.

In the Basin, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing, which effectively acts as an impervious lid to pollutants over the entire Basin. The mixing height for the inversion layer is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this layer of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_x) and carbon monoxide (CO) from vehicles, as the layer of cool air drifts seaward. Therefore, winter is a period of high levels of primary pollutants along the coastline.

3.3.1.2 Criteria Pollutants

The criteria pollutants consist of: ozone (O₃), CO, nitrogen dioxide (NO₂), SO₂, particulate matter 10 micrometers in diameter or less (PM₁₀), particulate matter 2.5 micrometers in diameter or less (PM_{2.5}), and lead (Pb). These pollutants can harm human health and the environment, as well as cause property damage. The United States Environmental Protection Agency (USEPA) 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.

- ◆ **Ozone (O₃):** O₃ is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and NO_x undergo slow photochemical reactions in the

presence of sunlight. O₃ concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

Individuals exercising outdoors, children, and people with pre-existing lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O₃ effects. Short-term exposure (lasting for a few hours) to O₃ at levels typically observed in southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O₃ levels are associated with increased school absences. In recent years, a correlation between elevated ambient O₃ levels and increases in daily hospital admission rates, as well as mortality, have also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high O₃ levels. O₃ exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O₃ may be more toxic than exposure to O₃ alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

- ◆ **Carbon Monoxide (CO):** CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O₃, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood and form carboxyhemoglobin (COHb). Accordingly, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

- ◆ **Nitrogen Dioxide (NO₂):** Nitrogen oxides (NO_x) consist of nitric oxide (NO), NO₂, and nitrous oxide (N₂O) and are formed when nitrogen (N₂) combines with oxygen (O₂). The lifespans of NO_x in the atmosphere ranges from one to seven days for NO and NO₂ and

170 years for N₂O. NO_x is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO₂ may result in numerous adverse health effects as it absorbs blue light, which results in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of NO_x compounds, NO₂ is the most abundant in the atmosphere. As ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO₂ than those indicated by regional monitors.

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO₂ at levels found in homes with gas stoves, which are higher than ambient levels found in southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis and emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO₂ considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O₃ exposure increases when animals are exposed to a combination of O₃ and NO₂.

- ◆ **Sulfur Dioxide (SO₂):** SO₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄). Collectively, these pollutants are referred to as sulfur oxides (SO_x).

A few minutes of exposure to low levels of SO₂ can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO₂. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO₂.

Animal studies suggest that despite SO₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations; however, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles (PM_{2.5}) show a similar association with ambient SO₂ levels. In these studies, efforts to separate the effects of SO₂ from those of PM_{2.5} have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

- ◆ **Particulate Matter (PM₁₀ and PM_{2.5}):** PM₁₀ is a major air pollutant that consists of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (less than 10 micrometers in diameter, and often referred to as “respirable

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particles”) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM₁₀ also causes visibility reduction.

PM_{2.5} is an air pollutant that consists of tiny solid or liquid particles less than 2.5 micrometers in diameter, which are often referred to as “fine particles.” These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO₂ release from power plants and industrial facilities and nitrates that are formed from NO_x release from power plants, automobiles, and other types of combustion sources. The chemical composition of PM_{2.5} highly depends on location, time of year, and weather conditions.

A consistent correlation between elevated ambient particulate matter (PM₁₀ and PM_{2.5}) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by particulate matter and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, school absences, a decrease in respiratory lung volumes in normal children, and increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}.

- ◆ **Lead (Pb):** Pb is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of Pb from gasoline, there have been no violations at any of the SCAQMD’s regular air monitoring stations since 1982. Currently, emissions of Pb are largely limited to stationary sources such as lead smelters. It should be noted that the Proposed Project is not anticipated to generate a quantifiable amount of Pb emissions.

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb 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 Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death, although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

3.3.1.3 Other Pollutants of Concern

In addition to the above-listed criteria pollutants, VOCs and reactive organic gases (ROGs) are other groups of pollutants of concern.

- ◆ **Volatile Organic Compounds (VOCs):** VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; they do not react at the same speed and do not form O₃ to the same extent when exposed to photochemical processes. VOCs often have an odor (e.g., gasoline, alcohol, and solvents used in paints). Exceptions to the VOC designation include: CO, carbon dioxide (CO₂), carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a precursor to O₃, which is a criteria pollutant. The SCAQMD uses the terms VOCs and ROGs (see below) interchangeably.
- ◆ **Reactive Organic Gases (ROGs):** Similar to VOC, ROGs are also precursors in forming O₃. Smog is formed when ROGs and NO_x react in the presence of sunlight. As stated above, the SCAQMD uses the terms ROGs and VOCs interchangeably.

3.3.1.4 Existing Regional Air Quality

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) (refer to Table 3.3-1 below). The USEPA and the California Air Resources Board (CARB) designate the air basins in which 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." Each standard has a different definition of what constitutes attainment, based on specific air quality statistics.

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Table 3.3-1. Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM₁₀)⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM_{2.5})⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO₂)¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO₂)¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹⁰	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹⁰	—	
Lead^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles¹⁴	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

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Table 3.3-1 (cont.). Ambient Air Quality Standards (footnotes)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the Basin. Attainment status is shown in Table 3.3-2 below. In 2014, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for O₃, PM₁₀, and PM_{2.5} at most monitoring locations; however, areas within the Basin did not exceed the federal or state standards for CO, NO₂, or SO₂.

Table 3.3-2. Attainment Status of Criteria Pollutants in the South Coast Air Basin

CRITERIA POLLUTANT	STATE DESIGNATION	FEDERAL DESIGNATION
O ₃ (1-hour)	Nonattainment	No Standard
O ₃ (8-hour)	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Pb	Attainment	Nonattainment ¹

Source: <http://www.arb.ca.gov/design/adm/adm.htm>

¹ The federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the Basin.

3.3.1.5 Existing Local Air Quality

Relative to the project site, the nearest long-term air quality monitoring site for O₃, CO, NO₂, PM₁₀, and PM_{2.5} is the SCAQMD's East San Gabriel Valley 2 monitoring station, located northeast of the project site in Azusa (Source Receptor Area [SRA] 9). The most recent three years of available data is shown on Table 3.3-3 below. Table 3.3-3 identifies the number of days that ambient air quality standards were exceeded for the project site and vicinity. In addition, data for SO₂ has been omitted because attainment is regularly met in the Basin and few monitoring stations measure SO₂ concentrations.

Table 3.3-3. Project Area Air Quality Monitoring Summary (2012-2014)

POLLUTANT	STANDARD	YEAR		
		2012	2013	2014
Ozone (O3)				
Maximum 1-Hour Concentration (ppm)		0.147	0.135	0.123
Maximum 8-Hour Concentration (ppm)		0.110	0.100	0.092
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	45	24	11
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	81	43	20
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	3	1	11
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	45	24	3
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		--	--	2.0
Maximum 8-Hour Concentration (ppm)		1.1	0.8	1.9

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POLLUTANT	STANDARD	YEAR		
		2012	2013	2014
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	0	0	0
Number of Days Exceeding Federal / State 8-Hour Standard	> 9.0 ppm	0	0	0
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	0
Nitrogen Dioxide (NO₂)				
Maximum 1-Hour Concentration (ppm)		0.060	0.056	0.070
Annual Arithmetic Mean Concentration (ppm)		0.014	0.013	0.018
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter Less Than 10 Microns (PM₁₀)				
Maximum 24-Hour Concentration (µg/m ³)		78	76	96
Number of Samples		61	61	60
Number of Samples Exceeding State Standard	> 50 µg/m ³	6	6	21
Number of Samples Exceeding Federal Standard	> 150 µg/m ³	0	0	0
Particulate Matter Less Than 2.5 Microns (PM_{2.5})				
Maximum 24-Hour Concentration (µg/m ³)		39.6	29.6	32.4
Annual Arithmetic Mean (µg/m ³)		11.0	10.54	11.6
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m ³	1	0	0

Source: http://www.epa.gov/airdata/ad_rep_mon.html

-- = data not available from SCAQMD or CARB

> = greater than

≥ = equal to or greater than

ppm = parts per million

µg/m³ = micrograms per cubic meter

3.3.2 Regulatory Setting

3.3.2.1 Federal

The USEPA is responsible for setting and enforcing the NAAQS for O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5}, and Pb. The USEPA has jurisdiction over emissions sources that are under the authority of the federal government, including aircraft, locomotives, and emissions sources outside state waters. The USEPA also establishes emission standards for vehicles sold in states other than California.

The federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The federal CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The federal CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the federal CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or meet interim milestones. The sections of the federal CAA most directly applicable to the development of the project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and Pb. Table 3.3-1 above provides the NAAQS currently in effect.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NOx.

3.3.2.2 State

The CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the California CAA, responding to the federal CAA, and regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the CAAQS by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride; however, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. Table 3.3-1 above provides the CAAQS currently in effect.

Local air quality management districts, such as SCAQMD, regulate air emissions from commercial and light industrial facilities. All basins have been formally designated as attainment or non-attainment for each CAAQS.

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

- ◆ Application of Best Available Retrofit Control Technology to existing sources;
- ◆ Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- ◆ A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- ◆ Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- ◆ Significant use of low emissions vehicles by fleet operators; and
- ◆ Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NOx, CO, and PM₁₀; however, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

3.3.2.3 Regional

South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. Accordingly, 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.

Currently, the NAAQS and CAAQS are exceeded in most parts of the Basin. The Proposed Project region within the Basin is in nonattainment with the NAAQS for O₃ (8-hour) and PM_{2.5}. In addition, the Proposed Project region within the Basin is in nonattainment with the CAAQS for O₃ (1-hour and 8-hour), PM₁₀, and PM_{2.5}. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. The AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and minimize any negative fiscal impacts of air pollution control on the economy. The most recent SCAQMD AQMP was finalized in 2012 (SCAQMD 2012); however, the SCAQMD is currently preparing a 2016 AQMP.

Southern California Association of Governments

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 Metropolitan Planning Organization (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 (RTP) and Regional Transportation Improvement Plan (RTIP), which address 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 RTP, RTIP, and AQMP are based on projections originating within city and county general plans.

3.3.2.4 Local

County of Los Angeles

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. The 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.

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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.

City of Arcadia

The Resource Sustainability Element of the City of Arcadia 2010 General Plan Update includes one goal and seven policies focused on the improvement of air quality:

Goal RS-1: Continued improvement in local and regional air quality

Policy RS-1.1: Reduce local contributions of airborne pollutants to the air basin.

Policy RS-1.2: Limit, when feasible, locating sensitive receptors near pollutant emitting sources.

Policy RS-1.3: Continue to participate in regional efforts to meet state and federal air quality standards.

Policy RS-1.4: Lower the emissions caused by motor vehicles through Transportation Demand Management strategies and land use patterns that reduce vehicle miles traveled.

Policy RS-1.5: Promote the reduction of vehicular traffic and improved efficiency of the City's circulation system (i.e., roadways) as a means to improving air quality.

Policy RS-1.6: Require projects that generate potentially significant levels of air pollutants to incorporate the most effective air quality mitigation into project design, as appropriate.

Policy RS-1.7: Promote energy-efficient building construction and operation practices that reduce emissions and improve air quality.

City of El Monte

The Public Health and Safety Element of the City of El Monte 2011 General Plan includes one goal and seven policies focused on the improvement of air quality:

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Goal PHS-3: Clean and healthful air through the implementation of responsive land use practices, enhancement to the natural landscape, pollution reduction strategies, and cooperation with regional agencies.

- Policy PHS-3.1: Land Use. As a condition for siting or expanding operations in El Monte, require air pollution emitters to evaluate and fully mitigate the impacts of their operations on schools, homes, medical facilities, child care centers, and other sensitive receptors.
- Policy PHS-3.2: Sensitive Receptors. Utilize CARB recommendations to evaluate the siting of dry cleaners, chrome platers, large gas stations, freeways, and other high pollutant sources near residences, health care facilities, schools, and other sensitive land uses.
- Policy PHS-3.3: Community Forest. As prescribed in the Parks and Recreation Element, enhance the City's community forest by planting trees along all roadways as a means to help filter air pollutants, clean the air, and provide other health benefits to the community.
- Policy PHS-3.4: Transportation. Encourage alternative modes of travel to work and school by maximizing transit service, purchasing alternative fuel vehicles, completing all sidewalks, and creating a network of multiuse trails and bicycle paths.
- Policy PHS-3.5: Regional Coordination. Work cooperatively with cities through the San Gabriel Valley Council of Governments to address interjurisdictional and regional issues of air quality, including mobile and stationary sources of air pollution.
- Policy PHS-3.6: Health Risk Assessment. Require that projects for new industries or expansion of industries that produce air pollutants conduct a health risk assessment and establish appropriate mitigation prior to approval of new construction, rehabilitation, or expansion permits.
- Policy PHS-3.7: Quarries. Work through regional entities to advocate for the continued monitoring of the quarries, development of technologies for measuring air emissions, and the institution of appropriate mitigation if risks are found.

City of Industry

The Resource Management Element of the City of Industry 2014 General Plan includes one goal and four policies focused on the improvement of air quality:

Goal RM2: Improved air quality and reduced greenhouse gas emissions.

- Policy RM2-1: Comply with state building codes relative to indoor air quality.
- Policy RM2-2: Support efforts to reduce pollutants to State and Federal Clean Air Standards.
- Policy RM2-3: Collaborate with the CARB and other agencies within the South Coast Air Basin to improve regional air quality and achieve GHG reduction targets.
- Policy RM2-4: Prohibit siting of sensitive land uses within distances defined by CARB unless sufficient mitigation is provided.

City of Irwindale

The City of Irwindale 2008 General Plan Update does not include any goals or policies specifically related to the improvement of air quality; however, the General Plan Update includes the following implementation program:

Air Quality Planning. The City of Irwindale will continue to participate in the regional planning efforts being undertaken by the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) to develop and implement strategies to improve regional air quality. The City of Irwindale will continue to work with the SCAQMD and SCAG and the surrounding cities in improving air quality.

City of Rosemead

The Resource Management Element of the City of Rosemead 2010 General Plan Update includes one goal and five policies focused on the improvement of air quality:

Goal 4: Effective contributions to regional efforts to improve air quality and conserve energy.

- Policy 4.1: Integrate air quality planning with City land use, economic development, and transportation planning efforts.
- Policy 4.2: Support programs that reduce air quality emissions related to vehicular travel.
- Policy 4.3: Support alternative transportation modes and technologies, and develop bike- and pedestrian-friendly neighborhoods and districts to reduce emissions associated with automobile use.
- Policy 4.4: Encourage energy conservation efforts and the incorporation of energy-saving designs and features into new and refurbished buildings.
- Policy 4.5: Encourage public employees to follow energy conservation procedures.

City of South El Monte

The Resource Element of the City of South El Monte 2000 General Plan includes one goal and two policies focused on the improvement of air quality:

Goal 5.0: Improve air quality for future generations of South El Monte residents.

- Policy 5.1: Continue to improve traffic flow through and within the City.
- Policy 5.2: Review the zoning regulations annually to identify whether revisions are required to accommodate and encourage the use of alternative-fuel vehicles (e.g., electric cars).

3.3.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, a project would have a significant impact on air quality if it would:

- ◆ Conflict with or obstruct implementation of the applicable air quality plan;

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- ◆ 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

<i>Threshold: Would the project conflict with or obstruct implementation of the applicable air quality plan?</i>
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This section includes an analysis of the consistency with the criteria in the SCAQMD's 2012 AQMP and discusses whether the Proposed Project would interfere with the region's ability to comply with federal and state air quality standards.

The air quality levels projected in the 2012 AQMP are based on several assumptions. For example, the 2012 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS; SCAG 2012a). The 2012 AQMP also assumed that such development projects would implement strategies to reduce emissions generated during the construction and operational phases of projects.

Criteria for determining consistency with the AQMP are defined in Sections 12.2 and 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993). The Handbook identifies two key criteria for consistency:

- ◆ Consistency Criterion No. 1: The project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- ◆ Consistency Criterion No. 2: The project will not exceed the assumptions in the AQMP based on the years of project buildout phase.

Consistency Criterion No. 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if SCAQMD regional and local thresholds of significance are exceeded. Based on the air quality modeling analysis for the Proposed Project, short-term construction would result in less than significant impacts based on the SCAQMD regional and local thresholds of significance. In addition, the regional analysis demonstrates that the Proposed Project's operational-source emissions would not exceed applicable thresholds, and would therefore not result in or cause violations of the CAAQS and NAAQS. Because the Proposed Project is not anticipated to contribute to the exceedance of any air pollutant concentration standards, the Proposed Project would be consistent with Consistency Criterion No. 1 of the AQMP.

Consistency Criterion No. 2

The SCAQMD's 2012 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to SCAG and are used to develop regional growth forecasts. These regional growth forecasts are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the local general plans is considered to be consistent with the AQMP.

The Proposed Project is intended to close gaps in the existing regional recreational trails network, thereby improving connectivity. The Proposed Project would not result in an exceedance of regional thresholds for operational emissions, and the Proposed Project would result in a less than significant impact. Development of the Proposed Project would be consistent with the growth projections in the local general plans; therefore, the Proposed Project would be consistent with the AQMP. Accordingly, the Proposed Project would be consistent with Consistency Criterion No. 2 of the AQMP.

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?

Construction Impacts

For the purposes of the construction-related air quality analysis, the individual projects that collectively constitute the Proposed Project have been included in one of four groups (Group A, B, C, or D). Table 3.3-4 below shows the individual projects within each group.

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Table 3.3-4. Summary of Projects in Groups A through D¹

PROJECT NO.	PROJECT NAME	REGIONAL AREA	CONSTRUCTION CHARACTERISTICS
Group A (Based on SCAQMD's Summary of a 5-acre Site)			
1	Quarry Clasp Park Development	Quarry Clasp	Includes construction of a 600-square-foot bathroom facility; does not include building structures ²
Group B (Based on SCAQMD's Summary of a 1-acre Site)			
2	Quarry Clasp Multi-Use Trail and Bike Path	Quarry Clasp	Does not include building structures
5	Class I Bicycle Path on Rosemead Boulevard to Legg Lake	Whittier Narrows	
7	Class I Bicycle Path from the Rio Hondo to Legg Lake through the Southern California Edison Easement	Whittier Narrows	
8	Pellissier Village Multi-Use Trail from State Route 60 to Peck Road Bridge	Whittier Narrows	
12	Alhambra Wash from State Route 60 to the Garvey Community Center	Westside	
16	Interstate 10 Freeway Underpass Improvements	Westside	
Group C (Based on SCAQMD's Summary of a 1-acre Site)			
3	Peck Road Signalized Crossing and Trail Connectivity	Quarry Clasp	Does not include building structures
6	Class IV Bikeway from El Bosque del Rio Hondo to Lincoln Avenue on San Gabriel Boulevard	Whittier Narrows	
13	Rosemead Boulevard Access Ramp	Westside	
14	Rosemead Boulevard Underpass	Westside	
15	Multi-Use Trail from Rosemead Boulevard to Valley Boulevard	Westside	
Group D (Based on SCAQMD's Summary of a 1-acre Site)			
9	Pellissier Bridge at Blackwill Arena Staging Area	Whittier Narrows	Includes construction of bridges; does not include building structures
10	Multi-Use Trail and Bridge Connections from the San Jose Creek Trail to San Gabriel River Trail	San Jose Creek	

Source: Urban Crossroads 2016a

¹ Project No. 11, Multi-Use Trail from San Jose Creek to the Duck Farm on the San Gabriel River, is not included in any of the groups because the project would be limited to the installation of a fence, which would not result in a quantifiably measurable impact to air quality.

² Although Project No. 1 includes the construction of a 600-square-foot bathroom facility, this project does not include "building structures" as defined by the CalEEMod 2013.2.2.

The air quality modeling analysis is based on the assumption that construction of the Proposed Project would commence in September 2016 and last through December 2017. It was also assumed that no overlapping would occur between the various groups and individual projects. This construction schedule utilized in the analysis represents a "worst-case" scenario, should construction occur any time after the respective dates; this is because emission factors for

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construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.¹ Site-specific construction fleets may vary due to specific project needs at the time of construction. The duration of construction activities and associated construction equipment were based on CalEEMod 2013.2.2 defaults, as well as SCAQMD's Summary of a 5-acre site for Group A and SCAQMD's Summary of a 1-acre site for Groups B, C, and D. Construction durations by activity for each group are shown in Table 3.3-5.

Table 3.3-5. Duration of Construction

CONSTRUCTION ACTIVITY	DURATION OF CONSTRUCTION (DAYS)			
	GROUP A	GROUP B	GROUP C	GROUP D
Demolition	20	10	10	10
Site Preparation	5	1	1	1
Grading	8	2	2	2
Building Construction	115*	N/A	N/A	115*
Paving	18	2	2	2

Source: Urban Crossroads 2016a

* Because the projects in Groups A and D do not include "building structures" as defined by the CalEEMod 2013.2.2, the number of days for "Building Construction" have been halved.

SCAQMD Rules that are currently applicable during construction activity for the Proposed Project include, but are not limited to: Rule 1403 (Asbestos), Rule 1113 (Architectural Coatings), Rule 431.2 (Low Sulfur Fuel), Rule 403 (Fugitive Dust), and Rule 1186/1186.1 (Street Sweepers). It should be noted that these rules are not mitigation, as they are standard regulatory requirements, and credit for Rule 403 has been taken.

The estimated maximum daily construction emissions are summarized in Table 3.3-6 below. As shown in the table, construction emissions associated with the Proposed Project would not exceed the applicable SCAQMD regional thresholds of significance for any criteria pollutant. Therefore, a less than significant regional air quality impact would occur from construction of the Proposed Project.

Table 3.3-6. Summary of Construction Emissions

YEAR	EMISSIONS (POUNDS PER DAY)					
	VOC	NOX	CO	SOX	PM ₁₀	PM _{2.5}
Group A						
2016	5.16	54.74	42.35	0.05	10.19	6.63
2017	3.30	28.51	19.37	0.03	1.91	1.79
Group B						
2017	2.49	25.92	19.18	0.02	4.03	2.61

¹ As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2013.2, Table 3.4, "OFFROAD Equipment Emission Factors," as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

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YEAR	EMISSIONS (POUNDS PER DAY)					
	VOC	NOX	CO	SOX	PM ₁₀	PM _{2.5}
Group C						
2017	2.49	25.92	19.18	0.02	4.03	2.61
Group D						
2017	5.16	74.19	53.41	0.16	8.07	4.17
Maximum Daily Emissions	5.16	74.19	53.41	0.16	10.19	6.63
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: Urban Crossroads 2016a

Operational Impacts

Operational activities associated with the Proposed Project would result in emissions of VOCs, NOx, CO, SOx, PM₁₀, and PM_{2.5}. Project operational emissions would be expected from the following primary sources:

- ◆ Area Source Emissions
 - Architectural Coatings. Emissions from architectural coatings result from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings.
 - Consumer Products. Consumer products include, but are not limited to, detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds that, when released in the atmosphere, can react to form O₃ and other photochemically reactive pollutants.
 - Landscape Maintenance Equipment. Landscape maintenance equipment generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain landscaping.

- ◆ Energy Source Emissions
 - Combustion Emissions Associated with Natural Gas and Electricity. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas; however, operation of the Proposed Project would not require the usage of natural gas, and no emissions would be generated during operation of the Proposed Project.

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◆ Mobile Source Emissions

- Vehicles. Project-related operational air quality impacts derive primarily from vehicle trips generated by the Proposed Project. Trip characteristics available from the Traffic Assessment for the Proposed Project (Urban Crossroads 2016c) were utilized in this analysis.
- Fugitive Dust Related to Vehicular Travel. Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates.

The estimated maximum peak operational emissions are summarized on Table 3.3-7. Under the assumed scenarios (summer and winter), emissions resulting from Project operations would not exceed the applicable SCAQMD regional thresholds of significance for any criteria pollutant. Therefore, operational impacts would be less than significant.

Table 3.3-7. Summary of Peak Operational Emissions

OPERATIONAL ACTIVITIES	EMISSIONS (POUNDS PER DAY)					
	VOC	NOX	CO	SOX	PM ₁₀	PM _{2.5}
Summer Scenario						
Area Source	0.28	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	1.97	5.34	21.85	0.05	3.60	1.02
Total Maximum Daily Emissions	2.25	5.34	21.85	0.05	3.60	1.02
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No
Winter Scenario						
Area Source	0.28	0.00	0.00	0.00	0.00	0.00
Energy Source	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source	2.07	5.61	22.03	0.05	3.60	1.02
Total Maximum Daily Emissions	2.35	5.61	22.03	0.05	3.60	1.02
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

Source: Urban Crossroads 2016a

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)?

The project area is designated as an extreme non-attainment area for O₃, and a non-attainment area for PM₁₀, PM_{2.5}, and Pb.

This analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in non-attainment, and, therefore, would not be considered to have a significant air quality impact. Because the Proposed Project would not exceed the applicable SCAQMD regional threshold for construction and operational emissions, the Proposed Project would not result in a cumulatively significant impact.

3.3.4.4 Exposure of Sensitive Receptors

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

Background on Localized Significance Thresholds

The analysis uses the methodology included in the SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2003). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the NAAQS or CAAQS. Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below state standards. In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if emissions increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5}, which are both non-attainment pollutants.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4². LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects.

² The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities.

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Localized Significance – Construction Activity

Table 3.3-8 identifies the localized impacts at the nearest receptor location in the vicinity of the Proposed Project. Emissions during construction activity would not exceed SCAQMD's localized significance thresholds for any criteria pollutant. It should be noted that credit for Rule 403 has been taken. A less than significant impact would occur.

Table 3.3-8. Summary of Localized Significance During Project Construction

ON-SITE SITE MAXIMUM DAILY EMISSIONS	EMISSIONS (POUNDS PER DAY)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Group A				
Site Preparation	54.63	41.63	9.98	6.58
Grading	44.4	27.6	9.65	5.78
SCAQMD Localized Threshold	203	1,733	14	8
Threshold Exceeded?	No	No	No	No
Groups B, C, and D¹				
Site Preparation	8.86	5.44	0.92	0.67
Grading	25.88	17.17	3.94	2.59
SCAQMD Localized Threshold	89	623	5	3
Threshold Exceeded?	No	No	No	No

Source: Urban Crossroads 2016a¹ Groups B, C, and D utilize identical construction equipment for the site preparation and grading phases. Accordingly, the maximum daily emissions for Groups B, C, and D would be the same.

Localized Significance – Long-Term Operational Activity

The Proposed Project would include the operation of a park, numerous trails (bicycle paths, pedestrian paths, and multi-use trails), trail access improvements, and bridges. According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project if the project includes stationary sources, or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., transfer facilities and warehouse buildings). The Proposed Project would not include such uses; therefore, due to the lack of significant stationary source emissions, no long-term LST analysis is needed, and no impact would occur.

3.3.4.5 Odors

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

Substantial odor-generating sources include agricultural activities, feedlots, wastewater treatment facilities, landfills, or various heavy industrial uses. The Proposed Project would not include any such uses or activities, and would not result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Proposed Project would include disposal of miscellaneous commercial refuse. Consistent with City/County

requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations, thereby precluding substantial generation of odors due to temporary holding of on-site refuse. In addition, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances.

3.3.5 Mitigation Measures

Because no significant impacts associated with air quality would occur, no 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.

3.3.6 Residual Impacts After Mitigation

No significant impacts to air quality would occur from construction or operation of the Proposed Project.

3.4 BIOLOGICAL RESOURCES

A biological resources assessment was completed for the Proposed Project (ECORP 2016a). The report is included in the technical appendices and is summarized in this section (Appendix C).

3.4.1 Environmental Setting

The Proposed Project is located in the San Gabriel Valley in the southeastern portion of Los Angeles County. The San Gabriel Valley is an urbanized valley that is largely built out with single- and multi-family residential, commercial, and industrial land uses; however, some areas within the valley are reserved for open space, such as the Whittier Narrows Recreation Area. San Gabriel Valley is the eastern gate to Los Angeles, west of the Inland Empire, and has a population of just over two million residents. It is approximately 284 square miles with a total of 47 neighborhoods and cities.

The Proposed Project passes through unincorporated County of Los Angeles areas and several cities including: Arcadia, El Monte, Industry, Irwindale, Rosemead, and South El Monte. Land uses in the area include: open space, industrial, recreational, commercial, public and private utilities, and transportation corridors. Much of the surrounding area consists of developed residential and commercial lots. Nearby natural areas include the Whittier Narrows Recreation Area in the southern portion of the Proposed Project and the San Gabriel River corridor located northeast of the Proposed Project. The Puente Hills are approximately one mile southeast of the Proposed Project and contain the Hellman Wilderness Park, Sycamore Park, Arroyo Pescadero Park, and the Habitat Authority Preserve. The Angeles National Forest is approximately 10 miles north of the project site.

The Proposed Project is located within the San Gabriel Watershed, a watershed of approximately 640 square miles. The Proposed Project is bound by the Rio Hondo to the west and the San Gabriel River to the east. The Rio Hondo and San Gabriel River flow south from the San Gabriel Mountains to Whittier Narrows. The cities of El Monte and South El Monte occupy the area between the rivers north of Whittier Narrows. At Whittier Narrows, the rivers flow through a gap between the Puente Hills to the east and the Montebello Hills to the west. San Jose Creek runs along the north side of the Puente Hills and enters the San Gabriel River north of Whittier Narrows. Tributaries to these rivers include: San Jose Creek, Walnut Creek, Arcadia Wash, Eaton Wash, Rubio Wash, and Alhambra Wash (Figure 2-2).

Local topography consists of a relatively flat landscape, with the nearest peak at the top of Workman Hill, about three miles southeast of the Proposed Project. The Proposed Project slopes from north to south, with the water generally flowing in a southwesterly direction, towards the San Gabriel River. The Proposed Project ranges in elevation from approximately 350 feet (106 meters) above mean sea level (amsl) in the north to 206 feet (62 meters) amsl in the south.

3.4.1.1 Vegetation

Vegetation communities within the project areas included five plant communities: California annual grassland, California sagebrush-California buckwheat scrub, chamise chaparral, mulefat

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thickets, and riparian woodland (Table 3.4-1). The project areas also contained disturbed and developed areas.

Table 3.4-1. Vegetation Communities per Project Area

VEGETATION COMMUNITY	PROJECT AREAS														
	QUARRY CLASP			WHITTIER NARROWS					SAN JOSE CREEK		WESTSIDE				
	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16
California annual grassland	X	X				X	X	X	X		X	X	X		
California sagebrush-California buckwheat scrub	X	X				X			X		X				
Chamise chaparral									X		X				
Mulefat thickets						X		X	X		X				
Riparian woodland								X	X		X				
Disturbed/Developed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

California Annual Grassland. Grassland plant communities occur throughout California naturally and as a result of type conversion caused by past disturbances. Grasslands in California have become more widespread due the history of agricultural practices that have introduced non-native grasses originally used as livestock feed. Areas of the Proposed Project classified as California annual grassland consist of several different vegetation series: Upland mustards, Annual brome grasslands, Red brome grasslands, cheatgrass grassland, and yellow star-thistle fields. All of these vegetation communities are predominantly composed of non-native ruderal species, and are generally found adjacent to the access roads and other recent disturbances. The dominant species in these communities, all of which are non-native, include: black mustard (*Brassica nigra*), ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), cheatgrass (*Bromus tectorum*), and tocalote (*Centaurea melitensis*). Native species are present in low amounts and include: common fiddleneck (*Amsinckia menziesii*), red maids (*Calandrinia ciliata*), California croton (*Croton californicus*), and twiggy wreath plant (*Stephanomeria virgata*). This community occurs within portions of Projects 1, 2, 7, 8, 9, 10, 12, 13, and 14).

California Sagebrush-California Buckwheat Scrub. California sagebrush-California buckwheat scrub is considered the new classification for the coastal sage scrub community, a sensitive vegetation community discussed further in Section 3.4.4.1. It consists of sclerophyllous, woody species co-dominated by California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Other plant species in the project areas were chaparral yucca (*Hesperoyucca whipplei*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and holly-leaved cherry (*Prunus ilicifolia* ssp. *lyonii*). The canopy is two-tiered, and intermittent to continuous, with a seasonally present herbaceous layer. Within the project areas, California sagebrush-California buckwheat scrub is found within portions of the Quarry Clasp project area (Projects 1 and 2), along the northwestern end of the Whittier Narrows

project area (Project 7) and San Jose Creek project area (Project 10), and along the southern end of the Westside project area (Project 12).

Chamise Chaparral. Chaparral is the most plentiful plant community in California, found from the coastal regions to the desert edge and throughout mountainous regions. It is a fire-adapted plant community whose typical plant species contain volatile oils that are fairly combustible. Chamise (*Adenostema fasciculatum*) is a long-lived, shade-intolerant shrub that can grow to over three meters tall and is found in low to mid-elevations throughout California. Chamise chaparral is found in the San Jose and Westside project areas. Chamise chaparral typically exists with low amounts of other shrub species such as California sagebrush, California buckwheat, chaparral yucca, toyon (*Heteromeles arbutifolia*), and black sage. Small areas of this vegetation community are found within the Westside project area (Project 12) and San Jose Creek project area (Project 10).

Mulefat Thickets. Mulefat (*Baccharis salicifolia*) is an evergreen shrub with willow-like leaves and composite cream-colored flowers. Mulefat thickets occur within the vicinity of the Rio Hondo and San Gabriel River, which includes all four project areas. It generally occurs on canyon bottoms, floodplains, irrigation ditches, lake margins, and stream channels on mixed alluvium soils. Mulefat thickets are found in low and mid-elevations throughout California. Mulefat can be found among California sagebrush, tree tobacco (*Nicotiana glauca*), willow trees (*Salix* sp.), and Mexican elderberry (*Sambucus nigra* ssp. *caerulea*). This vegetation community occurs in the Westside (Project 12), San Jose Creek (Project 10), and Whittier Narrows (Projects 7 and 9) project areas.

Riparian Woodland. The riparian woodland community is usually found along streams or in wet areas caused by natural or artificial hydrological input. The riparian woodland community is considered a sensitive vegetation community that is discussed further in Section 3.4.4.1. Riparian woodlands occur within the vicinity of the southern Rio Hondo, the San Gabriel River, and San Jose Creek. The plants that comprise these communities are generally less tolerant of drought than other plant communities, and include: western sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii* ssp. *fremontii*), and willow trees (*Salix* sp.). Wildlife is often more plentiful within riparian areas due to higher water and food availability. When found along a streambed, riparian areas are usually used as wildlife movement corridors. This vegetation community occurs in or near the San Jose Creek (Project 10), Whittier Narrows (Project 9), and Westside (Project 12) project areas.

3.4.1.2 Sensitive Plant Species

A total of 58 sensitive plant species were identified during the literature review and database search. Most of the plant species identified are of relatively low levels of sensitivity. Five of the plant species found during the literature search are either federally- or state-listed. Two of those species, San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), and slender-horned spineflower (*Dodecahema leptoceras*), are assumed absent from the project area because the project area is out of the known range for these species. Braunton's milk-vetch (*Astragalus brauntonii*) is assumed to be absent from the project area because it requires carbonate soils and these are absent from any of the project areas. The other two listed species, Nevin's barberry (*Berberis nevinii*) and Brand's phacelia (*Phacelia stellaris*), were found to have a low potential to occur within several of the project areas (ECORP 2016a). An

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evaluation of the potential for these two plant species to occur within each project area is provided in Table 3.4-2.

Table 3.4-2. Special-Status Plants by Project Area

PLANT SPECIES	PROJECT AREAS POTENTIAL FOR SPECIAL-STATUS PLANTS															
	QUARRY CLASP			WHITTIER NARROWS					SAN JOSE CREEK		WESTSIDE					
	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	
Nevin's barberry	A	A	A	A	A	L	A	L	L	A	L	A	A	A	A	
Brand's phacelia	A	L	A	A	A	L	L	L	L	L	L	A	A	A	A	

A=Assumed Absent, L=Low, M=Moderate, H=High

Nevin's Barberry. This plant blooms from March through April and occurs in chaparral, cismontane, woodland, coastal scrub, and riparian scrub (sandy or gravelly). In its native habitats it is usually found within canyon bottoms. There are known locations where the barberry is thought to have been spread by cultivation. There is a low potential for this species to occur in Projects 7, 9, 10, and 12.

Brand's Phacelia. This plant blooms from March through June and is occurs within coastal scrub and larger riparian floodplains. It grows in sandy openings within and adjacent to scrub habitats, including near riparian corridors. It is currently known from only 10 locations in San Diego County and Riverside County, and one location near Long Beach in Los Angeles County. This species has a low potential to occur within Projects 2, 7, 8, 9, 10, 11, and 12.

3.4.1.3 Sensitive Wildlife Species

During the assessment, no sensitive wildlife species were detected within the projects areas. The literature search documented 59 special-status wildlife species in the vicinity of the project areas. A list was generated from the results of the literature search (Appendix C) and the project areas were evaluated for suitable habitat to support any of the special-status wildlife species. Additionally, because construction and operation of the Proposed Project have the potential to affect wildlife in habitat adjacent to the project areas, a buffer area was evaluated for its potential to support special-status species that could be affected by project activities.

The list of sensitive wildlife includes species that are federally and state listed, as well as species that are not yet formally listed, but are listed as a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC) due to significant habitat loss or population declines. The potential for special-status animal species that are formally listed at state or federal levels, or that otherwise pose a constraint to project development, are summarized below in Table 3.4-3. Species from the list that have the potential to occur within the project areas or that have the potential to be otherwise affected are discussed in detail below.

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Table 3.4-3. Special-Status Animals by Project Area

ANIMAL SPECIES	PROJECT AREAS POTENTIAL FOR LISTED ANIMALS															
	QUARRY CLASP			WHITTIER NARROWS					SAN JOSE CREEK		WESTSIDE					
	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	
Santa Ana sucker	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Coastal California gnatcatcher	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Western yellow-billed cuckoo	A	A	A	A	A	A	L	L	M	A	L	A	A	A	A	
Southwestern willow flycatcher	A	A	A	A	A	A	L	L	L	A	L	A	A	A	A	
Least Bell's vireo	A	A	A	A	A	A	M	M	L	A	M	A	A	A	A	
Arroyo toad	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Bank swallow	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Red-legged frog	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Mountain yellow-legged frog	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
Peregrine falcon	L	L	A	A	A	A	A	A	A	A	A	A	A	A	A	
Swainson's hawk	L	L	A	A	A	A	A	A	A	A	A	A	A	A	A	
Burrowing owl	L	L	A	L	A	L	L	L	L	L	L	L	A	A	A	

A=Assumed Absent, L=Low, M=Moderate, H=High

Santa Ana Sucker. This fish species is only found within perennial streams with sand-rubble-boulder bottoms, cool, clear water, and algae. Although it is known from the upper San Gabriel River, it is not known from anywhere within any of the project areas. This fish is unlikely to enter into the project areas from areas where it is known because of the intervening blockages of streams created by several dam structures. Therefore, it is considered to be absent from all of the project areas.

Coastal California Gnatcatcher. This small passerine bird is considered an obligate, permanent resident of coastal sage scrub and some other shrub communities below 3,000 feet in Southern California. Not all areas classified as coastal sage scrub are occupied, because the species has requirements for distinct territory sizes and prey availability. The nearest recorded populations of gnatcatcher are within the Puente Hills, Chino Hills, and Montebello area. There is coastal sage scrub (categorized as California sagebrush-California buckwheat scrub) within Projects 1, 2, 7, 10, and 12. The species is considered absent from these areas, however, because the coastal sage scrub present is considered too fragmented and too small in patch size to support the species.

Western Yellow-Billed Cuckoo. This species occurs within dense and extensive riparian woodlands in Southern California, usually with a thick, almost impenetrable character and some running water nearby. It uses similar habitats as the least Bell's vireo and southern willow flycatcher, but its habitat requirements are even more specialized. They have not been recorded from within any of the project areas. The species is considered unlikely to nest in the project

area because the riparian habitat is not as suitable for them. Riparian habitat with limited potential to support this species can be found adjacent to the Whittier Narrows project area (Project 9), the San Jose project area (Project 10), and the southern portion of the Westside project area (Project 12).

Southwestern Willow Flycatcher. This species occurs within riparian woodlands in Southern California, usually with a high overstory of cottonwoods or other tree species and some running water nearby. It uses similar habitats as the least Bell's vireo, but its habitat requirements are more specialized. Often it is seen as a migrant in areas where it does not then settle in to nest. Although they have been seen migrating through the Whittier Narrows area, the species is not currently thought to consistently nest in the area. Riparian habitat with limited potential to support this species can be found adjacent to the Whittier Narrows project area (Project 9), the San Jose project area (Project 10), and the southern portion of the Westside project area (Project 12).

Least Bell's Vireo. This riparian obligate species nests in low riparian habitat within medium to large stream systems below 2,000 feet elevation. It requires a diversity of riparian habitat structure and is most often associated with willow riparian habitat areas having an herbaceous understory. The species is known to nest within the Whittier Narrows. Riparian habitat with limited potential to support this species can be found adjacent to the Whittier Narrows project area (Project 9), the San Jose project area (Project 10), and the southern portion of the Westside project area (Project 12).

Arroyo Toad. This species occurs within larger stream systems with scattered riparian vegetation and sandy or gravelly bottoms. They have not been recorded from within any of the project areas. Riparian habitats can include willows, sycamores, oaks, and cottonwoods. It breeds within alluvial braided channels that are slow-moving but well-oxygenated. Although the project areas are within the range of this species, suitable habitat is considered absent throughout the four project areas and they are not expected to occur.

Bank Swallow. This species is a migrant that nests in summer along vertical bluffs and cliffs along stream banks, at least one meter in height. They have not been recorded from within any of the project areas. Not many nesting areas are known in the southern California area and none have been identified within any of the project areas. This species is considered to be absent from all four project areas because of the lack of suitable cliff habitat.

Red-legged Frog. This frog uses standing or slow moving, perennial deep ponds and streams with perennial water flows. It favors tall vegetation, like grasses, cattails and shrubs, to provide protection from predators and the sun since they cannot tolerate excessive heat. They have not been recorded from within any of the project areas. Their habitat requirements do not associate well with managed flood control systems, and so the species is considered absent from all project areas.

Mountain Yellow-legged Frog. This species occurs at elevations between 1,200 to 7,500 feet and requires permanent water sources including streams, rivers, perennial creeks, pools, or other forms of aquatic habitat. It is known from very few streams in southern California. They have not been recorded from within any of the project areas. Like the red-legged frog, their habitat requirements do not associate well with managed flood control systems, and so the species is considered absent from all project areas.

Peregrine Falcon. This is a wide-ranging falcon that is found in open habitats ranging from tundra to savanna, and seacoast to high mountains. Its nesting areas are protected. The subspecies in the lower 48 states will nest on cliffs, in open forests, and on tall buildings or bridges in urban environments, feeding on rock doves. Within the project areas, the species potential to occur is considered low and only as a migrant and wintering species; it would not nest within the project areas.

Swainson's Hawk. This species nests in woodland stands with few trees in juniper-sage flats, riparian areas and in oak savanna and hunts in nearby grassland, or cultivated field areas supporting rodent populations. Its nesting areas are protected. The species occurs in coastal areas more during migration than during the breeding season, and is known from deserts more during the summer months. Within the project areas, the species potential to occur is considered low and only as a migrant and wintering species; it would not nest within the project areas.

Burrowing Owl. Burrowing owls are associated with low-lying vegetation, open scrub, grassland, disturbed habitat, and agricultural habitats. They frequently can be found in vacant lots in otherwise urban zones if the area has a prey base and suitable substrate for burrow creation. Potential for burrowing owl is considered low at all project areas, excluding areas that are heavily urbanized, due to their ability to inhabit multiple habitat types and areas directly adjacent to development (Projects 1, 2, 5, 7, 8, 9, 10, 11, 12, and 13).

Nesting Birds. All raptor species are protected from "take" pursuant to California Fish and Game Code Section 3503.5 and by the Migratory Bird Treaty Act [MBTA 1918]. During the biological resources assessment, breeding birds were observed, and there are several locations where large trees exist within and adjacent to all of the project areas which may contain nesting habitat for protected breeding birds such as raptors, hummingbirds, and other migratory birds. Nesting birds can also use urban structures, such as buildings or towers. Breeding bird species could pose a constraint to development of the area, if development occurs during the breeding season. Generally the breeding season is from March 1 through August 31 of each year. All Projects have the potential to support nesting bird species adjacent to or within their footprints.

The large ornamental trees on the site provide potential nesting habitat for several raptors including: Cooper's hawk, red-shouldered hawk (*Buteo lineatus*), and red-tailed hawk (*Buteo jamaicensis*). Raptors in the area of the Proposed Project typically breed between February 1 and August 31 while non-raptor birds protected under the Migratory Bird Treaty Act (MBTA) generally nest between March and August.

3.4.1.4 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

Wildlife Movement Corridors and Linkages

Wildlife movement corridors consist of an entire habitat connection or linkage between habitat blocks. The habitat blocks being connected tend to support core populations or, at a minimum, populations large enough to be self-sustaining. Wildlife corridors allow species within one habitat block to move to another in case of a fire or other disturbance that reduces the amount of available habitat. They are vital in maintaining viable populations of animal species on a meta-population (group of populations) basis.

Linkages and corridors facilitate regional animal movement and can consist of waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages often serve as movement corridors because wildlife can move easily through these areas and fresh water is periodically available. Corridors also offer wildlife terrain in which to forage and they allow for the dispersal of young individuals. Ridgelines may also serve as movement corridors.

Most corridors are suitable for a particular animal or group of animals based on their length, width, and vegetative features. The less constrained a corridor is, the more it can be used by a full gamut of animal species. Some wildlife, such as coyotes (*Canis latrans*), is accustomed to moving through more urban corridors. Some coyotes have been known to travel great lengths through narrow cement culverts, or occupy vacant lots surrounded by urban development. Other species of wildlife, such as mountain lions (*Felis concolor*) and mule deer (*Odocoileus hemionus*), are very sensitive to the configuration of a wildlife corridor and need wide, naturally-vegetated areas with little human disturbance. Each potential wildlife corridor must be evaluated on its own merits to determine which wildlife species are expected to use it and which are not, in order to manage it properly.

Within the project areas, wildlife corridors are considered to correspond primarily with the natural riparian corridors of the San Gabriel River, San Jose Creek, Rio Hondo, and their respective tributaries. The San Gabriel River flows from and links to the San Gabriel Mountains and is considered an important wildlife linkage and resident habitat area for regional wildlife populations. Wildlife using the rivers as corridors has the potential to use the project areas as part of the corridor as well. Because much of the course of these rivers is channelized and lined with cement, these reaches are considered to be a little value to larger wildlife such as mountain lions. They are, however, suitable for more urban species such as coyotes. Wildlife use is highest where the amount of natural vegetative cover is highest and wildlife use is lowest where urban areas dominate the landscape or where the channels that they could use for movement corridors are cement-lined. Within San Jose Creek (Project 10), the lower Rio Hondo (Project 12), and the San Gabriel River (Projects 8, 9, and 11) the potential for wildlife movement is high due to a high amount of riparian vegetation present. In contrast, for the cement-lined portions of the Rio Hondo along the Westside project area (Projects 13, 14, 15, and 16), wildlife movement potential is considered to be low. Habitats within and near the Whittier Narrows area (Projects 5, 6, and 7) are expected to have high potential for wildlife use.

Significant Ecological Areas

A Significant Ecological Area (SEA) designation is given by the Los Angeles County General Plan to land that contains irreplaceable biological resources. The County of Los Angeles has designated 62 sites as SEAs, with pending additional sites to be listed. These sites usually contain wildlife corridors as well as habitat blocks. The SEAs 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 2015a). 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 2015a; 2016d). 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 2015a). Conceptual areas are still pending approval and require a review for compatibility with the existing community plans (Los Angeles County 2016d).

The Puente Hills SEA occurs throughout the Whittier Narrows project area (Projects 6, 7, 8, and 9) and the southern parts of the San Jose Creek (Projects 10 and 11) and Westside (Project 12) project areas. The Quarry Clasp project area is not within an SEA. The Rio Hondo Wildlife Sanctuary SEA is located approximately one mile south of the Proposed Project. The Whittier Narrows project area and the southern parts of the San Jose Creek Westside project areas contain important wildlife resources and wildlife corridors.

3.4.1.5 Jurisdictional Areas

Jurisdictional areas are those that contain Ordinary High Water Mark and are regulated by the U.S. Army Corps of Engineers (USACE) under the federal Clean Water Act, contain lakes or streams and are regulated by the CDFW under the California Fish and Game Code (Section 1600), or (all waterbodies) by the Regional Water Quality Control Board (RWQCB). The Rio Hondo, San Jose Creek, and San Gabriel River are all known jurisdictional resources within the Proposed Project. Other smaller drainages and features that are tributary to these larger features (such as Mission Creek) are likely also jurisdictional.

3.4.2 Regulatory Setting

Biological resources are generally protected under the federal and California Endangered Species Acts and the Migratory Bird Treaty Act (MBTA). Wetlands and Waters of the United States are regulated under Sections 401 and 404 of the federal Clean Water Act. The California Fish and Game Code (CFG) Section 1600 regulates the alteration of streambeds. 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 (ESA) was established to protect and allow for recovery of species in danger of extinction and their associated habitat. The ESA 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 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 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 CWA is required for Section 404 permit actions; this certification or waiver is issued by the RWOCB.

3.4.2.2 State

California Endangered Species Act (California Fish and Game Code [CFG] Section 2081). The California Endangered Species Act (CESA) protects species of fish, wildlife, and plants that are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of California. CESA provides for a state list of endangered and threatened species by the CDFW, and restricts activities that may affect these species.

Streambed Alteration Regulations (CFG Section 1602). CFG Section 1602 regulates activities in the State’s rivers, lakes, and streambeds. Such activities require a Streambed Alteration Agreement from the CDFW.

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 OWCMP 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 (SEAs). SEAs are officially designated areas within the County of Los Angeles 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 2015a).

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 three 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.

City of Arcadia General Plan

The City of Arcadia's General Plan sets forth goals and policies related to biological resources in the Park, Recreation, and Community Resources Element (Chapter 7) (City of Arcadia 2010). The following goal from this element is applicable to the Proposed Project:

Goal PR-3: Ensuring that trees and the urban forest make a continuing and significant contribution to community character.

City of El Monte General Plan

The City of El Monte's General Plan sets forth goals and policies related to biological resources in the Parks and Recreation Element (City of El Monte 2011). The following policy from this element is applicable to the Proposed Project:

PR-3.4: Habitat Restoration. Seek to restore and protect native habitat and landscaping that sustains plants and wildlife species along the banks of rivers, lakes, and washes in the Emerald Necklace.

City of Industry General Plan

The City of Industry's General Plan does not contain goals or policies related to biological resources (City of Industry 2014).

City of Irwindale General Plan

The City of Irwindale's General Plan does not contain goals or policies related to biological resources (City of Irwindale 2008). However, the General Plan recognizes the importance of natural areas (San Gabriel River, Santa Fe Dam) in the City and its value and plant and wildlife habitat.

City of Rosemead General Plan

The City of Rosemead's General Plan does not contain goals or policies related to biological resources (City of Rosemead 2010).

City of South El Monte General Plan

The City of South El Monte's General Plan does not contain goals or policies related to biological resources (City of South El Monte 2000).

3.4.3 Thresholds of Significance

According to the Appendix G of the CEQA Guidelines, 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 CDFW or USFWS;
- ◆ Have substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
- ◆ Have substantial adverse effects, on federally protected wetlands as defined by section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) 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;
- ◆ Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ◆ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.4 Environmental Impacts

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 or U.S. Fish and Wildlife Service?

Impacts to Listed and Special-status Vegetation Communities

There are two special-status vegetation communities that are considered sensitive that were identified. These two habitats include coastal sage scrub and riparian areas (mulefat thickets and riparian woodland). These communities are considered sensitive by the CDFW because of their scarcity and because they provide habitat to state and federally listed endangered, threatened, and sensitive plants, birds, and reptile species. A summary of the special-status vegetation communities found within each project area is depicted below in Table 3.4-4.

Table 3.4-4. Special-Status Vegetation Communities per Project Area

VEGETATION COMMUNITY	PROJECT AREAS															
	QUARRY CLASP			WHITTIER NARROWS						SAN JOSE CREEK		WESTSIDE				
	1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	
California sagebrush-California buckwheat scrub	X	X				X			X		X					
Mulefat thickets						X		X	X		X					
Riparian woodland								X	X		X					

California Sagebrush-California Buckwheat Scrub. Within the project areas, California sagebrush-California buckwheat scrub is found within portions of the Quarry Clasp project area (Projects 1 and 2), along the northwestern end of the Whittier Narrows project area (Project 7) and San Jose Creek project area (Project 10), and along the southern end of the Westside project area (Project 12). Although this plant community is considered sensitive, it is not protected by local or County of Los Angeles regulations unless sensitive species are present. The habitat within the project areas is too fragmented to support sensitive species. However, if impacts to sensitive plant species would occur, implementation of Mitigation Measure B-1 would reduce impacts to a less than significant level.

Riparian Woodland and Mule Fat Thickets. This habitat is often associated with drainage features and wetlands. As such, permits would be required from regulatory agencies prior to its removal or disturbance. For example, if the drainage feature is found to be a Water of the State, then it would be necessary to obtain a Streambed Alteration Agreement from the CDFW before impacting the habitat. Riparian areas occur adjacent to the south end of the Westside project area where the Rio Hondo becomes unchannelized (Project 12). While most of the riparian areas are located adjacent to the project areas, the eastern side of the Whittier Narrows project area proposes a bridge that crosses over the San Gabriel River (Project 9) and

another portion of the Whittier Narrows (Project 7) crosses a potentially jurisdictional feature that supports mule fat thickets. The west end of the San Jose Creek project area proposes two bridges, one over the San Gabriel River and the other over San Jose Creek (Project 10). These bridges need to be taken into consideration for any project activity that have the potential to directly or indirectly affect off-site vegetation.

Ground disturbing activities associated with Projects 7, 9, 10, and 12 can result in the direct loss of riparian communities. These communities are considered jurisdictional to the USACE, CDFW, and RWQCB. In addition, the riparian woodland areas have the potential to support sensitive riparian bird species. The loss of these communities, because of their jurisdictional status, would result in a significant impact. Removal of riparian woodlands or mule fat thickets that support sensitive riparian bird species or nesting bird species, would also be a significant impact. With the implementation of Mitigation Measures B-2, B-3, B-4, B-5, and B-7 impacts would be less than significant.

Impacts to Listed and Special-status Plant Species

No sensitive plant species were observed during the biological resources assessment. Two special status plant species that are also formally listed at either state or federal levels have been documented previously on or adjacent to the project areas, including Nevin's barberry and Brand's phacelia (ECORP 2016a).

Nevin's Barberry. This species is state and federally endangered. There is a low potential for this species to occur in Projects 7, 9, 10, and 12. If this species is present in the impact footprint of Projects 7, 9, 10, and 12, direct effects to this species could occur from the removal of individual plants during ground disturbing construction activities (e.g. grading, vegetation removal). With implementation of Mitigation Measure B-1 impacts would be less than significant.

Brand's Phacelia. This species is a federal candidate for listing. There is a low potential for this species to occur within Projects 2, 7, 8, 9, 10, 11, and 12. If this species is present in the impact footprint of Projects 2, 7, 8, 9, 10, 11, and 12, direct effects to this species could occur from the removal of individual plants during ground disturbing construction activities (e.g. grading, vegetation removal). With implementation of Mitigation Measure B-1 impacts would be less than significant.

Impacts to Listed and Special-Status Wildlife Species

The literature search documented 59 special-status wildlife species in the vicinity of the Proposed Project. The project areas were evaluated for suitable habitat to support any of the special-status wildlife species. The following 12 special-status wildlife species are those with a potential or that otherwise pose a constraint to the Proposed project (ECORP 2016a). No sensitive wildlife species were detected within the project areas or in adjacent survey buffer areas during the biological resources assessment (ECORP 2016a).

Santa Ana Sucker. This fish species prefers streams with sand-rubble-boulder bottoms, cool, clear water, and algae. Although it is known from the upper San Gabriel River, its passage into the project area is blocked by several dam structures. Therefore, it is considered to be absent

from the project area. No impact to this species from construction and operation of the Proposed Project would occur.

Coastal California Gnatcatcher. Within the project area, the species is considered absent because the coastal sage scrub present is considered too fragmented to support the species. None of the individual Projects, as designed, are expected to impact this species. No impact from construction and operation of the Proposed Project would occur.

Western Yellow-Billed Cuckoo. This species occurs within dense and extensive riparian woodlands in southern California, usually with a thick, almost impenetrable character and some running water nearby. The species is not currently known to nest in the project area.

Riparian habitat with limited potential to support this species can be found within or adjacent to (within 500 feet) the Whittier Narrows project area (Projects 9), the San Jose project area (Project 10), and the southern portion of the Westside project area (Project 12). Construction and operation activities associated with Projects 9, 10, and 12 may result in direct impacts to this species from the loss of individuals or habitat or indirect impacts from nest abandonment due to increase in noise, dust, and human activity. With the implementation of Mitigation Measure B-3 for Projects 9, 10, and 12, these impacts would be less than significant.

Southwestern Willow Flycatcher. Riparian habitat with limited potential to support this species can be found in the Whittier Narrows project area (Projects 9), the San Jose project area (Project 10), and the southern portion of the Westside project area (Project 12). Construction and operation activities associated with Projects 9, 10, and 12 may result in direct impacts to this species from the loss of individuals and habitat or indirect impacts from nest abandonment due to increase in noise, dust, or human activity. With the implementation of Mitigation Measure B-4 for Projects 9, 10, and 12, these impacts would be less than significant.

Least Bell's Vireo. Riparian habitat with limited potential to support this species can be found in the Whittier Narrows project area (Project 9), the San Jose project area (Project 10), and the southern portion of the Westside project area (Project 12). Construction and operation activities associated with Projects 9, 10, and 12 may result in direct impacts to this species from the loss of individuals or habitat or indirect impacts from nest abandonment due to increase in noise, dust, and human activity. With the implementation of Mitigation Measure B-5 for Projects 9, 10, and 12, these impacts would be less than significant.

Arroyo Toad. Arroyo toads occur within larger stream systems, sandy washes with scattered riparian vegetation and sandy or gravel bottoms, typically in upland and riparian habitats with willows, sycamores, oaks, and cottonwoods. It breeds within alluvial braided channels that are slow-moving but well-oxygenated. Suitable habitat is considered absent throughout the project area. No impact from construction and operation of the Proposed Project would occur.

Bank Swallow. Not many nesting areas are known in the southern California area and none have been identified within any of the project areas. Therefore, this species is considered to be absent from all project areas. No impact from construction and operation of the Proposed Project would occur.

Red-legged Frog. Their habitat requirements do not associate well with managed flood control systems; therefore, this species is considered absent from all project areas. No impact from construction and operation of the Proposed Project would occur.

Mountain yellow-legged Frog. Like the red-legged frog, their habitat requirements do not associate well with managed flood control systems; therefore, species is considered absent from all project areas. No impact from construction and operation of the Proposed Project would occur.

Peregrine Falcon. Within all of the project areas, the species potential to occur is considered low and only as a migrant and wintering species. Only its nesting areas are protected, and these are not expected within the project area. No impact from construction and operation of the Proposed Project would occur.

Swainson's Hawk. Within all of the project areas, the species potential to occur is considered low and only as a migrant and wintering species. Impacts to this species may occur if present during construction. Only its nesting areas are protected, and these are not expected within the project area. No impact from construction and operation of the Proposed Project would occur.

Burrowing Owl. Burrowing owls are associated with low-lying vegetation, open scrub, grassland, and agricultural habitats. They frequently can be found in vacant lots in otherwise urban zones. Potential for burrowing owl is considered low at all project areas, other than those that are heavily urbanized, due to their ability to inhabit multiple habitat types and areas directly adjacent to development (Projects 1, 2, 5, 7, 8, 9, 10, 11, 12 and 13). Impacts to this species may occur if present during construction. With implementation of Mitigation Measure B-6 impacts would be less than significant.

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 CFG 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, 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 from February 1 through August 31 while non-raptor birds protected under the MBTA generally nest from March 1 through August 31.

Any vegetation removal, grubbing, or tree trimming conducted during the breeding season for raptors (February 1 through August 31) or other migratory birds (March 1 through August 31)

could have impacts on nesting birds, including raptors, that would be considered significant. Mitigation Measures B-2 will be implemented to reduce this impact to a less than significant level.

3.4.4.2 Riparian Habitat or Other Sensitive Natural Community

Threshold: Would the project have substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Vegetation communities within the project areas included five plant communities: California annual grassland, California sagebrush-California buckwheat scrub, chamise chaparral, mulefat thickets, and riparian woodland (Table 3.4-1). The project areas also contain disturbed and developed areas.

The loss of riparian (riparian woodland and mulefat thickets), if it were to occur, would constitute an adverse and significant impact. However, because these communities represent suitable habitat for western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo, with the implementation of Mitigation Measures B-2, B-3, B-4, and B-5 this impact would be less than significant.

3.4.4.3 Wetlands

Threshold: Would the project have substantial adverse effects, on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Based on the analysis of each individual Project at their current level of detail, impacts to jurisdictional areas are only anticipated to correspond with Projects 7, 9, 10, and 12. Project 7 would cross Mission Creek, Projects 9 and 10 would bridge the San Gabriel River, Project 10 would also bridge San Jose Creek, and Project 12 would parallel the Rio Hondo. Mission Creek is a tributary to the Rio Hondo which is a tributary to the Los Angeles River, a river under the jurisdiction of the USACE, CDFW, and RWQCB. San Jose Creek is a tributary to the San Gabriel River, a river under the jurisdiction to the USACE, CDFW, and RWQCB. If Projects 7, 9, 10, or 12 would result in the direct removal, filling, or hydrological interruption of any of these hydrological features then permitting with the USACE, CDFW, and RWQCB would be required. Impacts to jurisdictional resources would be less than significant with the implementation of Mitigation Measure B-7.

3.4.4.4 Movement of Native Resident or Migratory Fish or Wildlife Species

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?

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The trees and buildings in the project area provide habitat and potential nesting sites for a variety of bird species. Additionally, the tall trees as well as the steel-lattice transmission line towers within the area provide potential nesting sites for raptors and owls (ECORP 2016a).

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 sites 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 CFG Code Section 3503.5.

Any vegetation removal, grubbing, or tree trimming conducted during the breeding season for raptors (February 1 through August 31) or other migratory birds (March 1 through August 31) could have impacts on nesting birds, including raptors, that would be considered significant. With the implementation of Mitigation Measure B-2 impacts would be less than significant.

The Rio Hondo, San Jose Creek, and San Gabriel River connect all of the project areas and could support wildlife movement corridors. The Proposed Project is not anticipated to diminish the corridor values in the project area given their current conditions. Due to the linear and narrow nature of the individual Projects, impacts to wildlife movement are expected to be temporary and primarily would occur during construction. Long term impacts to wildlife movement are expected to be low due to the relatively light impacts corresponding with trail use and the narrowness of each Project. Impacts would be less than significant.

3.4.4.5 Local Policies or Ordinances Protecting Biological Resources

<i>Threshold: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</i>
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The Puente Hills SEA occurs throughout the Whittier Narrows project area (Projects 6, 7, 8, and 9) and the southern parts of the San Jose Creek (Projects 10 and 11) and Westside (Project 12) project areas. The Quarry Clasp project area is not within an SEA. The Rio Hondo Wildlife Sanctuary SEA is located approximately one mile to the south of the Proposed Project.

Recreational uses, such as hiking and wildlife watching are compatible by definition with the long-term sustainability of biological resources within the SEAs (County of Los Angeles 2015a). Projects 6, 7, 8, 9, 10, 11, and 12 are all infrastructure projects (bicycle paths, multi-use trails, and bridges) that would support recreational uses, such as hiking and wildlife watching. As such these Projects would not conflict with the County of Los Angeles SEA program. No impact would occur.

Oak trees were identified during the biological assessment within the footprints of Projects 7, 9, 10, and 12 (ECORP 2016a). 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 the implementation of Mitigation Measure B-8 for Projects 7, 9, 10, and 12 impacts would be less than significant.

3.4.4.6 Habitat Conservation Plans

<i>Threshold: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</i>

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. No impact would occur.

3.4.5 Mitigation Measures

B-1: Conduct Focused Rare Plant Surveys.

Nevin's Barberrry

Prior to ground disturbing construction activities (e.g. grading, vegetation removal) for Projects 7, 9, 10, and 12 a focused rare plant survey for Nevin's Barberrry shall be conducted. Because this plant is a shrub species that is obvious at any time of the year, the survey may be conducted during any season.

Brand's Phacelia

Prior to ground disturbing construction activities (e.g. grading, vegetation removal) for Projects 2, 7, 8, 9, 10, 11, and 12 a focused rare plant survey for Brand's phacelia shall be conducted. The survey shall take place during the blooming period for Brand's phacelia (March through June). Biologists will use a nearby population as a reference, if feasible, to verify that the target rare plant is blooming at the time of the survey.

If sensitive plant species are not found during the surveys, then no further mitigation is required. In the event a listed plant is discovered onsite, the location and numbers of the species shall be recorded by a qualified biologist. The California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS) and Watershed Conservation Authority (WCA) shall be formally notified and consulted regarding the presence of either the federal and/or state listed or candidate species onsite.

If the plant can be avoided by construction, a Preservation and Management Plan for the species found will be prepared and shall include, but not be limited to, the following:

- 1) Provision of protective fencing or buffers between development and any listed plant that may be found onsite as required by CDFW or USFWS. 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.,

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sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist and/or botanist. At minimum, the buffer shall be at least ten feet and demarcated by fencing that is installed with the assistance of a qualified plant ecologist. 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 WCA will be responsible for monitoring the listed plant areas during construction and after project completion to ensure avoidance.

If the plant cannot be avoided by construction, the CDFW and/or USFWS will be consulted. The following steps will be needed:

- 1) For direct impacts to the federal-listed and state-listed Nevin's barberry, the CDFW will be consulted regarding the potential need for a permit under the CESA and the USFWS will be consulted for the potential need for a permit under the ESA. Mitigation for the impact will be developed through this process and could include payment of in-lieu fee, preservation of another population of the plant, transplantation, or creation of a preserve.
- 2) For direct impacts to plants that are candidate species for listing (Brand's phacelia), the USFWS will be consulted for the potential need for a permit under the ESA. Mitigation for the impact will be developed through this process and could include payment of in-lieu fee, preservation of another population of the plant, transplantation, or creation of a preserve.

B-2: 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.

If activities with the potential to destroy nests or cause birds to abandon nests are scheduled to occur during the bird breeding season (February 1 – August 31), a pre-construction nesting bird survey shall be conducted by a qualified biologist within the footprint for all Projects and within a buffer of 500 feet of the Project limits. A qualified biologist is one having at least one year of nesting bird survey experience. The survey area shall include all potential bird nesting areas, including grasslands, scrub habitat, woodlands, and isolated trees that are within 500 feet of ground disturbance and vegetation clearing activities. The survey shall be conducted within the nesting season and no more than 30 days prior to commencement of ground disturbance activities.

If active bird nests are found, the qualified biologist will recommend measures to avoid impacts to the nest while it is active. At a minimum the nest itself will be protected while it is active and a no-disturbance buffer will be established around the nest to protect it from indirect Project effects due to noise and dust. Recommended buffers are 500 feet for raptors and sensitive species and 300 feet for all other birds. The biologist can adjust the buffer limits based on the setting, topography, exposure of the nest to adverse effects, and other factors. Direct removal of the nest and construction activities within the buffer zone will be avoided until the nest is deemed no longer active by the qualified biologist.

B-3: Conduct a habitat assessment for Western Yellow-billed Cuckoo.

A habitat assessment shall be conducted for Projects 9, 10, and 12 a year prior to planned ground disturbing activities. If the habitat assessment determines that suitable habitat for western yellow-billed cuckoo is present and would be directly impacted by Projects 9, 10, or 12 then a United States Fish and Wildlife (USFWS) protocol survey shall be conducted to ensure compliance with federal and state Endangered Species Acts (ESA and CESA). The survey period for western yellow-billed cuckoo extends from June 15 to August 15, consisting of four surveys. If western yellow-billed cuckoo are located during the survey, and their occupied habitat may be impacted by the Project, a request for take authorization must be submitted, processed, and approved with the USFWS and California Department of Fish and Wildlife (CDFW) prior to the ground disturbance activities that may affect this species. This will involve a consultation process under the ESA and CESA.

B-4: Conduct a habitat assessment for Southwestern Willow Flycatcher.

A habitat assessment shall be conducted for Projects 9, 10, and 12 within a year prior to ground disturbing activities. If the habitat assessment determines that suitable habitat for the southwestern willow flycatcher is present and would be directly impacted by Projects 9, 10, or 12 then United States Fish and Wildlife (USFWS) protocol surveys shall be conducted to ensure compliance with federal and state Endangered Species Acts (ESA and CESA). The survey period for southwestern willow flycatcher extends from May 15 to July 17, consisting of five surveys. If southwestern willow flycatcher are located during the survey, and their occupied habitat may be impacted by a Project, a request for take authorization must be submitted, processed, and approved with the USFWS and California Department of Fish and Wildlife (CDFW) prior to the ground disturbing activities that may affect this species. This will involve a consultation process under the ESA and CESA.

B-5: Conduct a habitat assessment for Least Bell's Vireo.

A habitat assessment shall be conducted for Projects 9, 10, and 12 within a year prior to proposed ground disturbing activities. If the habitat assessment determines that suitable habitat for the least Bell's vireo is present and would be directly impacted by Projects 9, 10, or 12 then United States Fish and Wildlife (USFWS) protocol surveys shall be conducted to ensure compliance with federal

and state endangered species acts (ESA and CESA). The survey period for least Bell's vireo extends from April 10 to July 31, consisting of eight surveys. If least Bell's vireo are located during the survey, and their occupied habitat may be impacted by the Project, a request for take authorization must be submitted, processed, and approved with the USFWS and California Department of Fish and Wildlife (CDFW) prior to the ground disturbance activities that may affect this species. This will involve a consultation process under the ESA and CESA.

B-6: Conduct a habitat assessment and pre-construction survey for burrowing owls.

Prior to ground disturbing activities within the burrowing owl breeding season (March 1 through August 31), a habitat assessment and pre-construction burrowing owl survey will be conducted by a qualified biologist within suitable habitat within the Project footprint and a 500-foot buffer surrounding the footprint for Projects 1, 2, 5, 7, 8, 9, 10, 11, and/or 12. A qualified biologist must have at least one year of experience conducting burrowing owl surveys. The assessment and pre-construction survey shall conform to the California Department of Fish and Game (CDFG) Report on Burrowing Owl Mitigation (CDFG 2012). If burrowing owls are located during the survey, and may be impacted by the Projects 1, 2, 5, 7, 8, 9, 10, 11, and/or 12 then measures to avoid the a burrowing owl will be developed prior to any ground disturbance that might affect the owl or it is burrows, as determined by a qualified biologist. At a minimum a burrowing owl mitigation plan shall be prepared to be submitted to the Watershed Conservation Authority (WCA) and the California Department of Fish and Wildlife (CDFW) for review and approval. The approved plan shall be implemented prior to the ground disturbance activities that may affect this species.

B-7: Conduct a jurisdictional delineation and prepare regulatory permit applications.

Due to the potential of Projects 7, 9, 10, and 12 to affect potentially jurisdictional features of the Rio Hondo, San Gabriel River, and San Jose Creek or tributaries thereto, a jurisdictional delineation shall be conducted within each of these project areas prior to the implementation of each Project to determine the extent of jurisdiction present and the extent to which a Project footprint affects jurisdictional resources. If such resources are planned to be impacted by a Project, then regulatory permits will be required for that Project by submitting applications to the United States Army Corps of Engineers (USACE) for a Section 404 Clean Water Act (CWA) Permit, to the California Department of Fish and Wildlife (CDFW) for a Section 1600 Streambed Alteration Agreement, and to the Regional Water Quality Control Board (RWQCB) for a Section 401 Water Quality Certification. Once the permits have been issued, the impacts to jurisdictional features can occur.

B-8: Protection of oak trees.

An oak tree survey and report shall be conducted by an oak tree consultant, as deemed acceptable by the Los Angeles County Director of Regional Planning and County Forester & Fire Warden, to document the trees being proposed to be impacted for Projects 7, 9, 10 and 12. An oak tree permit is required prior to cutting, destroying, removing, relocating, inflicting damage, or encroaching into the protected zone of any oak trees with a dbh of eight inches or more. All protection and replacement measures shall be consistent with the Los Angeles County Oak Tree Ordinance.

3.4.6 Residual Impacts After Mitigation

With mitigation of the above mitigation measures, the Proposed Project would result in less than significant impacts to biological resources.

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3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

A cultural resources technical report was completed for the Proposed Project (ECORP 2016b). This technical report is provided in Appendix D and summarized in the following sections.

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, for instance 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 - Prehistory. 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 mega fauna resulted in changing subsistence strategies with an emphasis on hunting smaller game and increasing reliance on plant gathering. Previously, Early Holocene sites were represented by only a few sites and isolates from the Lake Mojave and San Dieguito Complexes found along former lakebeds and grasslands of the Mojave Desert and in inland San Diego County. More recently, southern California Early Holocene sites have been found along the Santa Barbara Channel, in western Riverside County, and along the San Diego County coast (ECORP 2016b).

Residential sites along the coast from this period are shell middens with hearths. The most common artifacts are manos and milling stones (metates) and large core-cobble chopping tools. Other artifacts include hammerstones, large flake tools including scraper-planes and scrapers, worked bone, beads, coggled stones, discoidals, doughnut stones, and stone balls. Projectile

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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. The Milling Stone Period was originally defined based on sites along the Los Angeles and Ventura County coasts. The Milling Stone Period was extended to inland areas when sites with similar artifact inventories (but without shell middens) were investigated near Cucamonga, in the Prado Basin, and in Crowder Canyon near Cajon Pass. Population density was relatively low compared to later periods. The settlement system may have consisted of small bands moving in a seasonal round from the coast to inland areas and back again (ECORP 2016b).

Mortars and pestles were first used during the Intermediate Period, and probably indicate the beginning of acorn exploitation. Use of the acorn, a storable, high-calorie food source, probably allowed greater sedentism. Large projectile points, including Elko points, indicate that hunting was probably accomplished with the atlatl or spear thrower. The settlement pattern may have been semi-sedentary with winter residential bases near a permanent water source and use of temporary camps for resource collection during the rest of the year.

In the upper Santa Ana River drainage area, it has been suggested that the Milling Stone Period artifact assemblage (preponderance of manos and metates and core tools and few or no mortars and pestles) continued into the time period designated as Intermediate on the coast. This may indicate that intensive acorn use began later in inland areas compared to the coast. In western Riverside County the period corresponding to the Intermediate Period on the coast is the Late Archaic. Mortars and pestles were present in small quantities in some Late Archaic sites and entirely absent in others (ECORP 2016b).

The complex hunter-gatherer cultures encountered by the Spaniards in southern California developed during the Late Prehistoric Period. 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.

The more intensive use of resources and settlement in permanent villages near water sources in inland areas may have been a response to a warmer drier period known as the Medieval Climatic Anomaly (MCA) (1,050 to 600 BP). Droughts during the MCA were “severe enough to cause problems for residents of poorly watered areas of Native California” (ECORP 2016b).

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.

Cultural Background – Ethnography. At the time of contact with Europeans, the Gabrielino 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 “Gabrielino” came from the group’s association with Mission San Gabriel Archangel, established in 1771. The Gabrielino were one of several Takic-speaking groups in southern California at the time of Spanish contact.

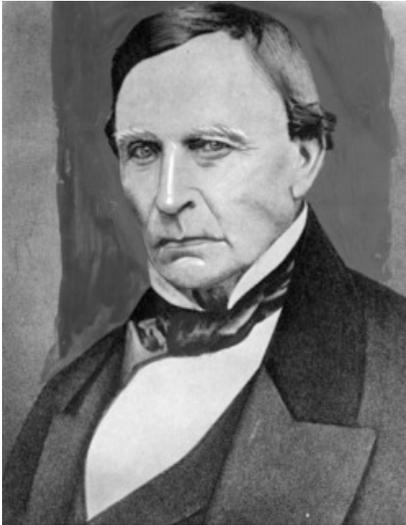
The Gabrielino occupied villages located along rivers and at the mouths of canyons. Populations ranged from 50 to 200 inhabitants. Residential structures within the villages were domed, circular, and made from thatched tule or other available wood. Gabrielino society was organized by kinship groups, 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 2016b).

Cultural Background – History. Spanish colonization of California began with the overland Portolá Expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junípero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, *presidios* (forts), and *pueblos* (towns) were established. Mission San Gabriel Archangel was founded in 1771 east of what is now Los Angeles to convert the Gabrielino. Mission San Gabriel was originally established at the east end of Montebello Hills overlooking the marshy confluence of the Rio Hondo and the San Gabriel River in the Whittier Narrows area in 1771. A Gabrielino village was located near the mission. In 1775 the mission was moved to its present location in San Gabriel. Large cattle ranches were established by Mission San Gabriel throughout the San Gabriel Valley (ECORP 2016b).

After Mexico became independent from Spain in 1821, what is now the state of California became the Mexican province of Alta California. The Mexican government closed the missions in the 1830s and former mission lands were granted (beginning in 1833) to retired soldiers and other Mexican citizens for use as cattle ranches. The Mexican Period includes the years 1821 to 1848.

In the project area, the former San Gabriel Mission cattle ranches were granted to Mexican citizens by the Mexican governors of Alta California. Rancho Potrero de Felipe Lugo, one of the former Mission San Gabriel cattle pastures, was granted to Jorge Morrillo and his son-in-law Teodoro Romero in 1845. This Rancho extended northeast along the west side of the San Gabriel River and included parts of what are now South El Monte and El Monte. Rancho Potrero Chico was very small and included the area around what is now Legg Lake in Whittier Narrows. It was granted in 1844 to Juan Alvitre and Antonio Valenzuela, residents of Los Angeles. Rancho Merced included the Montebello Hills and the portion of Whittier Narrows south of Rancho Potrero Chico. It was granted to Casilda Soto in 1844. Rancho Potrero Grande was on both sides of Rio Hondo in what are now South El Monte and South San Gabriel. It was granted to Manuel Antonio, “an Indian of San Gabriel” in 1845. Rancho San Francisquito was described as “land of San Gabriel near Azusa” and was granted to Henry Dalton in 1845. Rancho San Francisquito was on both sides of Rio Hondo north of Rancho Potrero Grande and included land now in El Monte and Temple City. Rancho La Puente was granted to John Rowland and William (Julian) Workman in 1845. It is located east of the San Gabriel River and included land in what

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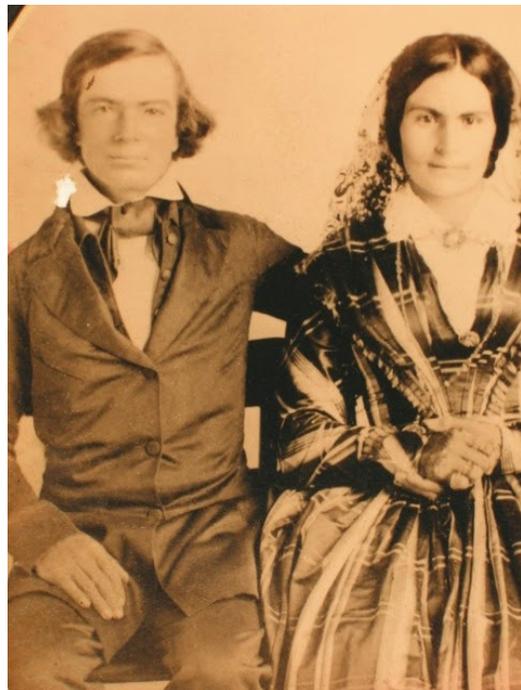
William Workman

is now in the cities of Baldwin Park, West Covina, Covina, City of Industry, and La Puente (ECORP 2016b).

The American Period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. The treaty ended a war between the United States and Mexico. As a result of the treaty, the former Mexican province of Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the original grantees by U.S. courts, but usually with more restricted boundaries which were surveyed by the U.S. Surveyor General's office. Land that was not part of a land grant was owned by the U.S. government until it was acquired by individuals through purchase from the General Land Office or homesteading.

William Workman, co-owner of Rancho La Puente, had acquired Rancho Merced (in the Whittier Narrows and the Montebello Hills to the west) by 1850. Rancho Merced was divided between Workman's son-in-law, Frances Pliny Fiske Temple, and Workman's ranch foreman, Juan Matias Sanchez. Temple built a house in the Whittier Narrows (near the intersection of Durfee Avenue and Rosemead Boulevard) and raised his family there. Sanchez had his house on Rancho Merced at the east end of the Montebello Hills. Temple later acquired Rancho Potrero de Felipe Lugo and Rancho Potrero Grande which adjoined Rancho Merced on the north, along with the small Rancho Potrero Chico.

In 1871 Temple went into partnership with his father-in-law 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 bank failed in 1876, Baldwin foreclosed on the loan and took all of Temple's assets, including Rancho Merced, Rancho Potrero de Felipe Lugo, and Rancho Potrero Grande. Baldwin also took Rancho La Puente from Workman. Workman committed suicide in 1876 and Temple died of a stroke in 1880. Baldwin used his newly acquired lands for cattle, sheep, and horse ranches into the 1880s. Baldwin began to subdivide and sell his properties beginning in the mid-1880s (Wilkman 1999). Many small farms developed in the Whittier Narrows area on the former Rancho Merced.



Frances Pliny Fiske Temple

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Elias J. "Lucky" Baldwin

Crops included citrus, cabbage, lettuce, and cauliflower. Dairying was important in the Whittier Narrows area in the 1920s and 1930s (Lindsey and Schiesl 1976). The small community of Temple Corners had formed by the end of the nineteenth century on the east bank of the Rio Hondo near what is now the intersection of Rosemead Boulevard and San Gabriel Boulevard. Temple Corners had a store, a saloon, and several houses (ECORP 2016b).

The original settlement of El Monte was along Valley Boulevard just east of the Rio Hondo. This area appears to have been part of Rancho San Francisquito which had been granted to Henry Dalton. Rancho San Francisquito was subdivided and sold as small tracts beginning in 1867. Presumably, these tracts were purchased by settlers in El Monte, some of which appear to have established homes and farms just inside the southern boundary of Rancho San Francisquito beginning in the 1850s. El Monte is said to be the first place settled by Anglo-Americans from the eastern United States in the Los Angeles Basin. They arrived by wagon train beginning in 1851. By the 1890s there was a central business district along Main Street in El Monte from the Rio Hondo east to about Tyler Street. El Monte was

incorporated as a city in 1912. South El Monte separated from El Monte and was incorporated as a city in 1958.

The channelized San Gabriel River is under the control of the U.S. Army Corps of Engineers (USACE). The USACE has constructed flood control facilities along the river, including levees, channels, and dams. The southern part of the project area is in the flood control basin of the Whittier Narrows Dam, constructed in 1957 (ECORP 2016b).

Cultural Resources in the Project Area. A cultural resources records search was conducted on April 16, 2013 at the South Central Coastal Information Center (SCCIC) located at California State University, Fullerton. An updated records search was conducted on July 12, 2016. The purpose of the records search was to determine the coverage of previous surveys within a one-half mile (800-meter) radius of the Proposed Project location, and what previously recorded prehistoric or historic archaeological sites, or historic buildings exist within this area. Materials reviewed included survey and evaluation reports, archaeological site records, historic maps, and listings of resources on the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Points of Historical Interest, California Historical Landmarks, and National Historic Landmarks.

A search of the Sacred Lands File was requested from the Native American Heritage Commission (NAHC). The NAHC response also provided a list of Native American contacts that could have information about cultural resources in the project area. Letters requesting information were sent to the listed contacts.

The results of the South Central Coastal Information Center (SCCIC) records search indicate that there have been 92 previous cultural resources studies that have been conducted within

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one-quarter mile of the proposed trail routes. In the Quarry Clasp area there have been several linear surveys along the San Gabriel River. Additionally, some small surveys have been done in the area for cell towers. The portion in the City of Arcadia was assessed in the Arcadia General Plan (1996), but it was most likely not based on a field survey. In the San Jose Creek area there have been many linear surveys along the San Gabriel River and a linear survey of the San Jose Creek Diversion Channel. Most of the Whittier Narrows area has been surveyed for various USACE and County of Los Angeles Department of Parks and Recreation projects. The south end of this area has previously been surveyed. There have been a few linear surveys along the Rio Hondo north of I-10 (ECORP 2016b).

Within one-quarter mile of the proposed trails, the records search results show that 33 cultural resources (prehistoric and historic archaeological sites and buildings and structures from the historic period) have been recorded.

Quarry Clasp

Two electrical transmission lines have been previously recorded within one-quarter mile of the Quarry Clasp trail segments area (Table 3.5-1).

**Table 3.5-1. Previously Recorded Cultural Resources
Within One-Quarter Mile of the Quarry Clasp Area**

PRIMARY NUMBER	TRINOMIAL	RECORDER AND YEAR	AGE/PERIOD	SITE DESCRIPTION
19-186876	Not Applicable ¹	J. J. Schmidt 2003	Historic	SCE Eagle Rock Pardee 230kV Transmission Line
19-190504	Not Applicable ¹	W. Tinsley Becker 2010	Historic	SCE Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line

¹Built environment resources (e.g., structures) are not assigned a trinomial. Trinomial numbers are predominantly associated with archaeological resources.

Whittier Narrows

Previously recorded cultural resources in the Whittier Narrows area include prehistoric residential sites, the site of Mission Vieja (the first location of San Gabriel Mission), the site of Temple’s adobe house on Rancho La Merced, the Montebello Oil Field, historic period refuse deposits and building foundations, and two transmission lines (Table 3.5-2).

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**Table 3.5-2. Previously Recorded Cultural Resources
Within One-Quarter Mile of the Whittier Narrows Area**

PRIMARY NUMBER	TRINOMIAL	RECORDER AND YEAR	AGE/PERIOD	SITE DESCRIPTION
19-000858	CA-LAN-858/H	J. Jones et al. 1976	Historic	Tizon brown ware, metal fragments
19-001311	CA-LAN-1311/H	J. Brock & J. Elliott 1986	Prehistoric Historic	Manos, metates, scrapers, debitage, fire-affected rock, animal bone; bottle fragments, ceramics, cut nails, cast and forged metal objects
19-002583	Not Applicable ¹	S. Owen, J. M. Foster 1989	Historic	La Merced Adobe foundations, hearths, and refuse deposits, 1840s
19-003121	CA-LAN-3121/H	G. Harman et al. 2010	Prehistoric Historic	Many ground stone tools and fire-affected rocks, flaked stone tools, burned animal bone, debitage, brown ware sherds; bottle fragments, ceramics, metal arrowhead, metal spoon
19-003813	Not Applicable ¹	T. Fulton & P. Fulton 2008	Historic	Montebello Oil Field, 1916+
19-003814	CA-LAN-3814/H	K. Larsen, J. Kuhns, D. Trout, C. Davis 2010	Historic	Durfee Ave. Homestead with foundry remains and dense domestic refuse
19-004117	CA-LAN-4117	K. Larsen, F. Arellano, S. Brewer 2010	Historic	Four historic refuse deposits including bottle fragments, ceramics, and metal fragments; circa 1890 to 1930
19-004117	CA-LAN-4118	K. Larsen, F. Arellano, S. Brewer 2010	Prehistoric	Ground stone tools, bowl fragment, debitage, fire-affected rock
19-186540	Not Applicable ¹	A. Forbes 1934	Historic	California Historical Landmark No. 161: Site of Mission Vieja
19-186889	Not Applicable ¹	P. Messick 2003	Historic	Whittier Narrows Dam Recreation Center, remains of former building foundations
19-190507	Not Applicable ¹	W. Tinsley Becker 2010	Historic	SCE Siphon Road Towers
19-190508	Not Applicable ¹	W. Tinsley Becker 2010	Historic	SCE Walnut-Hillgen-Industry-Mesa-Reno 66kV Transmission Line

¹Built environment resources (e.g., structures) are not assigned a trinomial. Trinomial numbers are predominantly associated with archaeological resources.

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San Jose Creek

Previously recorded cultural resources in the San Jose Creek area include five electrical transmission lines, a railroad, and the Woodland Farms, including the Louise A. Ward residence (Table 3.5-3). The Woodland Farms property is located south of Valley Boulevard on both sides of I-605. The Woodland Farms included a duck farm and equestrian stables which operated from 1954 to 2001. The Louise A. Ward residence, originally built elsewhere circa 1929, was moved to the Woodland Farms property in 1954 to serve as the residence for the farm owners. Construction of I-605 between 1964 and 1968 divided the property into two parts. Most of the farm buildings, with the exception of the residence and the equestrian center barn, were demolished circa 2001-2002.

**Table 3.5-3. Previously Recorded Cultural Resources
Within One-Quarter Mile of the San Jose Creek Area**

PRIMARY NUMBER	TRINOMIAL	RECORDER AND YEAR	AGE/PERIOD	SITE DESCRIPTION
19-004079	Not Applicable ¹	W. Tinsley Becker 2010	Historic	Woodland Farms and Louise A. Ward residence
19-186112	Not Applicable ¹	R. Herbert 2002	Historic	Southern Pacific Railroad, San Gabriel - Pomona
19-188983	Not Applicable ¹	S. Van Wormer & C. Dolan 1999	Historic	LADWP Boulder Lines 1 and 2, aka Boulder Dam – Los Angeles 287.5 kV transmission Line
19-186876	Not Applicable ¹	J. J. Schmidt 2003	Historic	SCE Eagle Rock – Pardee 230kV Transmission Line
19-190176	Not Applicable ¹	D. Supernowicz	Historic	SCE Mesa – Rio Hondo 220kV Transmission Line
19-190504	Not Applicable ¹	W. Tinsley Becker 2010	Historic	SCE Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line
19-190508	Not Applicable ¹	W. Tinsley Becker 2010	Historic	SCE Walnut-Hillgen-Industry-Mesa-Reno 66kV Transmission Line

¹Built environment resources (e.g., structures) are not assigned a trinomial. Trinomial numbers are predominantly associated with archaeological resources.

Westside

Fifteen cultural resources have been recorded (Table 3.5-4) in the Westside trail segments area along the Rio Hondo. These resources consist mostly of buildings from the historic period in the northern end of the Westside area in El Monte. A historic period electrical transmission line runs along the Rio Hondo west of South El Monte. There is one Late Prehistoric Period archaeological site (CA-LAN-1009/H) in the south end of the Westside area on the west side of the Rio Hondo. This site may have been occupied into the early historic period as indicated by the presence of tile and pottery.

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**Table 3.5-4. Previously Recorded Cultural Resources
Within One-Quarter Mile of the Westside Area**

PRIMARY NUMBER	TRINOMIAL	RECORDER AND YEAR	AGE/ PERIOD	SITE DESCRIPTION
19-001009	CA-LAN-1009/H	R. Sayles 1947 M. Rosen 1979	Prehistoric	Late Prehistoric minor residential base
19-186527	Not Applicable ¹	S. Howse 1989	Historic	Old El Monte Jail
19-186565 19-187072	Not Applicable ¹	S. Elder 1989	Historic	California Historical Landmark No. 765: El Monte—First Southern California Settlement by Immigrants from United States
19-188409	Not Applicable ¹	B. Tang 2005	Historic	Single family residence 1917
19-188410	Not Applicable ¹	B. Tang 2005	Historic	Single family residence 1935
19-188411	Not Applicable ¹	B. Tang 2005	Historic	Single family residence 1948
19-188412	Not Applicable ¹	B. Tang 2005	Historic	Multiple family residence 1949
19-188413	Not Applicable ¹	B. Tang 2005	Historic	Single family residence 1941
19-188433	Not Applicable ¹	B. Tang 2006	Historic	LACFD Fire Station No. 166 1955
19-188434	Not Applicable ¹	B. Tang 2006	Historic	El Monte Public Works Maintenance Yard
19-188435	Not Applicable ¹	B. Tang 2006	Historic	MTA Bus Operations Facility 1962
19-188436	Not Applicable ¹	B. Tang 2006	Historic	Conestoga Wagon in Santa Fe Trail Historic Park; year unknown
19-188437	Not Applicable ¹	B. Tang 2006	Historic	Frederick Exner Memorial Windmill
19-190502	Not Applicable ¹	W. Tinsley Becker 2010	Historic	SCE Mesa-Anita-Eaton 66kV Transmission Line
19-190667	Not Applicable ¹	D. Supernowicz 2012	Historic	9550 Flair Drive Building

¹Built environment resources (e.g., structures) are not assigned a trinomial. Trinomial numbers are predominantly associated with archaeological resources.

The only buildings shown on the 1894 and 1900 U.S. Geological Survey (USGS) Pasadena quads are located in El Monte and in Whittier Narrows. The El Monte principal business district is shown along what are now Valley Boulevard and Valley Mall extending west to the Rio Hondo. The Southern Pacific Railroad (Union Pacific) crosses the Rio Hondo and the San Gabriel River north of Valley Boulevard. In Whittier Narrows, four buildings are shown at the intersection of San Gabriel Boulevard and Lincoln Avenue near the site of the Mission Vieja. Four buildings are located along Durfee Avenue east of what is now Rosemead Boulevard. This may be the community of Temple Corners (ECORP 2016b). There are no buildings along the banks of Rio Hondo and San Gabriel River where most of the Emerald Necklace trails would be located. These rivers had not yet been channelized and had wide flood plains where there were no buildings. The Proposed Project would be located through the former flood plains along the now channelized rivers (ECORP 2016b).

3.5.1.2 Paleontological Resources

Definition of Resources. Paleontological resources are the recognizable remains of once-living, non-human organisms and early hominids. Identified as fossils, these resources represent a record of history of life on the planet dating back as far as 4 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. To determine whether the Proposed Project would have a significant impact to nonrenewable paleontological resources, a literature and records review was performed by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County (NHM 2013). Museum staff consulted geologic maps to determine what formations are present in the project area and assess the potential of those formations to contain buried fossil localities in the Proposed Project vicinity.

The literature and records review indicate that the majority of the project area is composed predominantly of younger Quaternary gravels derived from the San Gabriel River and the Rio Hondo. However, the Whittier Narrows area contains some exposures of older Quaternary alluvium and even the Pliocene Fernando Formation. It is also possible that the San Jose Creek area impinges on exposures of older Quaternary alluvium near the San Jose Creek diversion (NHM 2013).

The relatively coarse deposits of Quaternary gravels are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. There are no known vertebrate fossil localities nearby from such deposits. The exposures of older Quaternary alluvium found in the Whittier Narrows and San Jose Creek areas may contain significant vertebrate fossils; however, the older Quaternary alluvium is found at depths beneath the younger Quaternary alluvium (NHM 2013).

3.5.2 Regulatory Setting

3.5.2.1 Federal

National Register of Historic Places (NRHP)

The NRHP is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archaeological resources. To be considered eligible, a property must meet the National Register Criteria for evaluation. This involves examining the property's age, integrity, and significance (NPS 2013).

3.5.2.2 State

California Register of Historical Resources (CRHR)

The State Historical Resources Commission developed the CRHR to identify, evaluate, register, and protect California's historical and archaeological resources. A resource is eligible for listing in the CRHR if it meets one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;

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3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

If a resource is designated in the CRHR the following protections apply to the resource:

- ◆ If a CRHR-eligible resource will be significantly impacted by a project, mitigation measures will be required in the CEQA document;

Local building inspectors must grant code alternatives provided under State Historical Building Code; and

- ◆ Local assessors may enter into contract with the property owner for property tax reduction (Mills Act) (OHP 2016).

California Native American Heritage Commission (NAHC)

In 1976, the State passed Assembly Bill (AB) 4239, establishing the NAHC as the primary government agency responsible for identifying and cataloging Native American cultural resources. NAHC's primary duties are to prevent irreparable damage to designated sacred sites and to prevent interference with the expression of Native American religion in California. In 1982, legislation was passed authorizing the NAHC to identify a Most Likely Descendant (MLD) when Native American human remains are discovered outside of a dedicated cemetery. MLDs are granted the legal authority to make recommendations regarding the treatment and disposition of the discovered remains. These recommendations give MLDs a means by which to ensure that the Native American human remains are treated in the appropriate manner (NAHC 2013).

California Public Resources Code 5097.9

Public Resources Code 5097.9 establishes that no public agency or 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 interfere with the free expression or exercise of Native American Religion. This code also prohibits damage to a 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.

California Health and Safety Code 7050.5

Health and Safety Code 7050.5 establishes the intentional disturbance, mutilation, or removal of interred human remains a misdemeanor. This code also requires that upon the discovery of human remains outside of a dedicated cemetery, excavation or disturbance of land cease until a county coroner makes a report. The code also requires that the county coroner contact the NAHC within 24-hours if he or she determines the remains to be of Native American origin.

3.5.2.3 Local

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 2015a). 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.
- ◆ 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 NRHP.

City of Arcadia General Plan

The City of Arcadia’s General Plan sets forth goals and policies related to cultural resources in the Parks, Recreation, and Resources Element. Goals included in this element are intended to continue the recognition and support of historical and cultural organizations and the retention and proper stewardship of cultural resources. The City recognizes the importance of historical resources and will consider community initiatives to preserve significant sites, buildings, and/or landscapes (City of Arcadia 2010).

City of El Monte General Plan

The City of El Monte’s General Plan Cultural Resources Element is intended to celebrate El Monte’s story and provide direction on how to bring cultural values, heritage, and meaningful lives of residents into focus in the City on a daily basis. The City of El Monte is committed to acknowledging, celebrating, protecting, and enhancing its cultural resources. The goals and policies in the Cultural Resources Element support this commitment. The first goal and policies establish a broad-based cultural resources program. Goals 2, 3, and 4 address the importance

of incorporating cultural resources into the built and natural environment. The fifth goal and supporting policies enhance support for the important yearly civic events that the City sponsors (City of El Monte 2011).

City of Industry General Plan

The City of Industry's General Plan includes a Resource Management Element that lists a goal and several policies intended to continue support and compliance with federal and State requirements regarding cultural resources. Policies that would be applicable to the Proposed Project include Policy RM5-2 which is intended to support the proper handling and documentation of historically or archeologically significant sites, burial sites, and objects that may be discovered (City of Industry 2014).

City of Irwindale General Plan

The City of Irwindale's General Plan Implementation Element includes a Cultural Resource Management Program that provides guidance should archeological or paleontological resources be encountered during excavation and grading activities (City of Irwindale 2008).

City of Rosemead General Plan

The City of Rosemead's General Plan does not include goals or policies related to cultural resources that would be applicable to the Proposed Project (City of Rosemead 2010).

City of South El Monte General Plan

The City of South El Monte's General Plan does not include goals or policies related to cultural resources that would be applicable to the Proposed Project (City of South El Monte 2000).

3.5.3 Thresholds of Significance

3.5.3.1 Cultural Resources

According to the CEQA Guidelines, 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.

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, 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, 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 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 (see Section 3.5.1.2).

3.5.3.2 Paleontological Resources

According to the CEQA Guidelines, 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.

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.

A fossil may be considered significant if it provides data useful in determining the age(s) of a rock unit or sedimentary stratum, therefore contributing to an increased knowledge of the depositional history of a region and the timing of geologic events therein. A paleontological resource may also be considered significant if it provides important information on the evolutionary trends among organisms, particularly relating living inhabitants of the earth to extinct organisms or if it demonstrates unusual or specular circumstances in the history of life. The significance of a paleontological resource may also be determined by its relative abundance, or lack thereof, within a region. For example, if a fossil type is in short supply or is not found in other geologic locations and it is in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, the resource is likely to be considered significant.

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 that meet the CEQA definition of a historical resource can be considered significant (CEQA Guidelines Section 15064.5). Cultural resources that meet the eligibility criteria of the CRHR are historical resources as defined by CEQA. Archaeological sites are evaluated under CRHR Criterion 4, the potential to yield information important in history or prehistory (California Code of Regulations, Title 14, Section 4852). All projects that would result in ground disturbing activities have the potential to impact unknown cultural resources if ground disturbing activities beyond the depth of previous disturbances occur. Surveys in areas that are

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currently unpaved and/or lack ornamental vegetation should be performed to identify unknown cultural resources in these areas.

Quarry Clasp

Two electrical transmission lines have been previously recorded within one-quarter mile of the Quarry Clasp area. There are no constraints from known or potential cultural resources in the area (ECORP 2016b). Projects 1 and 2 would result in ground disturbing activities in areas that are currently unpaved and/or do not contain ornamental vegetation, which could result in potentially significant impacts to unknown cultural resources. With implementation of Mitigation Measure CR-1 (cultural resources survey) impacts would be less than significant.

Project 3 would be implemented within an existing paved area on Peck Road. This area was previously disturbed and is not expected to contain unknown cultural resources. As such, impacts to cultural resources would be less than significant.

Whittier Narrows

Projects 5, 6, and 7 in the western part of the Whittier Narrows area are in an area that is very sensitive for cultural resources. These projects are in the vicinity of prehistoric archaeological sites, possibly including the Gabrielino village of Iisanchanga and other Gabrielino settlements. Other historical archaeological sites in the area include the first site of the San Gabriel Mission (Mission Vieja) and places associated with late 19th-century settlement near the site of the Mission Vieja and at Temple Corners. Projects 6 and 7 would result in ground disturbing activities in areas that are not paved and/or do not contain ornamental vegetation, which could result in potentially significant impacts to unknown cultural resources. With implementation of Mitigation Measures CR-1 (cultural resources survey) impacts would be less than significant. If the cultural resources survey finds cultural resources or determines that the project area has a moderate to high potential to contain cultural resources, then CR-2 (archaeological and Native American monitoring) shall be implemented, as recommended in the cultural resources survey report.

Impacts to unknown cultural resources from Project 5 are not anticipated because this project would be located on the shoulder of Rosemead Boulevard adjacent to and partially within an agricultural field. Furthermore, Project 5 would not require deep excavations. As such, unknown cultural resources are not expected to be encountered during project construction. Impacts would be less than significant.

There are no known cultural resources constraints associated with the project sites for Projects 8 and 9 in the eastern part of the Whittier Narrows area (ECORP 2016b). However, Projects 8 and 9 would result in ground disturbing activities in areas that are not paved and/or do not contain ornamental vegetation, which could result in potentially significant impacts to unknown cultural resources. With implementation of Mitigation Measures CR-1 (cultural resources survey) impacts would be less than significant.

San Jose Creek

Previously recorded cultural resources in the San Jose Creek area consist of electric power transmission lines and a railroad. These resources would not be affected by the Proposed

Project (ECORP 2016b). Project 10 would be located along the edge of Woodland Farms (the Duck Farm) between the farm and the San Gabriel River. All of the facilities from the Duck Farm have been removed and there is little or no potential for significant subsurface archaeological deposits; therefore, the presence of the Duck farm site would not pose a cultural resources constraint for the Proposed Project (ECORP 2016b). Projects 10 and 11 would result in ground disturbing activities in areas that are not paved and/or do not contain ornamental vegetation, which could result in potentially significant impacts to unknown cultural resources. With implementation of Mitigation Measures CR-1 (cultural resources survey) impacts would be less than significant.

Westside

A prehistoric habitation site (CA-LAN-1009/H) has been previously recorded near the south end of the Westside area which could pose a constraint to the development of Project 12. The southern portion of Project 12 would result in ground disturbing activities in areas that are not paved and/or do not contain ornamental vegetation, which could result in potentially significant impacts to unknown cultural resources. With implementation of Mitigation Measures CR-1 (cultural resources survey) impacts would be less than significant. Project 12 would be located in a previously disturbed area that is currently being used as a trail and would not require deep excavations; as such, construction of Project 12 is not anticipated to encounter unknown subsurface cultural resources. Therefore, Project 12 would not require archaeological or Native American monitoring.

The original settlement of El Monte is on the east side of the Rio Hondo at Valley Boulevard/Valley Mall. Projects 13, 14, 15, and 16 would all be located on the west side of the Rio Hondo. These projects would not affect any subsurface historic archaeological deposits that may be associated with the original settlement of El Monte. There are no known constraints from known or potential cultural resources in the rest of the Westside area (ECORP 2016b). Projects 13, 14, 15, and 16 would occur in areas that are currently paved or have been previously disturbed during the channelization of the Rio Hondo or construction of transportation infrastructure. Furthermore, the proposed improvements would not require deep excavations beyond previously disturbed ground surfaces. Impacts to unknown cultural resources would be less than significant.

3.5.4.2 Unknown Human Remains

Quarry Clasp

Projects 1 and 2 would result in ground disturbing activities in areas that have not been previously disturbed, which could result in potentially significant impacts to unknown human remains. With implementation of Mitigation Measure CR-3 impacts would be less than significant. Project 3 would be implemented within an existing paved area on Peck Road. This area was previously disturbed and is not expected to contain unknown human remains. As such, no impact would occur.

Whittier Narrows

Projects 5, 6, and 7 in the western part of the Whittier Narrows area are in an area that is very sensitive for cultural resources. As previously stated, these projects are in the vicinity of prehistoric archaeological sites, possibly including the Gabrielino village of Iisanchanga and other Gabrielino settlements. Other historical archaeological sites in the area include the first site of the San Gabriel Mission (Mission Vieja) and places associated with late 19th-century settlement near the site of the Mission Vieja and at Temple Corners. Human burials could be encountered at the prehistoric sites and at the Mission Vieja site. Projects 6 and 7 would result in ground disturbing activities in areas that have not been previously disturbed, which could result in potentially significant impacts to unknown human remains. With implementation of Mitigation Measures CR-3 impacts would be less than significant.

Impacts to unknown human remains from Projects 5 and 8 are not anticipated because these projects would be located in previously disturbed areas would not require deep excavations. As such, unknown human remains are not expected to be encountered during project construction. Impacts would be less than significant.

Project 9 would result in ground disturbing activities, including deep excavations, in areas that have not been previously disturbed, which could result in potentially significant impacts to unknown human remains. With implementation of Mitigation Measure CR-3 impacts would be less than significant.

San Jose Creek

Project 10 would result in ground disturbing activities, including deep excavations, in areas that have not been previously disturbed, which could result in potentially significant impacts to unknown human remains. With implementation of Mitigation Measure CR-3 impacts would be less than significant.

Impacts to unknown human remains from Project 11 are not anticipated because this project would be located in previously disturbed areas and would not require deep excavations. As such, unknown human remains are not expected to be encountered during project construction. Impacts would be less than significant.

Westside

The southern portion of Project 12 is located in an area that is very sensitive for cultural resources. Project 12 would result in ground disturbing activities in areas that have not been previously disturbed, which could result in potentially significant impacts to unknown human remains. With implementation of Mitigation Measures CR-3 impacts would be less than significant. Impacts to unknown human remains from Projects 13, 14, 15, and 16 are not anticipated because these projects would be located in previously disturbed areas and would not require deep excavations. As such, unknown human remains are not expected to be encountered during project construction. Impacts would be less than significant.

3.5.4.3 Paleontological Resources

The majority of the project area is composed predominantly of younger Quaternary gravels derived from the San Gabriel River and the Rio Hondo. Younger Quaternary gravels are unlikely

to contain significant vertebrate fossils (NHM 2013). However, older Quaternary alluvium is present beneath the younger Quaternary gravels in the Whittier Narrows and San Jose Creek areas. Exposures of the Pliocene Fernando Formation might also be present in the San Jose Creek area. Both the older Quaternary alluvium and the Pliocene Fernando Formation may contain significant vertebrate fossils. Deep excavations in the Whittier Narrows area (Projects 6, 7, and 9) and the San Jose Creek area (Projects 10) that may encounter the older Quaternary alluvium and/or the Pliocene Fernando Formation may impact significant paleontological resources. With the implementation of Mitigation Measure CR-4 these impacts would be less than significant. If the final engineering design of Projects 6 and 7 determine that the older Quaternary alluvium deposits would not be disturbed then CR-4 would not be necessary for Projects 6 and 7.

3.5.5 Mitigation Measures

- CR-1:** All projects resulting in ground disturbing activities in areas that are unpaved and/or lack ornamental vegetation shall be surveyed by qualified archaeologists and the results shall be provided in subsequent environmental documents that will be prepared for the individual projects of the Emerald Necklace Implementation Plan – Phase I (Projects 1, 2, 6, 7, 8, 9, 10, 11, and 12). If cultural resources are identified as a result of the surveys, they shall be evaluated using California Register of Historical Resources eligibility criteria to determine whether they are Historical Resources for the purposes of CEQA. An impacts analysis shall be carried out for identified Historical Resources and mitigation measures shall be provided for Historical Resources that will be significantly impacted. The results of the evaluation and the impacts analysis, as well as the mitigation measures, shall be provided in the specific environmental document written for the project.
- CR-2:** All ground-disturbing activities below previously disturbed areas necessary for construction of Projects 6 and 7 shall be monitored by an archaeological monitor and a Native American monitor from a Gabrielino group, as recommended by the cultural resources survey report (CR-1). The archaeological monitor shall have the power to temporarily halt or divert equipment to allow for recording and evaluation of any encountered resources. If evaluated as eligible for the California Register of Historical Resources (CRHR) and determined eligible by the Watershed Conservation Authority, the archaeological site must be avoided and preserved. If this is not feasible, an archeological data recovery program shall be developed and implemented by a qualified archaeologist. The data recovery report shall be submitted to the South Central Coastal Information Center.
- 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) (MLD) 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: A qualified vertebrate paleontologist shall monitor deep excavations that extend into the older Quaternary deposits, as well as any excavations in the exposures of older Quaternary Alluvium or in the exposures of the Fernando formation in the Whittier Narrows area (Projects 6, 7, and 9) and the San Jose Creek area (Project 10). 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. If the final engineering design of Projects 6 and 7 determine that the older Quaternary alluvium deposits would not be disturbed then paleontological monitoring would not be necessary for Project 6 and 7.

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. The report and inventory shall be submitted to the Watershed Conservation Authority and the scientific institution where the fossils are deposited. When the Watershed Conservation Authority receives the report, inventory, and verification of acceptance of the specimens by the scientific institution, mitigation will be complete.

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.

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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.

3.6.1 Environmental Setting

The Proposed Project is located in the San Gabriel Valley, along the Rio Hondo and San Gabriel River. Surrounding local topographic features include the San Gabriel Mountains directly to the north, the San Rafael Hills to the west, and the Puente Hills to the south. Peck Road Water Conservation Park and Hanson Quarry are located at the northern portion of the Proposed Project with Whittier Narrows Recreational Area located at the southern end of the Proposed Project.

The Proposed Project comprises of 15 individual projects located within six cities, as well as portions of unincorporated Los Angeles County. Because the cities are relatively close together, their geologic settings are similar. The Proposed Project would be developed in the cities of Arcadia, El Monte, Industry, Irwindale, Rosemead, and South El Monte.

3.6.1.1 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 (City of Irwindale 2008).

There is one Alquist-Priolo Earthquake Hazard Zone (Hazard Zone), the Alhambra Wash-East Montebello Fault, mapped near the Proposed Project in the El Monte Quadrangle (CDC 1991). The Hazard Zone is located near the start of a multi-use trail proposed as part of Project 12. The Sierra Madre and Raymond Faults are mapped near the Quarry Clasp in Arcadia (City of Arcadia 2010). These Hazard Zones do not overlap the Proposed Project, however, there is still potential for seismic impacts to occur. While there are no Hazard Zones mapped within the project sites, it is possible for other unmapped or unknown faults to occur in the area.

Strong Ground Shaking

The principal seismic hazard for the Proposed Project is ground shaking resulting from an earthquake occurring along the Alhambra Wash-East Montebello Fault or along other distant faults, such as the Sierra Madre Fault or the Raymond Fault (CDC 1991; City of Arcadia 2010). The project area is expected to experience strong ground shaking caused by moderate to strong earthquakes during the anticipated life expectancy of the Proposed Project.

3.6.1.2 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 moderate to great earthquakes, when ground shaking causes water-saturated soils to become fluid and lose strength, much like quicksand. The loss of soil strength occurs as a consequence of cyclic pore water pressure increase below the groundwater surface. Potential hazards due to liquefaction include loss of bearing strength beneath structures, possibly causing foundation failure and/or significant settlements and differential settlements. Seismic settlement occurs when soil is compacted in response to ground shaking. Localities susceptible to liquefaction-induced damage are underlain by loose, water-saturated, granular sediment within 40 feet of the ground surface (City of El Monte 2011). Liquefaction is often responsible for damage to bridges, buildings, buried pipes, and underground storage tanks.

The Seismic Hazard Zone maps covering the El Monte and Baldwin Park Quadrangles show the majority of the project area in a Zone of Required Investigation of liquefaction potential (CDC 1999a; CDC 1999b). This area requires further investigation because of historic occurrence of liquefaction, or because the local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements such that further investigation is required.

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. The Zone of Required Investigation for landslides usually indicate areas with steep slopes composed of weak rock, debris, or soils that may fail when disturbed by strong ground shaking (CDC 2007c).

The Seismic Hazard Zones map covering the Baldwin Park Quadrangle shows an overlapping liquefaction and earthquake-induced landslide area along the edges of the Hanson Quarry (CDC 1999a). Projects 1 and 2 are located in this Zone of Required Investigation, and will require further liquefaction and earthquake-induced landslide investigations. While Projects 1 and 2, would require more investigation, Projects 3 through 16 would not be affected by the earthquake-induced landslide zone.

3.6.1.3 Soils

The Los Angeles County GIS Data identifies soils within the Emerald Necklace as consisting primarily of Chino Silt Loam, Hanford Fine Sandy Loam, Tujunga Fine Sandy Loam, and Ramona Loam. The Quarry Clasp area (Projects 1 through 3) of the Proposed Project consists of mostly Tujunga Fine Sandy Loam, with a small portion of the area consisting of Hanford Silt Loam. The Whittier Narrows area (Projects 5 through 9) sediment consists of Tujunga Fine Sandy Loam, Hanford Fine Sandy Loam, and Chino Silt Loam. In the San Jose Creek area (Projects 10 and 11) the soil types are mapped as Tujunga Fine Sandy Loam, with small portions mapped as Hanford Fine Sandy Loam and Ramona Loam. The Westside area (Projects 12 through 16) consists of Hanford Fine Sandy Loam, and Tujunga Fine Sandy Loam.

3.6.2 Regulatory Setting

3.6.2.1 Federal

International Building Code

The International Building Code (IBC) is the national model building code. The 2012 IBC is the most recent edition of the International Building Code (effective until January 1, 2017), which was incorporated into the 2009 California Building Code, and currently applies to all structures being constructed in California (ICC 2016). The national model codes are incorporated by reference into the building codes of local municipalities, such as the California Building Code 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. The AP Act was created 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 boundary 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 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 2009 IBC and 2010 CBSC described above. 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).

3.6.2.4 Local Cities

The cities of Arcadia, El Monte, Industry, Irwindale, Rosemead, and South El Monte all address local geologic and seismic hazards in their General Plans. Goals and Policies have been incorporated into each Safety Element to minimize impacts of geologic and seismic hazards when developing new projects. There are common goals and policies set forth in most of the Safety Elements that incorporate the AP Act, the Seismic Hazards Mapping Act, and the CBSC. Policies regarding seismic and geologic hazards are focused on minimizing loss of life and damage to property resulting from an earthquake or other geologic hazards.

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:
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction;
 - 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.

Just like most southern California, in the event of an earthquake, strong ground shaking would occur. However, the Proposed Project would not increase the risk of exposing people or structures to potential adverse effects, including the risk of loss, injury, or death due to rupture of a known earthquake fault because the project area already contains an informal trail network that is actively used and there are existing structures in the area such as the SR-60 bridge over the Rio Hondo. A less than significant impact would occur as identified in the Initial Study prepared for the Proposed Project. This issue is not discussed further in this section.

3.6.4 Environmental Impacts

<p><i>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?</i></p>
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3.6.4.1 Faulting and Seismicity

The principal seismic hazards to the Proposed Project are damage to structures and foundations due to strong ground shaking generated during earthquakes and seismic related ground failure, including both liquefaction and landslides.

Strong Ground Shaking

As with most of southern California, the Emerald Necklace is located in a seismically active region. The Proposed Project would be subject to ground shaking during a seismic event. There are no active faults underlying the Proposed Project area; however there are active faults in the vicinity. The nearest active fault occurs near Project 12. Project 12 consists of a multi-use trail located along the western bank of the Rio Hondo starting at the SR-60 underpass. The starting point of this trail would be the closest point to the fault. In this area, the project would improve the underpass by providing dry footing for equestrians. No structures are proposed as part of Project 12. Other active faults near the Proposed Project are the Sierra Madre Fault and the Raymond Fault. If movement occurred along the Alhambra Wash-East Montebello Fault, the Sierra Madre Fault, or the Raymond Fault, the Proposed Project would be subject to strong ground shaking.

The Proposed Project includes the construction and installation of bridges, underpasses, restrooms, water fountains, bicycle trails, multi-use trails, signage, lighting, parking lots, and drainage improvements. Although no habitable structures are proposed as part of the Emerald Necklace, bridges, underpasses, and the restrooms 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 to an acceptable level. While the proposed structures could be damaged during an earthquake and may need to be repaired, they would not pose substantial risks to people or properties when built in accordance with County Building Code standards. Since failure of these structures would not result in substantial risk to people or properties, impacts from strong ground shaking are less than significant. However, the projects that contain structural components, such as bridges, improvements to levees or underpasses, new underpasses, or restrooms (Projects 1, 3, 6, 7, 9, 10, 13, 14, 15, and 16) 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.

3.6.4.2 Secondary Seismic Hazards

Liquefaction

Due to the presence of loose sandy soils deposited by the Rio Hondo and San Gabriel River, most of the Proposed Project area falls within the liquefaction hazard zone. All 15 project sites are located in areas considered by the California Geological Survey to be susceptible to liquefaction based on historical occurrence of liquefaction or local geological and groundwater conditions (CDC 1999a; CDC 1999b). Because the Proposed Project is mapped in the liquefaction hazard zone, site-specific investigations of liquefaction potential should be conducted. Geotechnical investigations would disclose the geological conditions of project sites and recommend the appropriate measures to be incorporated into the design and construction of projects with structural components such as bridges and foundations. Impacts would be less than significant with incorporation of Mitigation Measure G-1.

Landslides

The Proposed Project is located in a relatively flat area along the Rio Hondo and San Gabriel River. Most of the project sites are not located within areas that are susceptible to landslides. However, Projects 1 and 2 are located within an overlapping liquefaction and earthquake-induced landslide Zone of Required Investigation (CDC 1999a). These projects are located near the Hanson Quarry, which has steep slopes. Project 1 is the Quarry Clasp Park Development, which includes a park with a restroom, water fountain, seating area, and parking lot. Project 2 is the Quarry Clasp Multi-Use Trail and Bicycle Paths. Project sites 1 and 2 will require further geotechnical investigations to determine if additional measures are needed to prevent landslides in the project area. Impacts would be less than significant with incorporation of Mitigation Measure G-1.

3.6.4.3 Soils

The principal soil hazards to the Proposed Project are erosion or loss of top soil, and damage to structures and foundations due to expansive soils.

Soil Erosion

<i>Threshold: Would the project result in substantial soil erosion or the loss of topsoil?</i>
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The Proposed Project would involve the construction of new multi-use trails as well as upgrades to existing trails. Soil erosion impacts can occur with increased slope, precipitation, ground disturbance, and decreased vegetative cover or hardscape. Disturbance of surface soils could take place during the construction of the trail system, or during use of the trail system. Impacts from the construction and use of the Proposed Project are discussed below.

Construction-Related Impacts

Ground-disturbing activities, removal of vegetation or hardscapes, and climatic factors associated with the Proposed Project could result in soil erosion or the loss of topsoil. Removal of soil, vegetation, and/or hardscapes exposes bare earth and can cause unstable conditions, resulting in soils that are easily disturbed by construction equipment and weather conditions. 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. During construction Best Management Practices (BMPs), included as part of the Storm Water Pollution and Prevention Plan (SWPPP) that will be prepared for the Proposed Project, would be in place. Incorporation of Mitigation Measure H-1 would reduce impacts from erosion during construction of the Proposed Project to a less than significant level.

User-Related Impacts

Use of the trail system created by the Proposed Project can lead to the potential for soil erosion impacts. Impacts from trail usage can include soil compaction and erosion, loss of organic litter, and loss of ground cover. The trail system under the Proposed Project would be accessed by three different types of users; pedestrians, bikers, and equestrians. In addition to impacts from users, impacts can occur through water erosion or high wind erosion.

Pedestrians typically cause minor impacts to soil erosion when using the trail system properly. Pedestrians may misuse the trails by creating shortcuts, or widening the trail, which can damage native vegetation and disturb surface soils. Bikers contribute to erosion impacts by suddenly braking or skidding, creating linear ruts, and adding informal trails. Bikers primarily impact the trails when using excessive speed or when using the trail in poor conditions. Due to their weight, horses and their riders can affect trails by loosening surface soils that would otherwise be compacted. This detaches the soil particles and increases the risk of erosion. Horses can also create pot holes in soft surface trails which can collect water, in turn losing the soils around the pothole. Vegetation holds soils in place and filters storm water runoff but grazing horses can result in the loss of vegetation near the trails.

All new and upgraded trails and park would be subject to the SWPPP that will be prepared for the Proposed Project. The SWPPP would include BMPs to prevent erosion during and after construction. The new trails and park would be maintained by the County of Los Angeles similar to the current maintenance schedule of the existing trails and parks. Impacts from erosion or loss of topsoil during the use of the Proposed Project would be less than significant with incorporation of Mitigation Measure H-1.

Expansive Soils

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?

Expansive soils generally result from specific clay minerals that have the capacity to shrink or swell in response to changes in moisture content. Based on review of regional geologic maps, the site is underlain by sandy gravelly soils. Because expansion generally occurs in soils that contain specific clay minerals, the potential for the soils in the Proposed Project area to be expansive is considered low. However, site specific geotechnical investigations would be required during the design of projects with structural components (Projects 1, 3, 6, 7, 9, 10, 13, 14, 15, and 16). Geotechnical investigations would disclose the geological conditions of these project sites and recommend the appropriate measures to be incorporated into the design and construction of these projects. Impacts from expansive soils would be less than significant with incorporation of Mitigation Measure G-1.

3.6.5 Mitigation Measures

G-1: A qualified geotechnical firm shall conduct site specific geotechnical investigations during the design of projects that contain a structural component such as bridges and foundations (Projects 1, 3, 6, 7, 9, 10, 13, 14, 15, and 16). The geotechnical firm shall review the site and grading plans for each project that contains a structural component as the Emerald Necklace is implemented and comment further on the geotechnical aspects of the project. Geotechnical investigations shall disclose the geological conditions of project sites and recommend the appropriate measures to be incorporated into the design and construction of each project.

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.

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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 settings in relationship to GHG emissions. A GHG analysis report was completed for the Proposed Project (Urban Crossroads, Inc. 2016b). The technical report is provided in Appendix E and summarized below.

3.7.1 Environmental Setting

3.7.1.1 Introduction to Global Climate Change

Global climate change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. GCC is currently one of the most controversial environmental issues in the United States, and much debate exists within the scientific community about whether or not GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred in the past over the course of thousands or millions of years. These historical changes to Earth's climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in Earth's atmosphere, including carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

GCC refers to the change in average meteorological conditions on Earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor (H₂O), CO₂, N₂O, CH₄, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These particular gases are important due to their residence times (duration they stay) in the atmosphere, which range from 10 years to more than 100 years. These gases allow solar radiation into Earth's atmosphere, but prevent radioactive heat from escaping, thus warming Earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages. According to the California Air Resources Board (CARB), the climate change since the industrial revolution differs from previous climate changes in both rate and magnitude.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural GHG effect, the Earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these GHGs in Earth's atmosphere is considered to be the cause for the observed increase in Earth's temperature.

Although California's rate of growth of GHG emissions is slowing, the state is still a substantial contributor to the U.S. emissions inventory total. Despite a population increase of 16 percent between 1990 and 2004, California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs, as well as adoption of strict emission controls.

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GHGs have varying global warming potential (GWP) values. GWP values represent the potential of a gas to trap heat in the atmosphere. CO₂ is utilized as the reference gas for GWP, and thus has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 3.7-1 below.

Table 3.7-1. Global Warming Potential and Atmospheric Lifetime of Select GHGs

GHG	ATMOSPHERIC LIFETIME (YEARS)	GLOBAL WARMING POTENTIAL (100-YEAR TIME HORIZON)	
		SECOND ASSESSMENT REPORT (SAR)	4 TH ASSESSMENT REPORT (AR4)
Carbon dioxide	50-200	1	1
Methane	12 ± 3	21	25
Nitrous oxide	120	310	298
HFC-23	264	11,700	14,800
HFC-134a	14.6	1,300	1,430
HFC-152a	1.5	140	124
Sulfur hexafluoride	3,200	23,900	22,800

Source: Urban Crossroads 2016b

Water Vapor (H₂O)

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. 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 Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor 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 are also dynamics that hold 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 able to reflect incoming solar radiation (thus allowing less energy to reach Earth’s surface and heat it up).

There are no human health effects from water vapor itself; however, when some pollutants come in contact with water vapor, they can dissolve and the water vapor can then act as a pollutant-carrying agent. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include: evaporation from other water bodies,

sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

Carbon Dioxide (CO₂)

CO₂ is an odorless and colorless GHG. Outdoor levels of CO₂ are not high enough to result in negative health effects. CO₂ is emitted from natural and human-made sources. Natural sources include: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: burning of coal, oil, natural gas, and wood. CO₂ is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO₂ concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of CO₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.

According to the National Institute for Occupational Safety and Health (NIOSH), high concentrations of CO₂ can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO₂ in Earth's atmosphere are estimated to be approximately 370 ppm, while the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour work week and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period.

Methane (CH₄)

CH₄ is an extremely effective absorber of radiation, though its atmospheric concentration is less than CO₂ and its lifetime in the atmosphere is brief (10 to 12 years), compared to other GHGs. CH₄ 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 CH₄. Other anthropogenic sources include fossil-fuel combustion and biomass burning. CH₄ is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. CH₄ is also an asphyxiant and may displace oxygen in an enclosed space.

Nitrous Oxide (N₂O)

N₂O, also known as laughing gas, is a colorless GHG. N₂O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage). Concentrations of N₂O began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). N₂O 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 used as an aerosol spray propellant (e.g., in whipped cream bottles), as well as used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N₂O can be transported into the stratosphere, be deposited on Earth's surface, and be converted to other compounds by chemical reaction.

Chlorofluorocarbons (CFCs)

CFCs are gases formed synthetically by replacing all hydrogen atoms in CH₄ or ethane (C₂H₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

CFCs have no natural source, but were first synthesized in 1928. They were 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 was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons (HFCs)

HFCs are synthetic, human-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest GWP. The HFCs with the largest measured atmospheric abundances are (in order): HFC-23, HFC-134a, and HFC-152a. Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant. The U.S. Environmental Protection Agency (USEPA) estimates that concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each, and that concentrations of HFC-152a are about 1 ppt. No health effects are known to result from exposure to HFCs, which are human-made for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons (PFCs)

Perfluorocarbons (PFCs) have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur 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 (CF₄) and hexafluoroethane (C₂F₆). The USEPA estimates that concentrations of CF₄ in the atmosphere are over 70 ppt.

No health effects are known to result from exposure to PFCs. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride (SF₆)

SF₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any GHG evaluated (23,900). The USEPA indicates that concentrations in the 1990s were about 4 ppt. In high concentrations in confined areas, SF₆ presents the hazard of suffocation because it displaces the oxygen needed for breathing. SF₆ 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.

3.7.1.2 Greenhouse Gas Emissions Inventories

Global

Worldwide anthropogenic (human-made) GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human-made GHG emissions data for Annex I nations are available through 2012. For 2012, the sum of these emissions totaled approximately 28,865,994 gigagrams (Gg)¹ of CO₂e.

United States

The United States was the second highest producer of GHG emissions in 2012. The primary GHG emitted by human activities in the United States was CO₂, representing approximately 83 percent of total GHG emissions. CO₂ from fossil fuel combustion, the largest source of United States GHG emissions, accounted for approximately 78 percent of the GHG emissions.

California

CARB compiles GHG inventories for the State of California. CARB GHG inventory data indicates that in 2013 (the most recent inventory of record), California GHG emissions totaled approximately 459.3 million metric tons (MMT) of carbon dioxide equivalent (CO₂e).

3.7.2 Regulatory Setting

3.7.2.1 International

International Regulation and the Kyoto Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming 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 currently consists of more than 50 voluntary programs for member nations to adopt.

The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. Some have estimated that if the commitments outlined

¹ 1 gigagram = 1,000 metric tons

in the Kyoto Protocol are met, global GHG emissions could be reduced an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the United States is a signatory to the Kyoto protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments. In December 2009, international leaders from 192 nations met in Copenhagen to address the future of international climate change commitments post-Kyoto.

2015 United Nations Paris Climate Change Conference

On December 12, 2015, which marks the 11th meeting of the parties to the Kyoto Protocol, 195 nations, including the United States and China, agreed upon a strategy for combatting global climate change to be in effect in 2020. This historic meeting, known as the 21st Annual Conference of the Parties (COP21), focused on five key elements: mitigation, a transparency system and global stock-take, adaptation, loss and damage, and support.

In mitigating global climate change, COP21 participating nations agreed upon a universal long-term goal of keeping the global temperature to well below 2 degrees Celsius (°C; or 3.6°F) above pre-industrial levels. The agreement also encouraged participating nations to limit temperature increases even further to 1.5°C (or 2.7°F) above pre-industrial levels. In addition, nations agreed to peak their GHG emissions as soon as possible, with the recognition that developing countries may take longer than developed countries. Thereafter, nations are to undergo rapid reductions in accordance to best available technological advances. The nations are to submit national climate action plans that detail future objectives to address climate change.

In supporting a transparency system and global stock-take, the participating nations agreed to meet every five years to set more ambitious targets on global climate change as technologically feasible. The nations are to report to each other and to the public on their progress towards implementing targets and goals through a transparency and accountability system. In adaptation, participating nations are to strengthen the ability of nations to deal with climate impacts and provide continued international support for adaptation to developing countries.

In supporting loss and damage, participating nations understand the importance of minimizing and addressing the loss and damage associated with adverse effects of global climate change. These nations acknowledge the need to cooperate with each other and support each other through safeguards, such as early warning systems, emergency preparedness, and risk insurance.

Participating nations are to support each other in their efforts to fight against global climate change. Developed countries within the COP21 are to continue their existing collective goal of utilizing 100 billion per year in support of the poorest and most vulnerable participating nations, known as climate finance, until 2025, when a new collective goal will be set.

3.7.2.2 Federal

Coinciding with the 2009 meeting in Copenhagen, on December 7, 2009, the USEPA issued an Endangerment Finding under Section 202(a) of the federal Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public

health and welfare and are subject to regulation under the federal CAA. To date, the USEPA has not promulgated regulations on GHG emissions, but has begun to develop such regulations.

Previously, the USEPA had not regulated GHGs under the federal CAA because it asserted that the CAA did not authorize it to issue mandatory regulations to address global climate change and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 in 2007), however, the U.S. Supreme Court held that GHGs are pollutants under the federal CAA and directed the USEPA to decide whether GHGs endangered public health or welfare.

3.7.2.3 State

Although global climate change did not become an international concern until the 1980s, efforts to reduce energy consumption began in California in response to the oil crisis in the 1970s, resulting in the unintended reduction of GHG emissions. To manage the state's energy needs and promote energy efficiency, Assembly Bill (AB) 1575 created the California Energy Commission (CEC) in 1975.

Title 24 Energy Standards

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and non-residential buildings subject to the standards. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The CEC's most recent standard, the 2013 Building Energy Efficiency Standard, is 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for non-residential construction. The standards, which took effect on January 1, 2014, offer builders better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

CALGreen

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen 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 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 CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

The CALGreen Code contains both mandatory and voluntary measures for non-residential land uses; there are 39 mandatory measures including, but not limited to: exterior light pollution

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reduction, wastewater reduction by 20 percent, and commissioning of projects over 10,000 square feet. There are two tiers of voluntary measures for non-residential land uses for a total of 36 additional elective measures.

The 2013 CALGreen Code includes additions and amendments to the water efficiency standards for non-residential buildings in order to comply with the reduced flow-rate table. The 2013 CALGreen Code was also revised to clarify and definitively identify the requirements and applicability for residential and non-residential buildings.

Assembly Bill 1493

AB 1493 required CARB to develop and adopt the nation's first GHG emission standards for automobiles. The legislature declared in AB 1493 that global warming was a matter of increasing concern for public health and environment in California. The legislature also stated that technological solutions to reduce GHG emissions would stimulate the California economy and provide jobs.

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR), adding GHG emission standards to California's existing motor vehicle emission standards in 2004. Amendments to CCR Title 13 Sections 1900 and 1961 and adoption of Section 1961.1 require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016.

In December 2004, a group of car dealerships, automobile manufacturers, and trade groups representing automobile manufacturers filed suit against CARB to prevent enforcement of 13 CCR 1900 and CCR 13 1961 as amended by AB 1493 and 13 CCR 1961.1 (Central Valley Chrysler-Jeep, et al. v. Catherine E. Witherspoon, in her official capacity as Executive Director of the California Air Resources Board, et al.). The suit, heard in the U.S. District Court for the Eastern District of California, contended that California's implementation of regulations that in effect regulate vehicle fuel economy violates various federal laws, regulations, and policies. In January 2007, the judge hearing the case accepted a request from the State Attorney General's office that the trial be postponed until a decision is reached by the U.S. Supreme Court on a separate case addressing GHGs. In the Supreme Court Case, Massachusetts vs. USEPA, the primary issue in question is whether the federal CAA provides authority for USEPA to regulate CO₂ emissions. In April 2007, the U.S. Supreme Court ruled in Massachusetts' favor, holding that GHGs are air pollutants under the CAA. On December 11, 2007, the judge in the Central Valley Chrysler-Jeep case rejected each plaintiff's arguments and ruled in California's favor. On December 19, 2007, the USEPA denied California's waiver request. California filed a petition with the Ninth Circuit Court of Appeals challenging USEPA's denial on January 2, 2008.

The Obama administration subsequently directed the USEPA to re-examine their decision. On May 19, 2009, challenging parties, automakers, the State of California, and the federal government reached an agreement on a series of actions that would resolve these current and potential future disputes over the standards through model year 2016. In summary, the USEPA and the U.S. Department of Transportation agreed to adopt a federal program to reduce GHGs and improve fuel economy, respectively, from passenger vehicles in order to achieve equivalent or greater GHG benefits as the AB 1493 regulations for the 2012-2016 model years.

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Manufacturers agreed to ultimately drop current and forego similar future legal challenges, including challenging a waiver grant, which occurred on June 30, 2009. The State of California committed to: (1) revise its standards to allow manufacturers to demonstrate compliance with the fleet-average GHG emission standard by “pooling” California and specified state vehicle sales; (2) revise its standards for 2012-2016 model year vehicles so that compliance with USEPA-adopted GHG standards would also comply with California’s standards; and (3) revise its standards, as necessary, to allow manufacturers to use emissions data from the federal Corporate Average Fuel Economy (CAFE) program to demonstrate compliance with the AB 1493 regulations.

Executive Order S-3-05

Executive Order (EO) S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra’s snowpack, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To combat those concerns, EO S-3-05 established total GHG emission targets. Specifically, emissions are to be reduced to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050. EO S-3-05 directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary also is required to submit biannual reports to the Governor and state legislature describing: (1) progress made toward reaching the emission targets; (2) impacts of global warming on California’s resources; and (3) mitigation and adaptation plans to combat these impacts. To comply with EO S-3-05, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commissions. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local governments, and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

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In November 2007, CARB completed its estimates of 1990 GHG levels. Net emission 1990 levels were estimated at 427 MMT of CO₂e. Emission sources by sector were: transportation (35 percent), electricity generation (26 percent), industrial (24 percent), residential (7 percent), agriculture (5 percent), and commercial (3 percent). Accordingly, 427 MMT of CO₂e was established as the emissions limit for 2020. For comparison, CARB's estimate for baseline GHG emissions was 473 MMT of CO₂e for 2000 and 532 MMT of CO₂e for 2010. "Business-as-usual" (BAU) conditions (without the 28.4 percent reduction to be implemented by CARB regulations) for 2020 were projected to be 596 MMT of CO₂e.

In December 2007, CARB approved a regulation for mandatory reporting and verification of GHG emissions for major sources. This regulation covered major stationary sources such as cement plants, oil refineries, electric generating facilities/providers, and co-generation facilities, which comprise 94 percent of the point source CO₂ emissions in the state.

On December 11, 2008, CARB adopted a Scoping Plan to reduce GHG emissions to 1990 levels. The Scoping Plan's recommendations for reducing GHG emissions to 1990 levels by 2020 include emission reduction measures, including a cap-and-trade program linked to Western Climate Initiative partner jurisdictions, green building strategies, and recycling and waste-related measures, as well as Voluntary Early Actions and Reductions. Implementation of individual measures were required to begin no later than January 1, 2012, so that the emissions reduction target can be fully achieved by 2020.

While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMT of CO₂e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB has recommended GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal- and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 MMT of CO₂e (or approximately 1.2 percent of the GHG reduction target).

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and regulations (referred to as "business-as-usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and CAT early actions and additional GHG reduction measures, identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.

In connection with its preparation of the August 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document, CARB released revised estimates of the 2020 emissions level projection in light of the economic recession and the availability of updated information from development of measure-specific regulations. Based on the new economic data, CARB determined the 2020 emissions level projection in the BAU condition would be reduced from 596 metric tons (MT) of CO₂e to 545 MT of CO₂e. Under this scenario, achieving the 1990 emissions level in 2020 would require a reduction of GHG emissions of 118 MT of CO₂e, or 21.7 percent (down from 28.5 percent), from the BAU condition.

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When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model years 2009-2016) and the renewable portfolio standard (12-20 percent), the 2020 projection in the BAU condition was reduced further to 507 MT of CO₂e. As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 MT of CO₂e, or approximately 16 percent (down from 28.5 percent), from the BAU condition.

On February 10, 2014, CARB released a Draft Proposed First Update of the Scoping Plan. The draft recalculates 1990 GHG emissions using new global warming potentials (GWPs) identified in the IPCC Fourth Assessment Report released in 2007. Using those GWPs, the 427 MT of CO₂e 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 MT of CO₂e. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 MT of CO₂e (down from 509 MT of CO₂e), or approximately 15.3 percent (down from 28.5 percent), from the BAU condition.

Although CARB released an update to the Scoping Plan and reduction targets from BAU, it is still appropriate to utilize the previous 28.5 percent reduction from BAU, since the modeling tools available are not able to easily segregate the inclusion of the renewable portfolio standards, and Pavley requirements that are now included in the revised BAU scenario.

Senate Bill 1368

In 2006, the State Legislature adopted Senate Bill (SB) 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Due to the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, SB 1368 prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the state.

Senate Bill 97

Pursuant to the direction of SB 97, the California Office of Planning and Research (OPR) released preliminary draft CEQA Guidelines amendments for GHG emissions on January 8, 2009, and submitted its final proposed guidelines to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency adopted the guideline amendments, which became effective on March 18, 2010.

The new guidelines state that a lead agency shall have discretion to determine whether to use a quantitative model or methodology, or in the alternative, rely on a qualitative analysis or performance based standards. CEQA Guidelines § 15064.4(a) states, "A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) use a model or

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methodology to quantify GHG emissions resulting from a project, and which model or methodology to use...; or (2) rely on a qualitative analysis or performance based standards.”

Executive Order S-01-07

On January 18, 2007, Governor Schwarzenegger, through Executive Order S-01-07, mandated a statewide goal to reduce the carbon intensity of California’s transportation fuel by at least 10 percent by 2020. The order also requires that a California specific Low Carbon Fuel Standard (LCFS) be established for transportation fuels.

Senate Bills 1078 and 107 and Executive Order S-14-08

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. SB 107 changed the target date to 2010. In November 2008, Governor Schwarzenegger signed EO S-14-08, which expands the state’s Renewable Energy Standard to 33 percent renewable power by 2020.

Executive Order B-30-15

In January 2015, Governor Jerry Brown, in his inaugural address and annual report to the legislature, established supplementary goals that would further reduce GHG emissions over the next 15 years. These goals include an increase in California’s renewable energy portfolio from 33 to 50 percent, a reduction in vehicle petroleum use for cars and trucks by up to 50 percent, measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

On April 29, 2015, Governor Brown, through EO B-30-15, stated a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. EO B-30-15 set a new statewide GHG emissions reduction target as a “mid-term” benchmark needed to achieve the 80 percent below 1990 levels by 2050. It should be noted, however, that this target has not been formally enacted by the legislature or CARB. As such, EO B-30-15 does not yet appear to constitute a new regulation or requirement adopted to implement a statewide, regional, or local plan for the reduction of GHG emissions within the context of CEQA.

The Proposed Project reduces its GHG emissions to the maximum extent feasible, as discussed below. As of July 2016, no further analysis is necessary or required by CEQA as it pertains to EO B-30-15.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) to prescribe land use allocation in each MPO’s regional transportation plan. CARB, in consultation with MPOs, has provided reduction targets for GHGs emitted by passenger cars and light trucks within the regions for 2020 and 2035.

CARB's Preliminary Draft Staff Proposal for Interim Significance Thresholds

Separate from its Scoping Plan approved in December of 2008, CARB issued a Staff Proposal in October 2008, as its first step toward developing recommended statewide interim thresholds of significance for GHGs that may be adopted by local agencies for their own use. CARB staff's objective in this proposal is to develop a threshold of significance that will result in the vast majority (approximately 90 percent statewide) of GHG emissions from new industrial projects being subject to CEQA's requirement to impose feasible mitigation. The proposal does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that, collectively, are responsible for substantial GHG emissions (e.g., industrial, residential, and commercial projects). CARB is developing these thresholds in these sectors to advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. These draft thresholds are under revision in response to comments. There is currently no timetable for finalized thresholds at this time.

As currently proposed by CARB, a quantitative threshold of 7,000 MT of CO₂e per year for operational emissions (excluding transportation), and performance standards yet to be defined for construction and transportation emissions are under consideration. However, CARB's proposal is not yet final, and thus, are not applied to the Proposed Project.

3.7.2.4 Regional

SCAQMD's Recommendations for Significance Thresholds

In April 2008, the SCAQMD, in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a "GHG CEQA Significance Threshold Working Group." The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects. However, the threshold is still under development. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for stationary source projects where it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 MT of CO₂e as a screening numerical threshold for stationary sources. It should be noted that when setting the 10,000 MT of CO₂e threshold, the SCAQMD did not consider mobile sources (vehicular travel); rather, the threshold is based mainly on stationary source generators such as boilers, refineries, power plants, etc. Therefore, it would be misleading to apply a threshold that was developed without consideration for mobile sources to a project where the majority of emissions are related to mobile sources, and there is no SCAQMD threshold that can be applied to the Proposed Project.

3.7.2.5 Local

County of Los Angeles

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 community 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 the CALGreen Code, 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:

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- ◆ Planning and design;
- ◆ Energy efficiency;
- ◆ Water efficiency and conservation;
- ◆ Material conservation and resource efficiency; and
- ◆ 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.

City of Arcadia

The Resource Sustainability Element of the City of Arcadia 2010 General Plan Update includes goals and policies focused on the reduction of GHG emissions:

Goal RS-2: Reducing Arcadia's carbon footprint in compliance with SB 375 and AB 32

Policy RS-2.1: Cooperate with the state to implement AB 32, which calls for reducing greenhouse gas emissions to 1990 levels by 2020, and Executive Order S-3-05, which calls for 1990 levels by 2020 and 80% below 1990 levels by 2050.

Policy RS-2.2: Reduce per capita greenhouse gas emissions to 15% below 2005 levels by 2020, and total municipal greenhouse gas emissions to 15% below 2005 levels by 2020.

Policy RS-2.3: Participate in regional strategies and plan to implement SB 375, and in particular, use the legislatively authorized incentives, such as grants and transportation funding and waivers to environmental assessments, to encourage infill and transit-oriented development.

Policy RS-2.4: Pursue the strategies in the Land Use and Community Design Element to encourage transit-oriented development in established focused areas.

Policy RS-2.5: Pursue the enhancement of bicycle and pedestrian infrastructure set forth in the Circulation and Infrastructure Element to help decrease vehicle miles traveled and vehicle trips.

Policy RS-2.6: Coordinate land use, circulation, and infrastructure improvement efforts with the West San Gabriel Valley Planning Council, regional planning agencies, and surrounding municipalities.

Goal RS-3: Promoting and utilizing clean forms of transportation to reduce Arcadia's carbon footprint

Policy RS-3.1: Develop a City fleet that to the extent feasible uses clean, alternative fuel and consists of energy-efficient vehicles.

Policy RS-3.2: Incorporate energy-efficient vehicles into the City's transit system.

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Policy RS-3.3: Educate residents on methods of sustainable driving techniques such as: reducing excessive speeding, preventing car idling, regular car maintenance for maximizing fuel efficiency, and carpooling.

Policy RS-3.4: Promote residents' and business owners' awareness and education of traffic congestion's effect on air pollution and help create voluntary programs that reduce traffic throughout the City.

City of El Monte

The City of El Monte 2011 General Plan does not include any goals, policies, or implementation plans related to the reduction of GHG emissions; however, the Parks and Recreation Element of the General Plan encourages the provisions of "safe routes to school for children to walk or bicycle will encourage exercise on a daily basis and reduce traffic and greenhouse emissions." As of July 2016, the City of El Monte has not prepared a Climate Action Plan.

City of Industry

The Resource Management Element of the City of Industry 2014 General Plan includes one goal and one policy focused on the reduction of GHG emissions:

Goal RM2: Improved air quality and reduced greenhouse gas emissions.

Policy RM2-3: Collaborate with the CARB and other agencies within the South Coast Air Basin to improve regional air quality and achieve GHG reduction targets.

City of Irwindale

The Resource Management Element of the City of Irwindale 2008 General Plan Update the following policy related to the reduction of GHG emissions:

Resource Management Element Policy 11. The City of Irwindale supports the ethic of conservation of non-renewable resources. This includes efforts to reduce the use of energy (in any form), greenhouse gas (GHG) emissions (consistent with AB 32) and efforts to find new and more energy efficient methods for delivering services. The City supports the development of building standards that enable the community to design energy saving features such as solar energy systems, water efficient landscaping, and sustainable, green, and energy efficient building standards.

City of Rosemead

The Resource Management Element of the City of Rosemead 2010 General Plan Update includes one policy related to the reduction of GHG emissions:

Goal 4: Effective contributions to regional efforts to improve air quality and conserve energy.

Policy 4.6: Adopt a Climate Action Plan or Policy to address greenhouse gas mitigation.

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As of July 2016, the City of Rosemead has not prepared a Climate Action Plan; however, the Resource Management Element of the General Plan Update includes the following implementation actions focused on the reduction of GHG emissions:

- Action 4.9: The Climate Action Plan or policy should:
- ◆ require a baseline inventory of greenhouse gas emissions from all sources by a date certain, establish greenhouse gas emissions reduction targets and deadlines, and enforceable greenhouse gas emissions reduction measures.
 - ◆ include mechanisms to ensure regular review of progress toward the emission reduction targets established by the Climate Action Plan, report progress to the public and responsible officials, and revise the plan as appropriate, using principles of adaptive management.
- Action 4.12: In governmental construction, require or give preference to products that reduce or eliminate indirect greenhouse gas emissions, e.g., by giving preference to recycled products over those made from virgin materials.
- Action 4.13: Consider requiring government contractors to take action to minimize greenhouse gas emissions, e.g., by using low or zero-emission vehicles and equipment.
- Action 4.14: Consider providing public education and information about options for reducing greenhouse gas emissions through reduced automobile usage (including trip reduction/linkage, biking and walking, vehicle performance and efficiency, low or zero-emission vehicles, car/ride sharing), responsible purchasing, conservation, and recycling.
- Action 4.15: Consider entering into partnerships to create and expand polluting vehicle buy-back programs to include vehicles with high greenhouse gas emissions.

City of South El Monte

The City of South El Monte 2000 General Plan does not include any goals, policies, or implementation plans related to the reduction of GHG emissions. In addition, as of July 2016, the City of South El Monte has not prepared a Climate Action Plan.

3.7.3 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, a project would have a significant GHG impact if it would:

- ◆ Generate GHG 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 GHG.

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?

The Lead Agency (Watershed Conservation Authority) has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A widely accepted screening threshold for relatively small projects (such as the Proposed Project) of 3,000 MT of CO₂e per year is used by the County of Los Angeles and numerous cities in the Basin to determine if additional analysis is required. This screening threshold is based on SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects (SCAQMD 2008).

GHGs are quantified and amortized over the life of a project. To amortize the emissions over the life of a project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year project life and then adding that to the annual GHG emissions from project operation. Accordingly, construction emissions were amortized over a 30-year period and added to the annual operations GHG emissions.

Operation of the Proposed Project would result in GHG emissions from the following primary sources:

- ◆ **Area Source Emissions (from Landscape Maintenance Equipment):** Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain landscaping of the Proposed Project.
- ◆ **Energy Source Emissions (Combustion Emissions Associated with Natural Gas and Electricity):** GHGs are emitted from buildings due to use of electricity and natural gas; however, operation of the Proposed Project would not require the usage of natural gas or electricity, and no GHG emissions would be generated during Project operation.
- ◆ **Mobile Source Emissions (Vehicles):** GHG emissions would also result from mobile sources associated with operations of the Proposed Project. These mobile source emissions would result from the typical daily operation of motor vehicles by trail users.
- ◆ **Solid Waste:** Recreational land uses would result in the generation and disposal of solid waste. A large percentage of this waste would be diverted from landfills by recycling and/or composting. The remainder of the waste would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material.
- ◆ **Water Supply, Treatment, and Distribution:** Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water.

The annual GHG emissions associated with the construction and operation of the Proposed Project are estimated to be 841.01 MT of CO₂e (Table 3.7-2). Annual GHG emissions from the Proposed Project would be substantially less than the SCAQMD significance threshold for small

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land use projects (3,000 MT of CO₂e per year). Accordingly, impacts associated with Project GHG emissions would be less than significant impact.

Table 3.7-2. Greenhouse Gas Emissions from the Proposed Project

EMISSION SOURCE	EMISSIONS (METRIC TONS PER YEAR)			
	CO ₂	CH ₄	N ₂ O	TOTAL CO ₂ E
Annual construction-related emissions amortized over 30 years	12.659	3.33E-03	0	12.73
Area Source Emissions	4.67E-03	0.00	0.00	7.60E-04
Energy Source Emissions	0.00	0.00	0.00	0.00
Mobile Source Emissions	736.78	0.03	0.00	737.42
Solid Waste	0.51	0.03	0.00	1.13
Water Supply, Treatment, and Distribution	89.29	5.03E-03	1.04E-03	89.73
Total CO₂e (All Sources)	841.01			
SCAQMD Threshold	3,000			
Significant?	No			

Source: Urban Crossroads 2016b

Note: Totals may not add up due to rounding.

Threshold: Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

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 identifies 26 local community actions as part of a comprehensive GHG emissions reduction program to reduce emissions from both existing and new development within the County. The 26 local community actions to reduce GHG emissions from the County's community activities are grouped into five "strategy areas." The Proposed Project would help reduce GHG emissions in the County by complying with or implementing some of the local community actions within these five strategy areas:

- ◆ **Green Building and Energy:** The Proposed Project would not conflict with this strategy area because the Proposed Project would not contribute to GHG emissions associated with building energy consumption, as no natural gas would be used during the operation of the Project. The Proposed Project would use energy efficient products, such as light emitting diode (LED) lighting.
- ◆ **Land Use and Transportation:** The CCAP specifically states, "Opportunities to address transportation-related emissions include...enhanced pedestrian and bicycle trails..." (County 2015). The Proposed Project would not conflict with this strategy area because the Proposed Project would provide a connection to communities in the area and promote travel between these communities by walking and bicycling, instead of by motor vehicles.
- ◆ **Water Conservation and Wastewater:** The only water use and wastewater generation from the Proposed Project would be associated with the one proposed bathroom facility, as well as irrigation for proposed landscaping. The Proposed Project

would not conflict with this strategy area because the bathroom would include low-flow toilets and sinks that turn off automatically, and the amount of water usage by irrigation would be minimized due to the use of drought-tolerant plant species.

- ◆ **Waste Reduction, Reuse, and Recycling:** The Proposed Project would not conflict with this strategy area because the Project would encourage recycling by including recycling bins next to trash cans along the Proposed Project trails.
- ◆ **Land Conservation and Tree Planting:** The Proposed Project would not conflict with this strategy area because the Project would include the planting of some additional trees.

The Proposed Project would help the County meet the goals of the CCAP. The Proposed Project would contribute to GHG emissions reductions by providing recreational facilities close to residential areas. These added green spaces and recreational opportunities would reduce vehicle miles traveled (VMT) for recreational purposes and improve the air quality. 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. The Proposed Project would be consistent with the area county/cities general plans' goals and policies related to GHGs. No impact would occur.

3.7.5 Mitigation Measures

Because no significant impacts associated with GHG emissions would occur, no mitigation measures would be required.

3.7.6 Residual Impacts After Mitigation

No significant impacts associated with GHG emissions would occur from construction or operation of the Proposed Project.

3.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes the environmental and regulatory settings for hazards and hazardous materials including existing site conditions, the hazards and hazardous materials impacts at the program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

The Emerald Necklace Implementation Plan – Phase I Initial Study determined that the Proposed Project would not be located on a site that is listed as a hazardous materials site, would not pose a safety hazard due to close proximity to the El Monte Airport, and would not be subject to wildfire hazards due to the urban setting of the project sites. These issues are not discussed further in this section.

3.8.1 Environmental Setting

The San Gabriel Valley is primarily built out with single- and multi-family residential, commercial, industrial, and infrastructure (transportation, communication, and electrical) land uses. Some areas within the Valley are reserved for open space uses; however, the Valley is generally urbanized. Due to the urbanized character of the Valley it is expected that the most common type of hazards in this area are related to past and present land uses.

Throughout the San Gabriel Valley there are many businesses, such as dry cleaners, manufactures, and automobile shops that use, generate, store, and dispose hazardous materials. Furthermore, several transportation corridors that include major freeways and rail lines cross the Valley. These transportation corridors carry a high volume of truck and train traffic, some of which transport hazardous materials. Unauthorized hazardous material releases have occurred in the Valley related to past and present land uses. Hazardous material site databases, including the Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List – Site Cleanup (Cortese List) and the DTSC EnviroStor database, were reviewed to find out if any known hazardous material sites are located within the project sites or the project vicinity. The 15 project sites are not located within a hazardous materials site (DTSC 2016a; DTSC 2016b). However, there are several hazardous materials sites in the vicinity. The most significant hazardous material sites in the area are the San Gabriel Valley Superfund Sites.

3.8.1.1 San Gabriel Valley Superfund Sites

The San Gabriel Valley Superfund Sites include multiple areas of contaminated groundwater in the San Gabriel aquifer. Groundwater contamination resulted from the cumulative impact of decades of hazardous material spills, improper handling, and disposal practices throughout the San Gabriel Valley. The San Gabriel Superfund Sites are divided into six cleanup projects referred to as Operable Units; which include the El Monte Operable Unit, the South El Monte Operable Unit, the Whittier Narrows Operable Unit, the Baldwin Park Operable Unit, the San Gabriel Valley Area 3 Operable Unit, and the Puente Valley Operable Unit. The Environmental Protection Agency (EPA) and several local agencies are currently undertaking cleanup and investigation efforts (EPA 2011).

3.8.2 Regulatory Setting

3.8.2.1 Federal

Resource Conservation and Recovery Act

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. The RCRA gives the Environmental Protection Agency (EPA) the authority to control hazardous waste from generation, transportation, treatment, storage, to disposal. The RCRA also sets forth a framework for the management of non-hazardous solid wastes. The RCRA also 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 (EPA 2016a).

Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) created a tax on the chemical and petroleum industries and provided a broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. 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, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation, and increased the size of the trust fund (EPA 2016b).

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) granted the EPA authority to create a regulatory framework to collect data on chemicals to evaluate, assess, mitigate, and control risks that may be posed by their manufacture, processing, and use. The TSCA provides a variety of control methods to prevent chemicals from posing unreasonable risk. Under TSCA Section 6, the EPA can ban the manufacture or distribution in commerce, limit use, require labeling, or place other restrictions on chemicals that pose unreasonable risks. Among the chemicals EPA regulates under Section 6 are asbestos, chlorofluorocarbons (CFCs), lead, and polychlorinated biphenyls (PCBs) (EPA 2016c).

3.8.2.2 State

Regulatory Definition for Hazardous Materials and Hazardous Wastes

As defined in Title 22 of the California Code of Regulations, 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

In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). CalEPA's Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Boards (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 the investigation and cleanup process.

Hazardous Materials Release Response Plans and Inventories (Business Plan Act)

The Business Plan Act was established to prevent or minimize the damage to public health and safety and the environment, from a release or threatened release of hazardous materials. It also satisfies community right-to-know laws. This act requires businesses that handle hazardous materials in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, or extremely hazardous substances above the threshold planning quantity to develop a business plan. The business plan includes an inventory of hazardous materials handled, a site plan where hazardous materials are stored, an emergency response plan, and a training program for employees (Cal OES 2016).

3.8.2.3 Local

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 (County of Los Angeles 2015a). 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.

City of Arcadia General Plan

The City of Arcadia's General Plan includes a Safety Element that addresses human-caused hazards (City of Arcadia 2010). The following goals from this element are applicable to the Proposed Project:

- Goal S-3: High level of protection from the dangers of wildland and urban fires*
- Goal S-4: A continued high level of protection from risks to life, the environment, and property associated with human-caused hazards in Arcadia*
- Goal S-5: To provide a continued high level of fire and police protection services, with an emphasis on prevention and education*
- Goal S-6: Comprehensive and effective emergency and disaster response preparedness*

City of El Monte General Plan

The City of El Monte's General Plan addresses hazardous materials in the Public Services and Facilities and the Public Health and Safety Elements (City of El Monte 2011). The following goal from the Public Services and Facilities Element would be applicable to the Proposed Project:

- Goal PSF-2: An excellent level of fire and emergency services with appropriate response times necessary to protect the health and safety of residents and minimize damage to structures and personal property.*

The following goals from the Public Health and Safety Element would be applicable to the Proposed Project:

- Goal PHS-4: Adequate protection and safety from the hazards of airway, roadway, and railroad through a balance of land use patterns, project design, improved technology, capital improvements, public education, and law enforcement.*
- Goal PHS-5: A safe and healthy environment that minimizes the public health risks and threats posed by hazardous materials and wastes.*
- Goal PHS-7: Proper planning for the threat of manmade and natural hazards so as to minimize, to the greatest extent possible, the risk to life, limb, property, and essential facilities through emergency preparedness, recovery, and response.*

City of Industry General Plan

The City of Industry's General Plan includes a Safety Element which identifies natural and man-made environmental hazards and ways to reduce the risk of property damage, injuries, or loss of life (City of Industry 2014). The following goals from the Safety Element would be applicable to the Proposed Project:

- Goal S3: Reduced risk of injury to lives and property from structural and wildland fires.*
- Goal S4: Reduced potential for hazardous materials exposure and contamination.*

Goal S5: Effective disaster mitigation, preparedness, response, and recovery.

City of Irwindale General Plan

The City of Irwindale's General Plan includes a Public Safety Element that discusses the production, use, storage, transport, and disposal of hazardous materials within the City (City of Irwindale 2008). The following General Plan program from the Public Safety Element would be applicable to the Proposed Project:

Hazardous Materials Control

The City shall continue to cooperate with County, State, and Federal agencies involved in the regulation of hazardous materials storage, use, and disposal. The City shall work with the County Fire Department in requiring hazardous materials users and generators to identify safety procedures for responding to accidental spills and emergencies. The Fire Department shall also work with local law enforcement officials in regulating the transport of hazardous materials through the City. The City will continue to promote the safe disposal of "hazardous and toxic substances" used in private households through the support of "Hazardous Materials Collections" conducted at specific locations and times within the City.

City of Rosemead General Plan

The City of Rosemead's General Plan includes a Public Safety Element that discusses hazards due to human activities (City of Rosemead 2010). The following goal from the Public Safety Element would be applicable to the Proposed Project:

Goal 2: Ensure safety of all City residents and local workers from hazardous wastes and the hazards associated with the transport of such wastes.

City of South El Monte General Plan

The City of South El Monte's General Plan includes a Public Safety Element that addresses natural and human-induced hazards that have the potential to impact the community (City of South El Monte 2000). The following goals from the Public Safety Element would be applicable to the Proposed Project:

Goal 5.0: Protect the resident and business populations from potential hazards associated with the use, storage, manufacture, and transportation of toxic and hazardous materials in and through the City.

Goal 7.0: Provide safe environments for City residents and businesses.

3.8.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have a significant effect on the hazards and hazardous materials environment if it would:

- ◆ Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

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- ◆ 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;
- ◆ Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- ◆ Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

3.8.4 Environmental Impacts

3.8.4.1 Routine Transport, Use, or Disposal of Hazardous Materials

Threshold: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction of the 15 projects 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 the project sites 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, the proposed recreational facilities and access infrastructure would not include the use of hazardous materials. Facility maintenance activities would likely require the use hazardous materials such as paints, fertilizers, and pesticides. These hazardous materials would be properly stored and used in limited quantities during maintenance activities by the respective jurisdiction implementing an individual project or group of projects. 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.

3.8.4.2 Accidental Release of Hazardous Materials

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?

During construction and operation, the use of hazardous materials could result in their accidental release and accident conditions. As discussed in Section 3.8.4.1 above, hazardous material users would comply with hazardous material regulations, therefore, reducing the hazard to the public and reducing the potential release of hazardous materials into the environment. Impacts would be less than significant.

3.8.4.3 Hazardous Emissions/Materials within One-Quarter Mile of a School

Threshold: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

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There are several schools located within one-quarter mile of the Proposed Project. South El Monte High School is located within one-quarter mile of Project 9. Charles T. Kranz Intermediate School and Mountain View High School are located within one-quarter mile of Project 10. El Monte Head Start Preschool and Loma Elementary School are located within a one-quarter mile of Project 12. Telstar Montessori Childcare Center is located within one-quarter mile of Projects 13, 14, and 15. Cortada Elementary School is located within a quarter-mile of Proposed Project 15. Although the proposed recreation facilities and access infrastructure are not expected to result in hazardous emissions, hazardous materials may be encountered (i.e. contaminated soils) or used (i.e. diesel fuel, paint) during construction and operation activities. Any activity that may encounter or use hazardous materials could pose hazards to nearby school children in the event of an accidental release or spill. As discussed in Section 3.8.4.1 above, hazardous material users would comply with hazardous material regulations; therefore, reducing the risk of exposure to the maximum extent possible. Impacts would be less than significant.

3.8.4.4 Emergency Evacuation Plan

<i>Threshold: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</i>
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Development of the 15 projects could potentially affect emergency response and evacuation plans during construction when road lanes or other access points are closed. Impacts to emergency access would be less than significant with the incorporation of Mitigation Measure HM-1.

3.8.5 Mitigation Measures

HM-1: Prior to any lane closures, the Watershed Conservation Authority (or its contractor) shall prepare a Traffic Control Plan to ensure proper access to residences and businesses by emergency vehicles during construction and to maintain traffic flow.

3.8.6 Residual Impacts After Mitigation

Impacts would be less than significant after mitigation.

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3.9 HYDROLOGY AND WATER QUALITY

This section describes the environmental setting for hydrology and water quality, including the regulatory setting and existing site conditions, the impacts on hydrology and water quality at the program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

3.9.1 Environmental Setting

3.9.1.1 Hydrology and Drainage

The Proposed Project would be located along the San Gabriel River and the Rio Hondo, which are within the San Gabriel River and the Los Angeles River Watersheds. Projects 1, 8, 9, 10, and 11 are located within the San Gabriel River Watershed. Projects 2, 3, 5, 6, 7, 12, 13, 14, 15, and 16 are located within the Los Angeles River Watershed.

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. 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, towards 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. The watershed is hydraulically connected to the Los Angeles River through 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 (LARWQCB 2007). The major tributaries to the San Gabriel River are Walnut Creek, San Jose Creek, and Coyote Creek. Within the project area the San Gabriel River remains a natural channel bottom stream with engineered modifications, such as dams and levees, to provide flood protection for the surrounding urban development.

Los Angeles River Watershed

The Rio Hondo is located within the Los Angeles River Watershed. The Los Angeles River Watershed is one of the largest in the region (824 square miles) and one of the most diverse in terms of land use patterns. Approximately 324 square miles of the watershed are covered by forest or open space land including the area near the headwaters of the Los Angeles River which originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed. The Los Angeles River flows through the San Fernando Valley past heavily developed residential and commercial areas. From the Arroyo Seco, north of

downtown Los Angeles, to the confluence with the Rio Hondo, the river flows through industrial and commercial areas and is bordered by railyards, freeways, and major commercial and government buildings. From the Rio Hondo to the Pacific Ocean, the river flows through industrial, residential, and commercial areas, including major refineries and petroleum products storage facilities, major freeways, rail lines, and rail yards serving the Ports of Los Angeles and Long Beach. The Los Angeles River is hydraulically connected to the San Gabriel River Watershed by the Rio Hondo through the Whittier Narrows Reservoir. Flows from the San Gabriel River and Rio Hondo merge at this reservoir during larger flood events. Most of the water in the Rio Hondo is used for groundwater recharge during dry weather seasons (LARWQCB 2007). The six major tributaries to the Rio Hondo are the Alhambra, Rubio, Eaton, Arcadia, Santa Anita, and Sawpit Washes. Within most of the project area, the Rio Hondo has been transformed to a concrete lined channel except within the Whittier Narrows Recreation Area where it remains a natural stream.

3.9.1.2 Flooding

Flood Hazards

Generally throughout the project area the San Gabriel River and the Rio Hondo have undergone major engineered modifications to provide flood protection to the surrounding urban development. The only remaining natural stream segment in the project area is a segment of the Rio Hondo within the Whittier Narrows Recreation Area. A portion of Project 6 would be located in a FEMA flood hazard Zones A and D (FIRM Map No. 06037C1664F; EPA 2016). FEMA flood hazard Zone A is defined as areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies (FEMA 2016). The 1-percent-annual-chance flood is also referred to as the base flood or 100-year flood. FEMA flood hazard Zone D is defined as areas with possible but undetermined flood hazards (FEMA 2016). None of the other Projects would be location within a FEMA mapped flood hazard (EPA 2016).

Dam Inundation

Dams in the vicinity of the Proposed Project include Santa Anita Dam, Cogswell Dam, San Gabriel Dam, Morris Dam, Santa Fe Dam, and Whittier Narrows Dam. The Santa Fe Dam inundation area would encompass all Emerald Necklace Projects (City of El Monte 2011). The Santa Anita Dam inundation area would encompass Project 3 (City of Arcadia 2010). The Puddingstone Dam inundation area would encompass the San Jose Creek Projects, Whittier Narrows Projects, and Project 12 of the Westside area (City of Industry 2014). All of the dams in the project area are flood control dams that do not impound substantial reservoirs for most of the year.

3.9.1.3 Water Quality

A healthy watershed reduces pollution by filtering sediment, chemicals, and nutrients from runoff. However, urbanization of a watershed creates impervious surfaces that prevent water from infiltrating into soil in a way that allows the natural environment to filter out pollutants that otherwise make their way into the water supply.

San Gabriel River Watershed

Land use in the watershed is diverse and ranges from predominantly open space in the upper watershed to urban land uses in the middle and lower parts of the watershed. These varying land uses result in various water quality issues. The upper reaches of the San Gabriel River (located in the Angeles National Forest) are heavily used for recreational purposes and have been impacted from trash, debris, and habitat destruction. In addition several reservoirs located in the upper watershed require frequent removal of accumulated sediments to maintain flood control capacity. Some of the removal methods previously used had water quality impacts. Continued need for such maintenance could cause longer-term impacts. The Proposed Project would be located in the middle of the watershed where dense clusters of residential, commercial, and industrial land uses have impaired the water quality. Furthermore, tertiary effluent from several sewage treatment plants enters the river in its middle reaches, which is partially channelized (LARWQCB 2007).

Major National Pollutant Discharge Elimination System (NPDES) discharges in the watershed are from either publicly owned treatment works (POTWs) with a yearly average flow of over 0.5 million gallons per day (MGD), from an industrial source with a yearly average flow of over 0.1 MGD, or are those discharges with lesser flows but with potential acute or adverse environmental impacts to surface waters. Minor discharges may be covered by general NPDES permits. A majority of the 74 NPDES permittees in the watershed discharge directly to the San Gabriel River. Twenty-four discharge to Coyote Creek and twelve discharge to San Jose Creek (LARWQCB 2007). The San Gabriel River Reach 3 (Whittier Narrows to Ramona Boulevard) is on the 2010 303(d) list of impaired waters due to indicator bacteria (SWRCB 2010).

Los Angeles River Watershed

Pollutants from dense clusters of residential, industrial, and other land uses have impaired water quality in the middle and lower Los Angeles River Watershed. Added to this complex mixture of pollutant sources (in particular, pollutants associated with urban and stormwater runoff), is the high number of point source permits. Excessive nutrients (and their effects) and coliform are widespread problems in the watershed as well as excessive metals. Water column toxicity was found at a number of sites sampled by the Surface Water Ambient Monitoring Program (SWAMP) in 2005 (LARWQCB 2007).

Major NPDES discharges in the Los Angeles River Watershed are from either POTWs with a yearly average flow of over 0.5 MGD, from an industrial source with a yearly average flow of over 0.1 MGD, or are those discharges with lesser flows but with potential acute or adverse environmental impacts to surface waters. Minor discharges may be covered by general NPDES permits, which are issued administratively, for those that meet the conditions specified by the particular general permit. A majority of the 134 NPDES discharges go directly to the Los Angeles River. Burbank Western Channel receives three discharges, Compton Creek receives twelve, and Rio Hondo receives fourteen (LARWQCB 2007).

The majority of the Los Angeles River Watershed is considered impaired due to a variety of point and nonpoint sources including POTWs, industrial discharges, septic systems, landfills, illegal trash dumping, and cross-contamination between surface and groundwater (LARWQCB 2007). Peck Road Park Lake is on the 2010 303(d) list of impaired waters with chlordane, DDT,

lead, organic enrichment/low dissolved oxygen, and trash (SWRCB 2010). The reach of the Rio Hondo within the project area is not on the 2010 303(d) list of impaired waters (SWRCB 2010).

3.9.2 Regulatory Setting

3.9.2.1 Federal

Clean Water Act

The United States Environmental Protection Agency (EPA) is the federal agency responsible for water quality management. The Federal Water Pollution Control Act of 1948 was the first major United States (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 U.S. 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 from 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 United States Army Corps of Engineers (USACE) nationwide permit also need individual Section 401 certification. The State Water Resource Control Board (SWRCB), through the Regional Water Quality Control Board (RWQCB) Los Angeles Region, administers these permits.

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 SWRCB, through the 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 U.S. 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 U.S.

The program is jointly administered by the USACE and the EPA. The USACE is responsible for the day-to-day administration and permit review and the 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 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.

Section 408. Modification to a federal levee system requires approval under Section 408 of the CWA. There are two types of Section 408 permits; a minor and a major permit. The USACE District Engineer is the approval authority for a minor 408 authorization. A minor 408 authorization applies to relatively minor, low impact alterations/modifications related to the operation and maintenance (O&M) responsibilities of the non-Federal sponsors. The types of alterations/modifications that can be approved under a minor 408 authorization include placement of structures such as pump houses, stairs, pipes, bike trails, sidewalks, fences, driveways, power poles, and instrumentation provided these alterations/modifications do not adversely affect the functioning of the project and flood fighting activities. A major 408 authorization requires the approval by the USACE Chief Engineers and includes degradations, raisings, and realignments of flood control structures. Other alterations/modifications would include non-Federal levee tie-ins, ramps, riverside landscaping, retaining walls, fill against a levee (such as railroad trestles and overbuild), bridges, relief wells, seepage berms, and stability berms. Engineering analysis must be conducted in instances where it is not clear if the proposed alteration/modification is within the authority delegated to a District Engineer or requires the approval by the Chief of Engineers (USACE 2008).

3.9.2.2 State

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, of this Draft PEIR.

3.9.2.3 Local

County of Los Angeles 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 are aimed at the protection of local surface and groundwater water resources and protection of watersheds (County of Los Angeles 2015a).

Water Quality Control Plan, Los Angeles Region

The Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (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. The Basin Plan includes water quality objectives for ammonia, coliform bacteria, bioaccumulation, biochemical oxygen demand (BOD₅), biostimulatory substances, chemical constituents, chlorine (total residual), color, exotic vegetation, floating material, methylene blue activated substances (MBAS), mineral quality, nitrogen (nitrate, nitrite), oil and grease, dissolved oxygen, pesticides, pH (numeric scale used to specify the acidity or basicity of an aqueous solution), polychlorinated biphenyls (PCBs), radioactive substances, solid suspended or settleable materials, taste, odor, temperature, toxicity, and turbidity. To maintain water quality objectives the RWQCB employs several different strategies to control point source pollutants; including but not limited to waste discharge requirements (WDRs), water reclamation requirements (WRRs), and through the NPDES program. To control nonpoint source pollutants the Regional Board has created various programs to address pollution from agriculture, urban runoff, construction, hydromodification, resource extraction, silviculture, and land disposal (LARWQCB 1994).

City of Arcadia General Plan

The City of Arcadia's General Plan sets forth goals and policies related to the management of water resources in the Resource Sustainability Element. Goals included in this element are intended to continue the proper stewardship of water resources. The City recognizes the importance of water resources and has established a City Water Master Plan to assess the City's water system's reliability, infrastructure rehabilitation, and restoration considerations of various water facilities. In addition to the City's Water Master Plan, the General Plan Resource Sustainability Element goals look to continue participation in regional programs that protect water resources in Arcadia (City of Arcadia 2010).

City of El Monte General Plan

The City of El Monte's General Plan includes policies and goals to maintain water quality through conservation and watershed management. These policies are outlined in the Community Development, Land Use, Parks and Recreation, Public Services and Facilities, and Public Health and Safety Elements of the General Plan. Goals and policies that would be applicable to the Proposed Project include Policy CD-4.5 and CD 7.16 that require new development to take on design principles that are sustainable and promote water conservation through "green building". At a regional level, the City of El Monte has also required that new development cooperate with the San Gabriel Water Quality Authority to expedite cleanup and remediation of groundwater pollution by implementing Best Management Practices (BMPs) to avoid future contamination. The Parks and Recreation Element of the General Plan deals specifically with the Emerald Necklace; it contains a policy on Watershed Management through protection and restoration of the surrounding rivers (PR-3.3). The Public Services Element of the General Plan contains policies that require the implementation of storm water management policies for current public and private entities as well as new developments. Policy PSF-3.7 plans to incorporate better management practices to conserve water in public landscaping (City of El Monte 2011).

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 through RM-8 which require updates to water infrastructure periodically, encourage the use of recycled water, promote 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).

City of Irwindale General Plan

The City of Irwindale's General Plan contains goals or policies that relate to water resources in its Resource Management Element. The policies that would be applicable to the Proposed Project outline the effort of the City to continue to cooperate with other agencies that are in charge of improving air quality and water quality in the region (City of Irwindale 2008).

City of Rosemead General Plan

The City of Rosemead's General Plan Resource Management Element includes goals and policies to manage water resources. Policy 3.2 states that water conservation measures should be promoted, urban runoff should be reduced, and prevent groundwater pollution associated with development projects, City operations, and all activities requiring City approval (City of Rosemead 2010).

City of South El Monte General Plan

The City of South El Monte's General Plan Resource Management Element includes goals and policies related to water resources that would be applicable to the Proposed Project. Goals include practicing water conservation at a city level and minimizing the amount of trash that enters the waste stream (City of South El Monte 2000).

3.9.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, 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;
- ◆ 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;
- ◆ Otherwise substantially degrade water quality;

- ◆ Place within a 100-year flood hazard area structures that would impede or redirect flood flows; or
- ◆ Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

3.9.4 Environmental Impacts

Overall hydrology and water quality impacts associated with project implementation are related to earthmoving (grading) associated with construction. Earthmoving associated with construction would increase the potential for erosion and sedimentation downgradient from the project sites. In addition, new development on the project sites 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.

3.9.4.1 Water Quality Standards/Waste Discharge Requirements

Threshold: Would the project violate any water quality standards or waste discharge requirements?

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 off-site in overland flow, could degrade surface and groundwater quality. In the event of heavy rainfall, flow from construction areas could flow off-site and reach nearby surface waters potentially degrading water quality.

Projects that disturb one or more acres of soil or projects that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (General Permit). Even though some individual projects would impact less than one acre, the overall Proposed Project would disturb more than one acre. Therefore, the Proposed Project would be subject to the requirements of a General Permit. Construction activities subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities. The General Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would list Best Management Practices (BMPs) to prevent construction pollutants and products from violating any water quality standard or waste discharge requirement.

Impacts associated with construction would be short-term and with implementation of Mitigation Measure H-1 impacts would be less than significant.

Stormwater BMPs would be constructed as part of the drainage plans for each project, as appropriate. Surface runoff from proposed trails and paved areas would be directed to adjacent unpaved areas where runoff would flow through stormwater management features such as bioswales aimed to improve the water quality of surface runoff. As such, a beneficial impact to water quality is anticipated during project operation compared to the existing condition. Permanent stormwater controls (e.g., bioswales) would be inspected and maintained by the County of Los Angeles. Impacts would be less than significant.

3.9.4.2 Groundwater

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)?

The Proposed Project is not considered a water intensive use and would only require minimal amounts of water during construction and during project operation for maintenance activities and landscaping irrigation. Native plants would be used to the greatest extent possible, which would only require irrigation while they are established. The Proposed Project would not result in the depletion of groundwater. Impacts would be less than significant.

Groundwater recharge impacts occur when natural ground cover that allows percolation to occur is covered with an impervious surface. No groundwater recharge impacts are expected from projects that would be located in areas with existing paved surfaces or from projects that would include permeable surfaces, such as soft surface trails. Projects that would construct impervious surfaces in areas with existing natural ground cover can potentially result in groundwater recharge impacts. However, it is expected that groundwater recharge impacts would be minimal because proposed impervious surfaces (e.g. asphalt bicycle trails) would be located adjacent to unpaved areas (e.g. landscaping, bioswales, etc.) where runoff would flow to and ground percolation would continue to occur. Impacts would be less than significant.

3.9.4.3 Drainage Patterns

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, siltation, or flooding on- or off-site?

The majority of the proposed recreational facilities would be constructed within or along existing roadways, roadway shoulders, or on access roads along flood control channels. During construction, grading of project sites would be required; however, drainage patterns would not be significantly altered from the existing conditions. Furthermore, the Proposed Project would include drainage systems designed to address existing erosion, siltation, and flooding issues at various project sites resulting in a beneficial impact. The project proponent would also implement Mitigation Measure H-1, which would require that construction controls (BMPs) be implemented during and after construction. These construction controls would help minimize or eliminate potential sources of polluted runoff including erosion and/or siltation. Impacts would be less than significant.

3.9.4.4 Stormwater Runoff and Flow Rates

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?

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The development of recreational facilities and access infrastructure would result in the increase of impervious surfaces. This increase in impervious surfaces would change the amount of runoff and the rate at which it flows off the project sites. Drainage plans for the projects would be designed by a registered civil engineer to safely retain, detain, and or convey stormwater runoff. Impacts would be less than significant.

3.9.4.5 Water Quality

Threshold: Would the project otherwise substantially degrade water quality?

The development of recreation facilities and access infrastructure can potentially affect water quality due to possible contaminants that could end up in surface runoff. Potential contaminants include fertilizers and chemicals associated with landscaping, as well as oil and grease associated with construction and maintenance vehicles and equipment. A SWPPP would be prepared for the Proposed Project, listing BMPs to prevent pollutants and products from violating any water quality standard or waste discharge requirement. With implementation of Mitigation Measure H-1 impacts would be less than significant. Furthermore, the Proposed Project would install permanent stormwater controls (e.g., bioswales) aimed at treating potentially contaminated (e.g., silt, erosion, horse manure) surface runoff originating from project facilities. Impacts during operation are anticipated to be less than significant and beneficial compared to the existing condition.

3.9.4.6 100-Year Flood Hazard Area

Threshold: Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?

As previously discussed in Section 3.9.1.2, Project 6 would be located within a 100-year flood zone (FEMA 2016). Project 6 is the San Gabriel Boulevard/Rio Hondo Bike Trail Connector. Project 6 proposes to fill in the missing gap between the northern and southern portions of the Rio Hondo Class I bicycle path with a Class IV bikeway. This would be achieved by restriping the existing traffic lanes and relocation the median of the San Gabriel Boulevard Bridge over the Rio Hondo. Due to the nature of the proposed improvements (restriping) this project would not impede or redirect flows. No impact would occur.

3.9.4.7 Flooding as a Result of the Failure of a Levee or Dam

Threshold: Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

As previously stated in Section 3.9.1.2, the Santa Fe Dam inundation area would encompass all Emerald Necklace projects (City of El Monte 2011). The Santa Anita Dam inundation area would encompass Project 3 (City of Arcadia 2010). The Puddingstone Dam inundation area would encompass all San Jose Creek Projects, all Whittier Narrows Projects, and Project 12 of the Westside area (City of Industry 2014). The State Department of Water Resources Division of Safety of Dams (DSOD) regulates and monitors dams for structural safety. Compliance with the DSOD requirements by the USACE for the Santa Fe Dam and by the County of Los Angeles for

the Puddingstone Dam and the Santa Anita Dam would reduce the potential for dam failure. Furthermore, the proposed recreational facilities and access infrastructure would not be significantly affected if a dam were to fail because of the nature of the structures that are proposed (e.g., bicycle and multi-use trails; access ramps). Impacts would be less than significant.

3.9.5 Mitigation Measures

H-1: Prior to ground disturbing activities or any activity affecting federal or state waters, the Watershed Conservation Authority (WCA) shall submit for approval to the State Water Resources Control Board, a Notice of Intent (NOI) to be covered under a National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity (General Permit) in compliance with Section 402 of the Clean Water Act. As part of the General Permit, the WCA shall prepare a Storm Water Pollution Prevention Plan (SWPPP) which will: (1) require implementation of Best Management Practices (BMPs) so as to prevent a net increase in sediment load in stormwater discharges relative to preconstruction levels; (2) prohibit discharges of stormwater or non-stormwater at levels which would cause or contribute to an exceedance of any applicable water quality standard contained in the regional basin plan; (3) discuss in detail the BMPs for the project related to control of sediment and erosion, non sediment pollutants, and potential pollutants in non-stormwater discharges; (4) describe post-construction BMPs for the project; (5) explain the monitoring and maintenance program for the project's BMPs; (6) require reporting of violations to the RWQCB; and (7) list the parties responsible for SWPPP implementation and BMP maintenance both during and after construction. Upon acceptance of the NOI by the State Board, the WCA shall implement the SWPPP and will modify the SWPPP as directed by the Storm Water Permit.

3.9.6 Residual Impacts After Mitigation

Impacts would be less than significant after mitigation.

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3.10 LAND USE AND PLANNING

This section describes the environmental and regulatory setting for land use and planning, including applicable plans, policies, regulations, and/or laws, and existing land use designations. This section also described the land use impacts at the program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

The Emerald Necklace Implementation Plan – Phase I Initial Study determined that the Proposed Project would not divide an established community. This issue is not discussed further in this section.

3.10.1 Environmental Setting

The Proposed Project is located in the cities of Arcadia, El Monte, Industry, Irwindale, Rosemead, and South El Monte, all of which are members of the San Gabriel Valley Council of Governments (SGVCOG), one of the 13 sub-regional organizations that make up the Southern California Association of Governments (SCAG) (SGVCOG 2016).

3.10.1.1 Existing Land Uses

Quarry Clasp

The Quarry Clasp project area is located along the northern end of the Proposed Project within the cities of Arcadia and El Monte and in an unincorporated area of the County of Los Angeles. The Quarry Clasp project area and its surroundings are characterized by single family residential, industrial, public institutional, open space and mining (quarries) land uses (City of Irwindale 2008; City of Arcadia 2010; City of El Monte 2011).

Whittier Narrows

The Whittier Narrows project area is located along the southern end of the Proposed Project within unincorporated areas of Los Angeles County and partially within the City of Industry. This area and its surroundings are characterized by recreational and agricultural open space, and light industrial land uses (City of Industry 2012; County of Los Angeles 2016a).

San Jose Creek

The San Jose Creek project area is located along the southeastern side of the Proposed Project within unincorporated areas of Los Angeles County (Avocado Heights and Bassett) and the City of Industry. This area and its surroundings are characterized by recreational and open space land uses (City of Industry 2014; County of Los Angeles 2016a).

Westside

The Westside project area is located along the western side of the Proposed Project within unincorporated areas of Los Angeles County and the cities of El Monte, Rosemead, and South El Monte. This area and its surroundings are characterized by open space and public facilities land

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uses (City of El Monte 2011; City of Rosemead 2010; City of South El Monte 2000; County of Los Angeles 2016a).

3.10.1.2 Land Use Designations

Table 3.10-1. Project General Plan Designations, Jurisdiction, and Zoning

PROJECT COMPONENT	GENERAL PLAN DESIGNATION	JURISDICTION	ZONING
Quarry Clasp			
Project 1	Industrial (0.5 FAR)	City of Arcadia	City of Arcadia – Planned Industrial District (M-1)
Project 2	Industrial (0.5 FAR) (Arcadia); Quarry Overlay (Irwindale)	City of Arcadia; City of Irwindale	City of Arcadia – Planned Industrial District (M-1) within Clark St right-of-way; City of Irwindale – Heavy Manufacturing (M-2)
Project 3	Industrial (0.5 FAR) (Arcadia); Quarry Overlay (Irwindale)	City of Arcadia; City of Irwindale	City of Arcadia – Planned Industrial District (M-1); City of Irwindale – Light Manufacturing within Peck Road right-of-way
Whittier Narrows			
Project 5	O – Open Space W – Water	Los Angeles County	Open Space (O-S) within Rosemead Boulevard right-of-way
Project 6	O – Open Space	Los Angeles County	Light Agriculture (A-1) and Open Space (O-S) within San Gabriel Boulevard right-of-way
Project 7	O – Open Space	Los Angeles County	Open Space (O-S)
Project 8	W – Water	Los Angeles County	Open Space (O-S); Light Agriculture (A-1-5)
Project 9	W – Water	Los Angeles County	Open Space (O-S)
San Jose Creek			
Project 10	O – Open Space	Avocado Heights (Los Angeles County); Los Angeles County; City of Industry	Los Angeles County – Heavy Agriculture (A-2-5), Light Agriculture (A-1-5), City of Industry – Commercial (C)

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PROJECT COMPONENT	GENERAL PLAN DESIGNATION	JURISDICTION	ZONING
Project 11	Recreation/Open Space	City of Industry; Avocado Heights (Los Angeles County)	Los Angeles County – Heavy Agriculture (A-2-5); City of Industry – Between Industrial (I) and Commercial (C); Avocado Heights (Los Angeles County) – Light Agricultural (A-1-10000)
Westside			
Project 12	O – Open Space (LA County); Office/Light Industrial (Rosemead)	Los Angeles County; City of Rosemead	Los Angeles County – Open Space (O-S); City of Rosemead – Open Space (O-S)
Project 13	Office Professional; Public Facilities	City of El Monte	Office Professional (O-P)
Project 14	Public Facilities	City of South El Monte	Drainage/River
Project 15	Public Facilities	City of El Monte	Drainage/River; Transitway; RR
Project 16	Public Facilities	City of El Monte	Drainage/River

Sources: (City of Arcadia 2010; City of El Monte 2011 and 2015; City of Industry 2014; City of Irwindale 2008; City of Rosemead 2010; City of South El Monte 2000; County of Los Angeles 2016a)

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, regulation, and/or laws related to land use are applicable to the Proposed Project.

3.10.2.3 Regional

The 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

General Plan

Within incorporated cities in the project area, land use planning is provided by general plans developed by each municipality. Within unincorporated communities of Los Angeles County, land use planning is provided by the Los Angeles County General Plan. The purpose of general plans is to guide future development by establishing goals and policies concerning seven elements that are required by state law. These elements include: land use, circulation, housing, conservation, open space, noise, and safety. General plans include descriptions and maps of where certain types of land uses and their intensity are allowed.

Table 3.10-2 summarizes the local general plan policies relevant to the Proposed Project. Documents from the municipalities located in the project area were reviewed to identify the consistency of the Proposed Project land uses with the local general plan and zoning designations.

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Table 3.10-2. Local General Plan Policies

JURISDICTION	LOCAL GENERAL PLAN POLICIES
Los Angeles County	<p>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 2015a). The Land Use Element presents the long-term land use plan for the County. The Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. The Parks and Recreation Element provide policy direction for the maintenance and expansion of the County's parks and recreation system.</p> <p>The County of Los Angeles Bicycle Master Plan, a sub-element of the Transportation Element of the County General Plan, contains goals and policies that look to create an expanded, improved, and interconnected system of County bikeways and bikeway support facilities. These goals look to establish safety, education, encouragement programs, community support, and funding for this system of bikeways throughout the County.</p>
City of Arcadia	<p>The City of Arcadia General Plan includes policies to preserve existing open space and maintain recreational areas (General Plan Strategies CD-29 through CD-31) as well as to provide park facilities and recreation areas that are appropriate for their location and reflect the needs and interests of the population they serve (FS-31).</p>
City of El Monte	<p>The City of El Monte General Plan contains policies to provide and maintain open space areas and recreational facilities along the Emerald Necklace. The policies strive to support, through a cooperative public/private/regional partnership, the realization of the Emerald Necklace Vision Plan.</p>
City of Industry	<p>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 (Goal RM3). It also strives, through regional efforts, to upgrade the resource and recreational value of the San Gabriel River (General Plan Policies RM3-1 through RM3-5).</p>
City of Irwindale	<p>The City of Irwindale's General Plan Land Use Element identifies the Quarry Overlay land use designation to support Commercial-Recreation, Residential-Business Park, Industrial-Business Park, and Open Space land uses.</p>
City of Rosemead	<p>The City of Rosemead General Plan's vision seeks to enhance parks and recreational space in underserved neighborhoods. The Resources Management Element of the General Plan includes a goal that seeks to provide high-quality parks, recreation, and open space facilities to meet the needs of all Rosemead residents (General Plan Goal RM-1).</p>

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JURISDICTION	LOCAL GENERAL PLAN POLICIES
<p align="center">City of South El Monte</p>	<p>The City of South El Monte General Plan includes policies to provide a local bicycle path link to the Whittier Narrows Recreation Area (Policy 4.2), to investigate opportunities to create small neighborhood “pocket” parks in the north half of the City, including areas adjacent to the San Gabriel River (Policy 1.2), and sets forth goals that strive to provide local public park space at a ratio of 2 acres of park land per 1,000 City residents.</p>

Sources: (County of Los Angeles 2015a; County of Los Angeles Bicycle Master Plan 2012; City of Arcadia 2010; City of El Monte 2011; City of Industry 2014; City of Irwindale 2008; City of Rosemead 2010; City of South El Monte 2000)

3.10.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have significant effect on the Land Use and Planning environment if it would:

- ◆ Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- ◆ Conflict with any applicable habitat conservation plan or natural community conservation plan.

3.10.4 Environmental Impacts

3.10.4.1 Conflicts with Applicable Land Use Plans, Policies, or Regulations

Threshold: Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

All projects, except Projects 2 and 3, would be located in areas designated as open space, recreation, or public facilities where the Proposed Project land uses would be allowed. Projects 2 and 3 would be located on sites with Industrial (Quarry Overlay) land use designations within the City of Irwindale (City of Irwindale 2008). The City of Irwindale’s General Plan Land Use Element identifies the Quarry Overlay land use designation to support Commercial-Recreation, Residential-Business Park, Industrial-Business Park, and Open Space land uses (City of Irwindale 2008). Therefore, recreational land uses, such as those proposed, are allowed in this area. The implementation of the Proposed Project would be consistent with local general plans. No impact would occur.

3.10.4.2 Conflicts with Applicable Habitat Conservation Plans or Natural Community Conservation Plans

Threshold: Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

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The Significant Ecological Area (SEA) program, part of the County General Plan Conservation/Open Space Element, designates areas where the County deems it important to facilitate balance between development and resource conservation. The County of Los Angeles has designated 62 sites as SEAs. These sites usually contain wildlife corridors as well as habitat blocks. The SEAs 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 Puente Hills SEA is generally located in the Whittier Narrows Recreation Area and along portions of the San Gabriel River and San Jose Creek. Projects 6, 7, 8, 9, 10, 11, and 12 would be located within the Puente Hills SEA. The Quarry Clasp and the majority of the Westside Projects are not within a SEA. The Rio Hondo Wildlife Sanctuary SEA is located approximately one mile to the south of the Proposed Project.

The Rio Hondo River, San Jose Creek, and San Gabriel River connect all of the project areas and could support wildlife movement corridors. The San Gabriel River flows from and links to the San Gabriel Mountains and is considered an important wildlife linkage and resident habitat area for regional wildlife populations. Wildlife using the rivers as corridors has the potential to use the project areas as part of the corridor as well. Because much of the course of these rivers are channelized and lined with cement, these reaches are considered to be a little value to larger wildlife, such as mountain lions. They are, however, suitable for more urban species such as coyotes (ECORP 2016b).

Recreational uses, such as hiking and wildlife watching are compatible by definition with the long-term sustainability of biological resources within the SEAs (County of Los Angeles 2015a). Projects 6, 8, 9, 10, and 11 are all infrastructure projects (bicycle paths, multi-use trails, and bridges) that would support recreational uses, such as hiking and wildlife watching. As such, these projects would not conflict with the County of Los Angeles SEA program. No impact would occur.

3.10.5 Mitigation Measures

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

3.10.6 Residual Impacts After Mitigation

Any residual land use impacts would be less than significant.

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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 and regulatory settings 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 (Urban Crossroads, Inc. 2016c). The technical report is provided in Appendix F and summarized below.

3.11.1 Environmental Setting

3.11.1.1 Fundamentals of Noise and Vibration

Noise has been simply defined as “unwanted sound.” Sound becomes unwanted when it interferes with normal activities, causes actual physical harm, or has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. Figure 3.11-1 summarizes the typical noise levels and their subjective loudness and effects.

Figure 3.11-1. Typical Noise Levels

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	SPEECH INTERFERENCE
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80	LOUD	SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70		
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60	MODERATE	SLEEP DISTURBANCE
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50		
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: U.S. EPA Office of Noise Abatement and Control 1974

Range of Noise

Because the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 dB indicates a sound energy 10 times greater than before, which is perceived by the human ear as being roughly twice as loud. The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). A normal conversation is roughly at 60 dBA at three feet, while loud jet engine noises equate to 110 dBA at approximately 100 feet, which can cause serious discomfort. Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent sound level (Leq). Equivalent sound levels are not measured directly, but rather, are calculated from sound pressure levels typically measured in dBA. Leq represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment.

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L_{50} , L_{25} , L_8 , and L_2 , are commonly used. The percentile noise descriptors are the noise levels equaled or exceeded during 50 percent, 25 percent, 8 percent, and 2 percent of a stated time. Sound levels associated with the L_2 and L_8 typically describe transient or short-term events, while levels associated with the L_{50} describe the steady state (or median) noise conditions. While the L_{50} describes the mean noise levels occurring 50 percent of the time, the Leq accounts for the total energy (average) observed for the entire hour. Therefore, the Leq noise descriptor is generally 1 to 2 dBA higher than the L_{50} noise level.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Day-Night Average Noise Level (L_{DN}) and the Community Noise Equivalent Level (C_{NEL}), representing a composite 24-hour noise level, is utilized. The L_{DN} and C_{NEL} are weighted averages of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The L_{DN} time of day corrections include the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. The C_{NEL} time of day corrections require the addition of 5 dB to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., in addition to the corrections for the L_{DN} . These additions are made to account for the noise sensitive time periods during the evening and night hours, when sound appears louder. L_{DN} and C_{NEL} do not represent the actual sound level heard at any particular time, but rather represent the total sound exposure. The County of Los Angeles relies on the 24-hour C_{NEL} to assess land use compatibility with transportation related noise sources; therefore, this analysis uses the C_{NEL} noise level to apply the more conservative evening hour corrections to the 24-hour noise levels.

Vibration

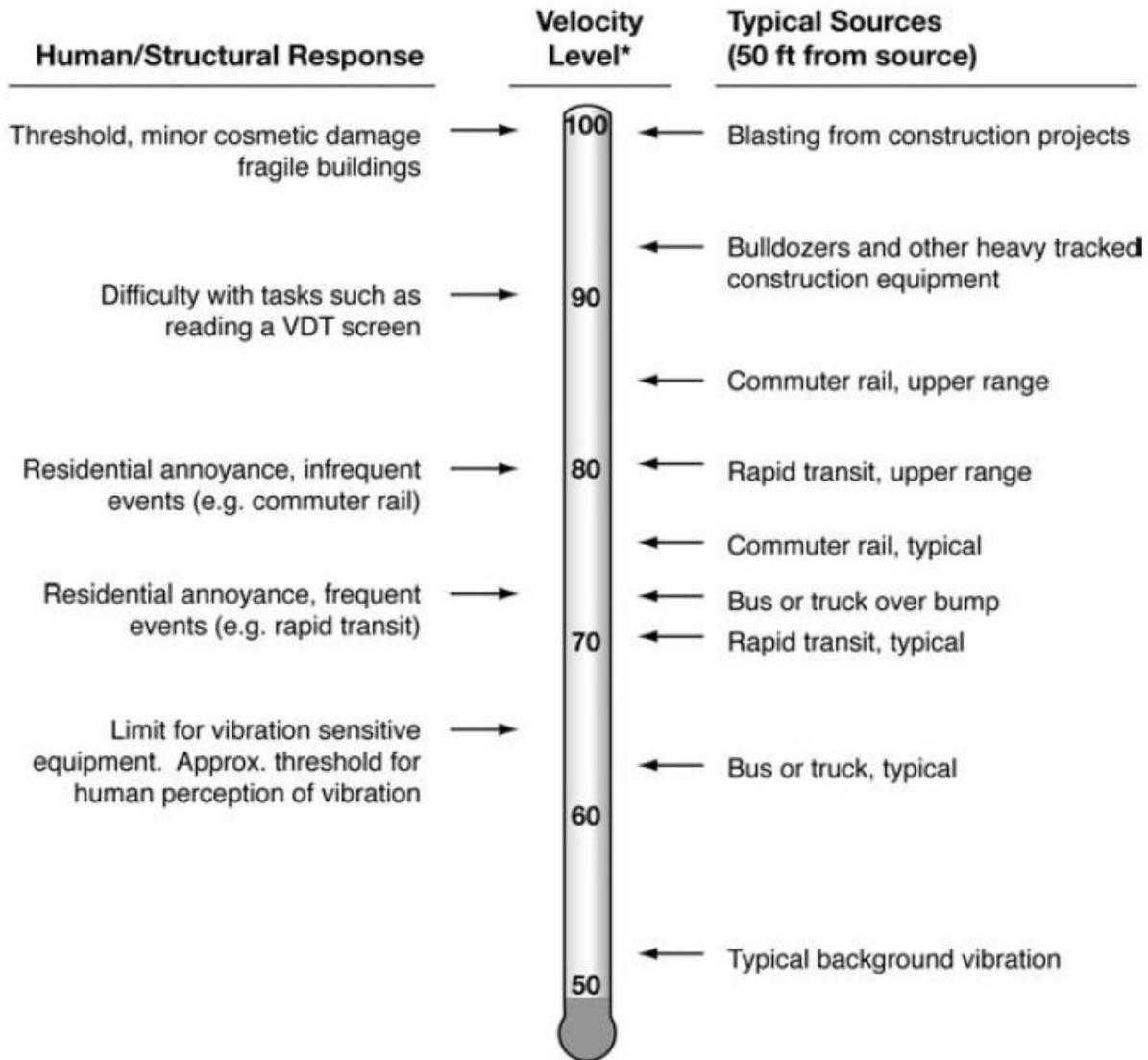
According to the U.S. Department of Transportation, Federal Transit Administration’s (FTA) Transit Noise Impact and Vibration Assessment (FTA 2006), vibration is the periodic oscillation

of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (such as factory machinery) or transient (such as explosions). As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings, but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal, and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. VdB serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by human-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Figure 3.11-2 illustrates common vibration sources and the human and structural response to ground-borne vibration.

Figure 3.11-2. Typical Levels of Ground-Borne Vibration



* RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second

Source: FTA 2006

Noise Measurement Locations

To assess the existing noise level environment, ten 24-hour noise level measurements were taken at sensitive receiver locations in the Proposed Project study area. The receiver locations were selected to describe and document the existing noise environment within the Proposed Project study area. Figure 3.11-3 provides the boundaries of the study area and the noise level measurement locations.

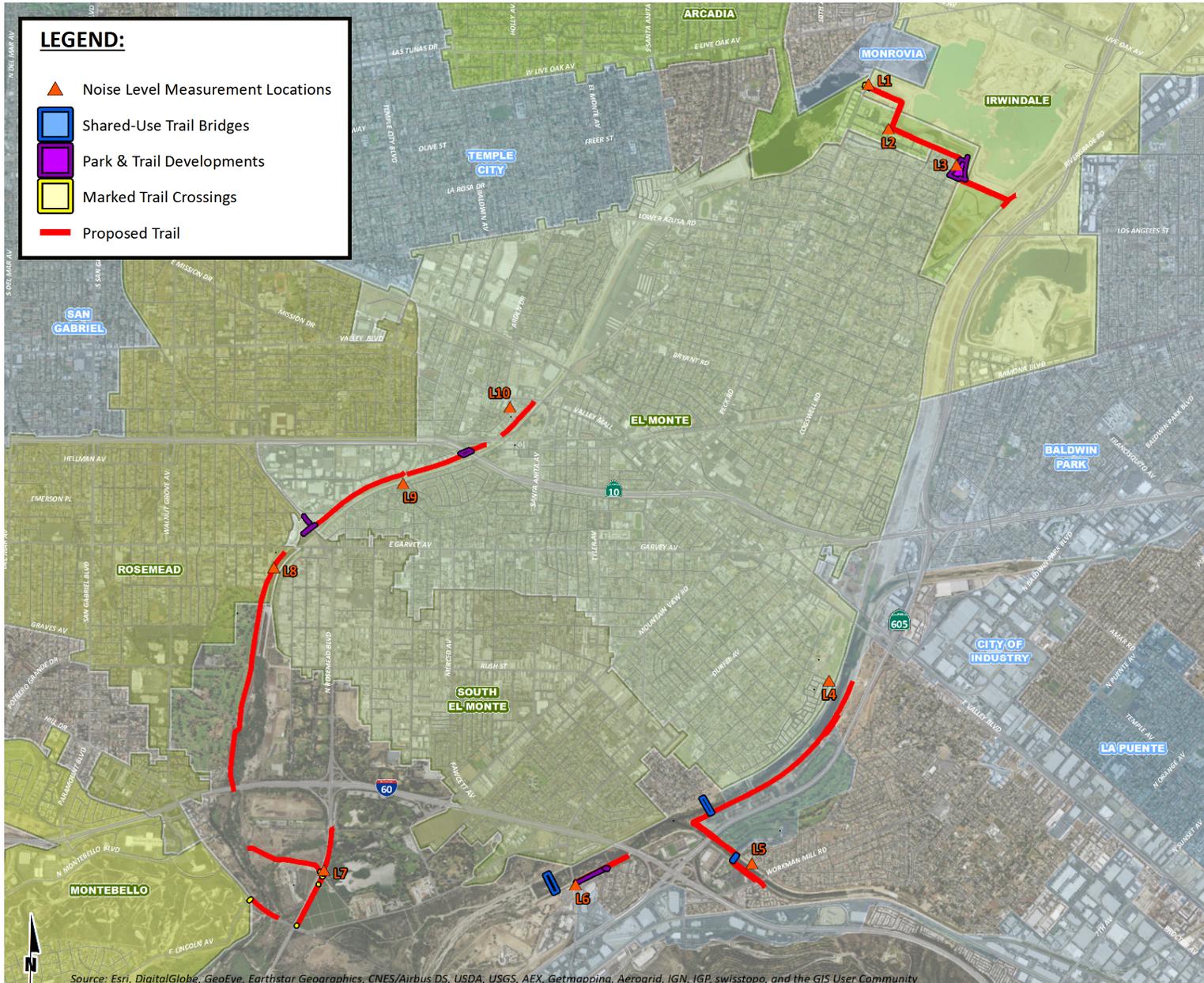
The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the project site. To describe the existing noise environment, it is not necessary to collect measurements at each individual receiver location, because each receiver measurement represents a group of receivers that share acoustical equivalence. In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and were used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Proposed Project noise levels and is necessary to assess the potential project-related noise level contributions.

3.11.1.2 Noise Measurement Results

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}), which represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 3.11-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. The average median noise level (dBA L_{50}) at each measurement location is included in Table 3.11-1 consistent with the County of Los Angeles percentile noise level standards.

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Location: N:\12012\2012-096 Emerald Necklace Program EIR\MAPS\Borders\Noise Measurement Locations Border.mxd (44_8/5/2016) - mapping_quest



Map Date: 8/5/2016

Photo (or Base) Source: Urban Crossroads 2016

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Table 3.11-1. Long-Term (24-Hour) Ambient Noise Level Measurements

ID ¹	DISTANCE TO PROJECT (FEET)	CITY/JURISDICTION	DESCRIPTION	ENERGY AVERAGE HOURLY NOISE LEVEL (DBA LEQ)		AVERAGE MEDIAN NOISE LEVEL (DBA L ₅₀)		C _{NEL}
				DAYTIME	NIGHT-TIME	DAYTIME	NIGHT-TIME	
L1	75	Irwindale	Located on Peck Road near the proposed trail and future Peck Road trail crossing.	72.3	68.0	68.7	58.4	75.7
L2	100	Arcadia	Located west of the proposed trail on Clark Street near existing industrial land uses.	63.0	57.0	51.0	49.9	65.2
L3	20	Arcadia	Located at the proposed Quarry Clasp Park on Durfee Avenue near existing residential homes.	56.3	63.0	49.9	58.2	69.0
L4	720	El Monte	Located west of the proposed trail at property line between Mountain View High School and the existing Brookside mobile home park.	50.7	52.0	47.8	49.8	58.4
L5	320	County of Los Angeles	Located east of the proposed trail and shared-use bridge near existing residential homes on Rolling Greens Way.	56.8	56.4	54.9	55.0	63.2
L6	0	County of Los Angeles	Located on Peck Road near existing industrial land uses south of the proposed trail.	71.3	68.3	68.2	61.1	75.7
L7	0	County of Los Angeles	Located on Rosemead Boulevard at the proposed trail location near Legg Lake and the Whittier Narrows Water Reclamation Plant.	76.1	72.7	72.0	64.6	80.1
L8	0	Rosemead	Located in the Garvey Community Center parking lot adjacent to an existing trail and the proposed Emerald Necklace trail.	58.2	54.8	51.0	53.2	62.0
L9	280	El Monte	Located south of the proposed trail on Brockway Street adjacent to existing residential homes.	56.2	52.9	47.8	48.2	60.3
L10	465	El Monte	Located west of the proposed trail at the entrance to the Santa Fe Mobile Park on Esto Avenue.	63.2	56.1	55.7	49.6	64.9

Source: Urban Crossroads 2016c

¹ Refer to Figure 3.11-3 for the noise level measurement locations.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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3.11.2 Regulatory Environment

3.11.2.1 State

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element, which is to be prepared in accordance to guidelines adopted by the Governor's Office of Planning and Research (OPR). The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, CEQA requires that all known environmental effects of a project be analyzed, including the potential environmental noise impacts.

3.11.2.2 Local

County of Los Angeles General Plan Noise Element

The County of Los Angeles has adopted a General Plan, which includes a Noise Element to reduce and limit the exposure of the general public to excessive noise levels. The Noise Element specifies the goals and policy direction to manage noise in the County. To protect County of Los Angeles residents from excessive noise, the Noise Element contains the following goal and policies related to the Proposed Project:

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 (C_{NEL} or L_{DN}) 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 1.8: Minimize noise impacts to pedestrians and transit-riders in the design of transportation facilities and mobility networks.
- 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 C_{NEL} and above, when unavoidable impacts are identified.
- Policy N 1.10: Orient residential units away from major noise sources (in conjunction with applicable building codes).

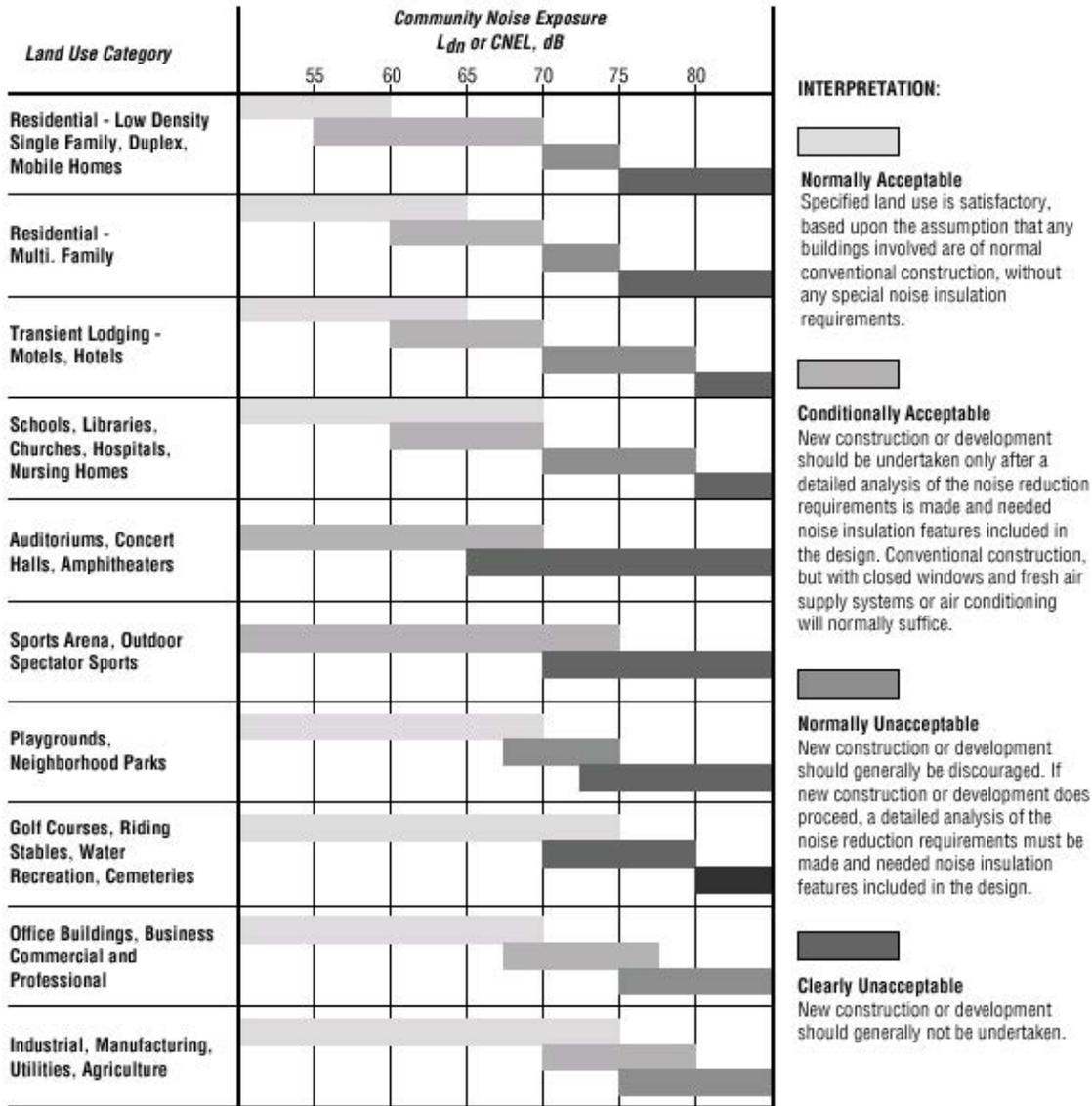
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- Policy N 1.11: Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.
- Policy N 1.12: Decisions on land adjacent 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.

While the County of Los Angeles General Plan provides background and noise fundamentals, the County does not identify criteria to assess the impacts associated with on-site transportation-related noise impacts for the Proposed Project. In addition, the County of Los Angeles General Plan Noise Element, Section III, Issues, does not identify the land uses of the Proposed Project as noise-sensitive. Therefore, for the purpose of this analysis, transportation-related noise criteria are derived from standards contained in the OPR General Plan Guidelines. Figure 3.11-4 below shows the land use/noise compatibility criteria that is used by many California cities and counties and specifies the maximum noise levels allowable for new developments impacted by transportation noise sources.

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Figure 3.11-4. OPR Noise Compatibility Criteria



Source: OPR 2003

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Within Figure 3.11-4, the land uses associated with the Proposed Project are considered “playgrounds and neighborhood parks” and are considered normally acceptable with unmitigated exterior noise levels of less than 70 dBA C_{NEL}. For conditionally acceptable exterior noise levels approaching 75 dBA C_{NEL}, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features are included in the design.

Construction Noise Standards

The applicable Municipal Code construction noise level standards from each potentially affected County/city jurisdiction are provided in Table 3.11-2. These standards were used in this analysis to determine potential construction-related impacts associated with the Proposed Project. Because several of the potentially affected cities do not maintain construction noise level standards, the County of Los Angeles standards are considered to be acceptable thresholds for determining the potential noise impacts from Proposed Project construction.

Table 3.11-2. Construction Noise Standards by Jurisdiction

JURISDICTION	MUNICIPAL CODE (MC)/ GENERAL PLAN (GP) SECTION	PERMITTED HOURS OF CONSTRUCTION ACTIVITY	CONSTRUCTION ACTIVITY EXEMPT FROM NOISE STANDARDS?	CONSTRUCTION NOISE LEVEL STANDARDS
County of Los Angeles	12.08.440	7:00 a.m. to 7:00 p.m. on weekdays; no activity allowed on Sundays or holidays	No	See Tables 3.11-3 and 3.11-4
Irwindale	9.25.110	7:00 a.m. to 7:00 p.m. on any day	No	Stationary Limits + 5 dBA
Arcadia	GP EIR Chapter 4.11	7:00 a.m. to 7:00 p.m. Mondays through Saturdays; no work on Sundays or major holidays	No	n/a
El Monte	8.36.050 (C)	6:00 a.m. to 7:00 p.m. Mondays through Fridays; 8:00 a.m. to 7:00 p.m. on Saturdays and Sundays	No	n/a
South El Monte	8.20.030 (D)	7:00 a.m. to 10:00 p.m. on weekdays; no activity allowed on weekends and holidays	Yes	Stationary Limits

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JURISDICTION	MUNICIPAL CODE (MC)/ GENERAL PLAN (GP) SECTION	PERMITTED HOURS OF CONSTRUCTION ACTIVITY	CONSTRUCTION ACTIVITY EXEMPT FROM NOISE STANDARDS?	CONSTRUCTION NOISE LEVEL STANDARDS
Rosemead	8.36.030 (A) (3)	7:00 a.m. to 8:00 p.m. on weekdays and Saturdays; no activity allowed on Sundays or holidays	Yes	65 dBA Leq + Stationary Limits
Montebello	15.48.280	7:00 a.m. to 6:00 p.m. on any day; no activity allowed on Sundays	No	n/a

Source: Urban Crossroads 2016c

"n/a" = Jurisdiction's municipal code does not specify any construction noise level standard

To help abate noise impacts, the County of Los Angeles has established limits for construction hours. Section 12.08.440 of the Los Angeles County Municipal Code indicates that construction activities are permitted between the hours of 7:00 a.m. to 7:00 p.m. on weekdays, with no activity allowed on Sundays or holidays. In addition, the County of Los Angeles identifies specific noise level standards for mobile and stationary construction equipment, as shown on Tables 3.11-3 and 3.11-4, respectively. The mobile construction equipment noise level standard of 75 dBA Lmax for single-family residences is used as a conservative threshold to assess the potential impacts related to construction of the Proposed Project.

Table 3.11-3. County Mobile Construction Equipment Noise Standards

TYPE	RECEIVING LAND USE CATEGORY	TIME PERIOD	MAXIMUM NOISE LEVELS (DBA LMAX) ¹
I	Single-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	75
		Nighttime (8:00 p.m. - 7:00 a.m.)	60
II	Multi-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	80
		Nighttime (8:00 p.m. - 7:00 a.m.)	64
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 8:00 p.m.)	85
		Nighttime (8:00 p.m. - 7:00 a.m.)	70

Source: Los Angeles County Municipal Code, Section 12.08.440

¹Maximum noise levels for nonscheduled, intermittent, short-term (less than 10 days) operation of mobile equipment.

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Table 3.11-4. County Stationary Construction Equipment Noise Standards

TYPE	RECEIVING LAND USE CATEGORY	TIME PERIOD	MAXIMUM NOISE LEVELS (DBA LMAX)¹
I	Single-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	60
		Nighttime (8:00 p.m. - 7:00 a.m.)	50
II	Multi-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	65
		Nighttime (8:00 p.m. - 7:00 a.m.)	55
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 8:00 p.m.)	70
		Nighttime (8:00 p.m. - 7:00 a.m.)	60

Source: Los Angeles County Code, Section 12.08.440

¹Maximum noise levels for repetitively scheduled and relatively long-term (period of 10 days or more) operation of stationary equipment.

Operational Noise Standards

Although the Proposed Project's land uses are located within the County of Los Angeles, stationary noise levels due to operation of the Proposed Project would affect nearby off-site sensitive receiver locations in the adjacent cities of Irwindale, Arcadia, El Monte, South El Monte, Rosemead, and Montebello. The applicable Municipal Code operational noise level standards from each potentially affected jurisdiction are provided in Table 3.11-5 to determine the most conservative criteria to assess the potential Project-related impacts. While each jurisdiction has its own operational noise standards, the County of Los Angeles standards represent the most restrictive threshold for determining the potential impacts of the Proposed Project at nearby receiver locations. Therefore, this analysis uses the County of Los Angeles 50 dBA L₅₀ daytime and 45 dBA L₅₀ nighttime noise level standards for residential land uses to evaluate the Project-related noise sources such as pedestrians, bicycles, and equestrian activities.

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Table 3.11-5. Operational Noise Standards by Jurisdiction

JURISDICTION	LAND USE	TIME PERIOD	EXTERIOR NOISE LEVEL STANDARDS ¹							
			LEQ (HOURLY)	L ₅₀ (30 MINS)	L ₂₅ (15 MINS)	L ₁₇ (10 MINS)	L ₈ (5 MINS)	L ₃ (2 MIN)	L ₂ (1 MIN)	L _{MAX} (<1 MIN)
County of Los Angeles ²	Residential (Noise Zone II)	7:00 a.m. to 10:00 p.m.	-	50	55	-	70	-	65	70
		10:00 p.m. to 7:00 a.m.	-	45	50	-	65	-	60	65
Irwindale ³	Residential	7:00 a.m. to 10:00 p.m.	50	-	-	-	-	-	-	-
		10:00 p.m. to 7:00 a.m.	45	-	-	-	-	-	-	-
Arcadia ⁴	Residential	7:00 a.m. to 10:00 p.m.	-	55	60	-	65	-	-	70
		10:00 p.m. to 7:00 a.m.	-	50	-	-	-	-	-	-
El Monte ⁵	Single-Family Residential	7:00 a.m. to 10:00 p.m.	-	50	55	-	60	-	-	65
		10:00 p.m. to 7:00 a.m.	-	45	50	-	55	-	-	60
	Multi-Family Residential	7:00 a.m. to 10:00 p.m.	-	55	60	-	65	-	-	70
		10:00 p.m. to 7:00 a.m.	-	50	55	-	60	-	-	65
South El Monte ⁶	One or Two Family Residential Zone	7:00 a.m. to 10:00 p.m.	-	55	60	-	65	-	70	75
		10:00 p.m. to 7:00 a.m.	-	45	50	-	55	-	60	65
	Multi-Dwelling Residential and Public Zone	7:00 a.m. to 10:00 p.m.	-	60	65	-	70	-	75	80
		10:00 p.m. to 7:00 a.m.	-	50	55	-	60	-	65	70

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JURISDICTION	LAND USE	TIME PERIOD	EXTERIOR NOISE LEVEL STANDARDS ¹							
			LEQ (HOURLY)	L ₅₀ (30 MINS)	L ₂₅ (15 MINS)	L ₁₇ (10 MINS)	L ₈ (5 MINS)	L ₃ (2 MIN)	L ₂ (1 MIN)	L _{MAX} (<1 MIN)
Rosemead ⁷	Single, Double, or Multi-Family Residential	7:00 a.m. to 10:00 p.m.	-	60	65	-	70	-	75	80
		10:00 p.m. to 7:00 a.m.	-	45	50	-	55	-	60	65
Montebello ⁸	Residential	7:00 a.m. to 10:00 p.m.	-	65	70	-	75	-	80	85
		10:00 p.m. to 7:00 a.m.	-	60	65	-	70	-	75	80

¹ Leq represents a steady state sound level containing the same total energy as a time-varying signal over a given sample period. The percent noise level is the level exceeded "n" percent of the time during the measurement period. For example, L₂₅ is the noise level exceeded 25 percent of the time.

² Source: Los Angeles County Code, Section 12.08.390.

³ Source: City of Irwindale Municipal Code, Section 9.28.030.

⁴ Source: City of Arcadia Municipal Code, Section 4610.3.

⁵ Source: City of El Monte Municipal Code, Section 8.36.040.

⁶ Source: City of South El Monte Municipal Code, Section 8.20.020.

⁷ Source: City of Rosemead Municipal Code, Section 8.36.060.

⁸ Source: City of Montebello Municipal Code, Section 17.22.110.

Vibration Standards

The County of Los Angeles Municipal Code, Section 12.08.350, identifies a vibration perception threshold of 0.01 in/sec RMS. For the purposes of this analysis, the perception threshold of 0.01 in/sec was used to assess the potential impacts due to construction of the Proposed Project at nearby sensitive receiver locations.

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; and
- ◆ For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

There are no private airstrips within two miles of the project site. Therefore, the Proposed Project would not expose people residing or working in the project area to excessive noise levels associated with a private airstrip. No impact would occur. This issue is not discussed further in this PEIR.

3.11.4 Environmental Impacts

3.11.4.1 Noise

<i>Threshold:</i>	<i>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?</i>
<i>Threshold:</i>	<i>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?</i>
<i>Threshold:</i>	<i>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?</i>

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Threshold: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Construction Noise

As previously stated, the County of Los Angeles construction noise standards are used as an acceptable threshold for determining the potential noise impacts due to construction of the Proposed Project. To help abate noise impacts associated with the construction of projects, the County of Los Angeles has established limits to the hours of operation, as well as identified specific noise level standards for mobile and stationary construction equipment. Based on the planned mix of project construction equipment, the mobile construction equipment noise level standard of 75 dBA Lmax for single-family residential homes is used to assess the potential impacts related to project construction.

For the purposes of the construction-related noise analysis, the individual projects that collectively constitute the Proposed Project have been included in one of four groups (Group A, B, C, or D). Table 3.11-6 below shows the individual projects within each group.

Table 3.11-6. Summary of Projects in Groups A through D

PROJECT NO.	PROJECT NAME	REGIONAL AREA
Group A (Quarry Clasp Park)		
1	Quarry Clasp Park Development	Quarry Clasp
Group B (Long, Linear Trail Development)		
2	Quarry Clasp Multi-Use Trail and Bike Path	Quarry Clasp
5	Class I Bicycle Path on Rosemead Boulevard to Legg Lake	Whittier Narrows
7	Class I Bicycle Path from the Rio Hondo to Legg Lake through the Southern California Edison Easement	Whittier Narrows
8	Pellissier Village Multi-Use Trail from State Route 60 to Peck Road Bridge	Whittier Narrows
12	Alhambra Wash from State Route 60 to the Garvey Community Center	Westside
16	Interstate 10 Freeway Underpass Improvements	Westside
Group C (Smaller Trail Access Improvements)		
3	Peck Road Signalized Crossing and Trail Connectivity	Quarry Clasp
6	Class IV Bikeway from El Bosque del Rio Hondo to Lincoln Avenue on San Gabriel Boulevard	Whittier Narrows
13	Rosemead Boulevard Access Ramp	Westside
14	Rosemead Boulevard Underpass	Westside
15	Multi-Use Trail from Rosemead Boulevard to Valley Boulevard	Westside
Group D (Bridges)		
9	Pellissier Bridge at Blackwill Arena Staging Area	Whittier Narrows
10	Multi-Use Trail and Bridge Connections from the San Jose Creek Trail to San Gabriel River Trail	San Jose Creek

Some of the groups would have the same mix of equipment for specific construction stages; therefore, each unique construction stage is only analyzed once for the purposes of this noise

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analysis. The number and mix of construction equipment is expected to occur in the following stages:

- ◆ Demolition (all groups)
- ◆ Site Preparation (Group A)
- ◆ Site Preparation (Groups B, C, and D)
- ◆ Grading (all groups)
- ◆ Building Construction (Groups A and D)
- ◆ Paving and Site Finishes (all groups)

To determine the Proposed Project’s construction noise levels, measurements were collected for similar activities at several construction sites. Table 3.11-7 provides a summary of 16 construction reference noise level measurements. Because the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 3.11-7 have been adjusted to describe a common reference distance of 50 feet.

Table 3.11-7. Construction Reference Noise Levels

ID	NOISE SOURCE	REFERENCE DISTANCE FROM SOURCE (FEET)	REFERENCE NOISE LEVELS @ REFERENCE DISTANCE		REFERENCE NOISE LEVELS @ 50 FEET ⁶	
			DBA LEQ	DBA LMAX	DBA LEQ	DBA LMAX
1	Truck Pass-Bys & Dozer Activity ¹	30	63.6	68.1	59.2	63.7
2	Dozer Activity ¹	30	68.6	76.4	64.2	72.0
3	Construction Vehicle Maintenance Activities ²	30	71.9	74.8	67.5	70.4
4	Foundation Trenching ²	30	72.6	74.9	68.2	70.5
5	Rough Grading Activities ²	30	77.9	84.8	73.5	80.4
6	Residential Framing ³	30	66.7	76.7	62.3	72.3
7	Water Truck Pass-By & Backup Alarm ⁴	30	76.3	82.3	71.9	77.9
8	Dozer Pass-By ⁴	30	84.0	89.9	79.6	85.5
9	Two Scrapers & Water Truck Pass-By ⁴	30	83.4	89.0	79.0	84.6
10	Two Scrapers Pass-By ⁴	30	83.7	86.9	79.3	82.5
11	Scraper, Water Truck, & Dozer Activity ⁴	30	79.7	87.7	75.3	83.3
12	Concrete Mixer Truck Movements ⁵	50	71.2	73.1	71.2	73.1
13	Concrete Paver Activities ⁵	30	70.0	75.7	65.6	71.3
14	Concrete Mixer Pour & Paving Activities ⁵	30	70.3	76.3	65.9	71.9
15	Concrete Mixer Backup Alarms & Air Brakes ⁵	50	71.6	78.8	71.6	78.8
16	Concrete Mixer Pour Activities ⁵	50	67.7	79.2	67.7	79.2

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ID	NOISE SOURCE	REFERENCE DISTANCE FROM SOURCE (FEET)	REFERENCE NOISE LEVELS @ REFERENCE DISTANCE		REFERENCE NOISE LEVELS @ 50 FEET ⁶	
			DBA LEQ	DBA LMAX	DBA LEQ	DBA LMAX

Source: Urban Crossroads 2016c

¹ As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.

² As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.

³ As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.

⁴ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.

⁵ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

⁶ Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

Table 3.11-8 below shows the project construction phases and the reference construction noise levels used for each phase. As shown in the table, the unmitigated peak construction noise levels are expected to range from 70.5 to 85.5 dBA L_{max} at a distance of 50 feet from the project construction footprint area. Table 3.11-8 also shows the distances from each construction stage to the 75 dBA L_{max} noise level contour, consistent with the County of Los Angeles Municipal Code, which would range from 30 to 167 feet. It is important to note that the construction noise contour boundaries provided in this analysis do not account for any additional attenuation from existing barriers or topography at the adjacent receiver locations in the project study area. The peak unmitigated 75 dBA L_{max} noise level contour boundary encompasses the receiver locations that may perceive the worst-case noise levels when construction activities occur at the property line. Exhibits showing the construction noise level contours are included in Appendix 9.1 of the Noise Impact Analysis (Appendix F to this PEIR). As shown in Table 3.11-8, noise-sensitive land uses within 167 feet of project construction activities have the potential to experience potentially significant noise level impacts, depending on the construction phase and the group of a specific project. Implementation of Mitigation Measures N-1 through N-4 would reduce construction-related noise impacts to a less than significant level.

Table 3.11-8. Unmitigated Construction Equipment Noise Levels by Phase

CONSTRUCTION PHASE	CONSTRUCTION PHASE NOISE LEVELS @ 50 FEET (DBA LMAX)	DISTANCE TO 75 DBA LMAX NOISE LEVEL CONTOUR (FEET) ¹
Demolition (All Groups)	85.5	167
Site Preparation (Group A)	85.5	167
Site Preparation (Groups B, C, and D)	80.4	93
Grading (All Groups)	85.5	167
Building Construction (Groups A and D)	70.5	30
Paving and Site Finishes (All Groups)	79.2	81

Source: Urban Crossroads 2016c

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Operational Noise

As previously discussed, although the Proposed Project is located within the jurisdiction of the County of Los Angeles, stationary noise levels due to the operation of the Proposed Project would also affect nearby off-site sensitive receiver locations in the adjacent cities of Irwindale, Arcadia, El Monte, South El Monte, Rosemead, and Montebello. While each jurisdiction has its own operational noise standards, the County of Los Angeles standards represent an acceptable threshold for determining the potential impacts of the Proposed Project at the nearby receiver locations. For the purposes of this analysis, the County of Los Angeles 50 dBA L₅₀ daytime and 45 dBA L₅₀ nighttime noise level standards for residential land uses are used to evaluate the project-related operational noise sources.

Potential project-related stationary noise sources include: pedestrians, bicycles, and equestrian activities. To estimate the operational noise impacts associated with the Proposed Project, reference noise level measurements were collected from similar types of activities. The reference noise level measurements shown in Table 3.11-9 below. It is important to note that the projected noise levels from operation of the Proposed Project assume the worst-case noise environment, with pedestrians, bicycles, and equestrian activities operating simultaneously. In reality, these noise level impacts would vary throughout the day. To describe the worst-case operational noise levels associated with the Proposed Project, the analysis used a reference noise level of 46.6 dBA L₅₀ at 50 feet and at a height of 5 feet, representing bike and pedestrian activities taken at existing trails and parks in the Emerald Necklace study area. The analysis assumed the trails and parks would be operational during the daytime hours, seven days per week.

Table 3.11-9. Reference Noise Level Measurements

NOISE SOURCE	JURISDICTION(S)	DURATION (H:MM:SS)	DISTANCE FROM SOURCE (FEET)	NOISE SOURCE HEIGHT (FEET)	NOISE LEVEL (DBA L ₅₀)	
					@ REF. DISTANCE	@ 50 FEET
Emerald Necklace Bike and Pedestrian Activities ¹	South El Monte and Irwindale	0:00:21	10	5	57.1	46.6
Bike and Pedestrian Trail Activities ²	Rancho Santa Margarita	0:02:30	10	5	52.7	42.2
Equestrian Activities ³	County of Los Angeles	0:00:18	10	5	52.3	41.8

Source: Urban Crossroads 2016c

¹ As measured by Urban Crossroads on 4/12 and 4/14/16 at the Whitter Narrows and Santa Fe Dam Recreation Areas in South El Monte and Irwindale, respectively.

² As measured by Urban Crossroads on 4/13/16 at the Rancho Santa Margarita Lake.

³ As measured by Urban Crossroads on 4/21/16 at the Lazy T Ranch in Leona Valley, within the County of Los Angeles.

The operational noise level calculations account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. With geometric spreading, sound levels attenuate (or decrease) at a rate of 6 dB for each doubling of distance from a point source, and at a rate of 4.5 dB for each doubling of distance from a line source (e.g., pedestrians, bicycles,

and equestrian activities). The operational noise contour boundaries do not account for any additional attenuation provided by existing barriers or topography at the adjacent receiver locations in the project study area.

The operational noise source locations, including pedestrians, bicycles, and equestrian activities, are shown in Appendix 8.1 of the Noise Impact Analysis (Appendix F of the PEIR). The estimated distance to the 50 dBA L_{50} noise level contour boundary is 30 feet from each of the noise sources. The exact location of each 50 dBA L_{50} noise level contour for each individual project under the Proposed Project would depend on the location of each noise source, any existing noise barriers in the project study area, and the topographic differences between the sources and receiver locations.

Proposed Project operational noise levels would vary based on the frequency and intensity of use of each individual project. The analysis presents a conservative approach using a worst-case, continuous-activity reference noise level to represent the potential operational noise levels of the Proposed Project; however, the unmitigated Proposed Project noise impacts are not expected to extend to the nearby sensitive receiver locations.

In other words, the operational noise analysis for the Proposed Project indicates that the noise levels due to pedestrians, bicycles, and equestrian activities would not exceed the County of Los Angeles Municipal Code's 50 dBA L_{50} noise level standard at nearby sensitive receiver locations. Therefore, operational noise impacts associated with the Proposed Project would be less than significant.

Los Angeles County Airport Land Use Plan

The El Monte Airport is located in the project study area, south of Lower Azusa Road, approximately 0.5 mile north of the Proposed Project. The Los Angeles County Airport Land Use Plan (LAC ALUP; County of Los Angeles Airport Land Use Commission 2004) identifies the land use compatibility policies related to the El Monte Airport and the land uses of the Proposed Project. Per Section V of the LAC ALUP, the Proposed Project's land uses would be classified as recreation uses and considered satisfactory with noise levels below 65 dBA C_{NEL} from aircraft noise levels from the El Monte Airport (County of Los Angeles Airport Land Use Commission 2004). Based on the noise level contours provided in the LAC ALUP, the project site would be located outside of the 65 dBA C_{NEL} noise level contour boundaries of the El Monte Airport. Accordingly, implementation of the Proposed Project would not expose people excessive noise levels associated with the El Monte Airport, and no impact would occur.

3.11.4.2 Vibration

<i>Threshold: Would the project expose persons to or generation of excessive groundborne vibration or groundborne noise levels?</i>

Construction activities can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures, and soil type. It is expected that groundborne vibration from Proposed Project construction activities would cause intermittent, localized intrusion. Groundborne vibration levels resulting from construction activities occurring within the project site were estimated by data published by the FTA (2006). Construction activities that would have the potential to generate low levels of groundborne

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vibration within the project site include grading. Using the standard vibration source level of construction equipment and the FTA's construction vibration assessment methodology, it is possible to estimate the Proposed Project vibration impacts. Table 3.11-10 below shows the expected project-related vibration levels.

Table 3.11-10. Construction Equipment Vibration Levels

DISTANCE TO CONSTRUCTION ACTIVITY (FEET)	RECEIVER PPV LEVELS (IN/SEC)					RMS VELOCITY LEVELS (IN/SEC)	THRESHOLD EXCEEDED?
	SMALL BULL-DOZER	JACK-HAMMER	LOADED TRUCKS	LARGE BULL-DOZER	PEAK VIBRATION (PPV)		
25	0.003	0.035	0.076	0.089	0.089	0.063	Yes
50	0.001	0.012	0.027	0.031	0.031	0.022	Yes
100	0.000	0.004	0.010	0.011	0.011	0.008	No
200	0.000	0.002	0.003	0.004	0.004	0.003	No

Source: Urban Crossroads 2016c

In order to assess the human perception of vibration levels in PPV, velocities are converted to RMS vibration levels, based on the California Department of Transportation's (Caltrans) *Transportation and Construction Vibration Guidance Manual* (Caltrans 2013) conversion factor of 0.71. Table 3.11-10 shows the construction vibration levels in RMS are expected to approach 0.063 in/sec (RMS) at a distance of 25 feet. Based on the County of Los Angeles vibration standards, the Proposed Project construction activities would exceed the vibration standard of 0.01 in/sec RMS at receiver locations within 50 feet of construction activities. Vibration impacts due to Project construction represent temporary perceptible vibration levels that may cause annoyance in residential areas within 50 feet of construction; however, project construction would not result in vibration levels capable of causing building damage to nearby residences. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV (FTA 2006). The peak project-construction vibration levels, shown in Table 3.11-10 as approaching 0.063 in/sec PPV, would not exceed the FTA vibration levels for building damage at the residences near the project site. In addition, impacts at the site of the closest sensitive receivers would unlikely be sustained during the entire construction period, but rather, would occur only during the times when heavy construction equipment is operating adjacent to the project site perimeter. Construction of the Proposed Project would be restricted to daytime hours consistent with the County of Los Angeles' requirements, which would thereby eliminate potential vibration impacts during the sensitive nighttime hours. Accordingly, vibration impacts associated with construction of the Proposed Project would be less than significant.

It is anticipated that operation of the Proposed Project would not result in impacts from vibration.

3.11.5 Mitigation Measures

N-1: Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating project construction activities shall only occur between the hours of 7:00 a.m. to 7:00 p.m. on weekdays, with no activity allowed on Sundays or holidays. The project construction supervisor

shall ensure compliance with the note and the County shall conduct periodic inspection at its discretion.

- N-2:** Prior to Proposed Project construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest to the project site.
- N-3:** The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the project site throughout the project construction period.
- N-4:** The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. to 7:00 p.m. on weekdays, with no activity allowed on Sundays or holidays). The contractor shall prepare a haul route exhibit and shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

3.11.6 Residual Impacts After Mitigation

No residual noise impacts would occur after implementation of the above mitigation measures.

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 Proposed Project would include police, fire, and sheriff protection. Parks and recreational facilities are discussed in Section 3.13 Recreation, of this Draft PEIR.

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, please refer to Section 3.14 Transportation/Traffic.

3.12.1 Environmental Setting

3.12.1.1 Quarry Clasp

The Quarry Clasp is located at the northern point of the Emerald Necklace within the cities of Arcadia, and Irwindale, in the County of Los Angeles.

Fire Protection. Fire protection for the Quarry Clasp project area is provided by the Arcadia Fire Department (AFD) and the Los Angeles County Fire Department (LACoFD).

The closest AFD station is located at 710 Santa Anita Avenue in the City of Arcadia, approximately four miles north of the Quarry Clasp project area. LACoFD provides fire protection to the cities of Irwindale and County areas. The closest LACoFD fire station is the Battalion 10 Station 169 located at 5112 North Peck Road in the City of El Monte approximately 0.5 mile south of the Quarry Clasp project area (LACoFD 2016).

Police Protection. Police protection for the Quarry Clasp project area is provided by the Arcadia Police Department (APD), El Monte Police Department (EMPD), and the Irwindale Police Department (IPD) within their respective jurisdictional areas. The closest APD station is located at West Huntington Drive in the City of Arcadia, approximately 5.5 miles north of the Quarry Clasp project area. The closest EMPD station is located at 11333 Valley Boulevard in the City El Monte, approximately 2.5 miles south of the Quarry Clasp project area (City of El Monte 2006). The closest IPD Station is located at 5050 North Irwindale Avenue in the City of Irwindale, approximately five miles east of the Quarry Clasp project area (City of Irwindale 2008).

Schools. The Quarry Clasp project area is served by multiple school districts within the cities of Arcadia, El Monte, and Irwindale. The City of Arcadia is served by the Arcadia Unified School District, which operates eleven schools with approximately 10,000 enrolled students (City of Arcadia 2010). The City of El Monte is served by the Mountain View School District (MVSD), the El Monte City School District (EMCSD), and the El Monte Union High School District (EMUHSD). MVSD operates 10 schools, EMCSD operates 16 schools, and EMUHSD operates six schools. The three districts serve a student population of approximately 25,100 (City of El Monte 2011). The City of Irwindale is served by the Covina Valley Unified School District (CVUSD), the Azusa Unified School District (AUSD), the Duarte Unified School District (DUSD), and the Baldwin Park

Unified School District (BPUSD). CVUSD operates 17 schools, AUSD operates 17 schools, DUSD operates eight schools, and BPUSD operates 22 schools. These four districts serve a student population of approximately 49,244 (City of Irwindale 2016; Great Schools 2016).

Public Libraries. Library services in the Quarry Clasp project area are provided by four local libraries within the County of Los Angeles Public Library System (County of Los Angeles Public Library 2016b). Libraries include:

- ◆ Arcadia Public Library (20 West Duarte Road, Arcadia, CA 91006);
- ◆ El Monte Library (3224 Tyler Avenue, El Monte, CA 91731);
- ◆ Norwood Library (4550 North Peck Road, El Monte, CA 91732); and
- ◆ Irwindale Library (5050 North Irwindale Avenue, Irwindale, CA 91706).

3.12.1.2 Whittier Narrows

The Whittier Narrows project area is located at the southern end of the Emerald Necklace within unincorporated areas of Los Angeles County.

Fire Protection. Fire protection for the Whittier Narrows project area is provided by LACoFD Battalions 10 and 12. LACoFD Battalion 10 provides fire protection services for the cities of El Monte, Rosemead, San Gabriel, South El Monte, and Temple City. Fire protection for the City of Industry is provided by LACoFD Battalion 12. The nearest fire station to the Whittier Narrows project area is LACoFD Battalion 10 Fire Station 90, located at 10115 East Rush Street in the City of South El Monte approximately 1.5 miles northeast of the Whittier Narrows project area. This station is staffed with a three-person engine company and a two person paramedic squad (LACoFD 2016).

Police Protection. Los Angeles County Sheriff's Department (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 Whittier Narrows Substation located at 1012 North Durfee Road, South El Monte, California 91733 would serve the Whittier Narrows project area.

Schools. The Whittier Narrows project area is served by the Bassett Unified School District (BUSD) and the Hacienda La Puente Unified School District (HLPUSD). The BUSD operates seven schools (grades kindergarten through 12) and the HLPUSD operates 34 schools (grades kindergarten through 12 and ungraded). These two districts serve a student population of approximately 25,785 (Great Schools 2016). Currently there is no resident population within the Whittier Narrows project area.

Public Libraries. Library services in the Whittier Narrows project area are provided by three local libraries within the County of Los Angeles Public Library System (County of Los Angeles Public Library 2016b). Libraries include:

- ◆ Montebello Library (1550 West Beverly Boulevard, Montebello, CA 90640);
- ◆ South El Monte Library (1430 North Central Avenue, South El Monte, CA 91733); and
- ◆ Pico Rivera Library (9001 Mines Avenue, Pico Rivera, CA 90660).

3.12.1.3 San Jose Creek

The San Jose Creek project area is located on the southeastern segment of the Emerald Necklace within unincorporated areas of Los Angeles County (Avocado Heights) and the City of Industry.

Fire Protection. Fire protection for the San Jose Creek project area is provided by LACoFD Battalions 10 and 12. LACoFD Battalion 10 provides fire protection services for the cities of El Monte, Rosemead, San Gabriel, South El Monte, and Temple City. Fire protection for the City of Industry is provided by LACoFD Battalion 12. The nearest fire station to the San Jose Creek project area is Battalion 12 Fire Station 87, located at 140 South Second Avenue in the City of Industry approximately 1.8 miles northeast of the San Jose Creek project area (LACoFD 2016).

Police Protection. Police protection for the San Jose Creek project area is provided by the LASD. The Industry Sheriff Station, located at 150 North Hudson Avenue in the City of Industry, serves the eastern edge of the San Jose Creek project area. This station provides police protection services for the City of Industry, La Puente, and La Habra Heights (LASD 2016a).

Schools. The San Jose Creek project area is served by the BUSD as well as the HLPUSD. The BUSD operates seven schools (grades kindergarten through 12) and the HLPUSD operates 35 schools (grades kindergarten through 12 and ungraded). These two districts serve a student population of approximately 25,785 (Great Schools 2016).

Public Libraries. Library services in the San Jose Creek project area are provided by three local libraries within the County of Los Angeles Public Library System (County of Los Angeles Public Library 2016b). Libraries include:

- ◆ La Puente Library (15920 Central Avenue, La Puente, CA 91744);
- ◆ Sunkist Library (840 North Puente Avenue, La Puente, CA 91746); and
- ◆ Hacienda Heights Library (16010 La Monde Street, Hacienda Heights, CA 91745).

3.12.1.4 Westside

The Westside project area is located along the western side of the Emerald Necklace within unincorporated areas of Los Angeles County and the cities of Rosemead, El Monte, and South El Monte.

Fire Protection. Fire protection for the Westside project area is provided by LACoFD Battalion 10. LACoFD Battalion 10 provides fire protection services for the cities of El Monte, Rosemead, San Gabriel, South El Monte, and Temple City. The nearest fire station to the southern end of the Westside project area is Battalion 10 Fire Station 4, located at 2644 North San Gabriel Boulevard in the City of Rosemead, approximately one mile to the west. The nearest fire station to the northern end of the Westside project area is Battalion 10 Fire Station 166, located at 3615 Santa Anita Avenue in the City of El Monte, approximately 0.4 miles to the east (LACoFD 2016).

Police Protection. Police protection for the Westside project area is provided by the LASD and the El Monte Police Department (EMPD). The Temple Sheriff Station, located at 8838 Las Tunas Drive in Temple City, is contracted to provide police services to the cities of Bradbury, Duarte, Rosemead, South El Monte, and Temple City, along with the unincorporated areas of Monrovia,

Arcadia, Duarte, North San Gabriel, East Pasadena, and South San Gabriel (LASD 2016a). The EMPD is located at 11333 Valley Boulevard in the City of El Monte, approximately one mile east of the Westside project area (City of El Monte 2006).

Schools. The Westside project area is served by the MVSD, EMCSO, EMUHSD, Garvey Elementary School District (GESD), Rosemead Elementary School District (RESO), and Valle Lindo Elementary School District (VLESO). MVSD operates 10 schools, EMCSO operates 16 schools, EMUHSD operates six schools, GESD operates 10 schools, RESO operates five schools and VLESO operates two schools. These six districts serve a student population of approximately 34,898 (City of El Monte 2011; Great Schools 2016).

Public Libraries. Library services in the Westside project area are provided by four local libraries within the County of Los Angeles Public Library System (County of Los Angeles Public Library 2016b). Libraries include:

- ◆ Rosemead Library (8800 Valley Boulevard, Rosemead, CA 91770);
- ◆ El Monte Library (3224 Tyler Avenue, El Monte, CA 91731);
- ◆ Norwood Library (4550 North Peck Road, El Monte, CA 91732); and
- ◆ South El Monte Library (1430 North Central Avenue, South El Monte, CA 91733).

3.12.1.5 San Gabriel and Rio Hondo Riverways Task Force

A concerted patrol effort for the Emerald Necklace came about in early 2015 during the initiation of the Emerald Necklace Taskforce. The patrol effort was led by Lieutenant Geoffrey Deedrick (Lieutenant of the Homeless Services Team) with the Los Angeles County Sheriff's Department. The patrol team utilized deputies from the Homeless Services Team and from surrounding municipalities on their patrol effort. Since then, the Emerald Necklace Task Force has been reinstated as the San Gabriel and Rio Hondo Riverways Task Force. Currently this task force is in charge of and maintains a presence along the Emerald Necklace through outreach efforts with homeless services and the cleaning up of abandoned homeless encampments located in the riverbed (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

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 the 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,

police, 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

Los Angeles County Code

Title 13 of the Los Angeles County Code contains the County’s regulations for protecting the public peace, morals, and welfare. These regulations address offenses by or against public officers and government, offenses by or against minor, weapons, discrimination against persons with AIDS, and counterfeit goods nuisance abatement. Title 15 of the County Code includes regulations for vehicles and traffic on roads, crosswalks, bicycle lanes, railroad crossings, parking lots, and other traffic-related conditions. These regulations are enforced by the LASD, along with other regulations regarding public safety and police protection. Title 17, Parks, Beaches, and other Public Areas, of the Los Angeles County Code contains rules and regulations for County parks. The regulations include restrictions on operating hours, parking, property and vegetation removal, camping vehicles, overnight camping, animals, grazing, disturbances, alcoholic beverages, soliciting, rubbish, nudity, concessions, swimming, boating, fishing, firecrackers, explosives, smoking, riding and hiking, and other activities. Title 32 adopts the California Fire Code and International Fire Code.

County of Los Angeles 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 2015a). 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 Arcadia General Plan

The City of Arcadia’s General Plan includes Land Use and Safety Element’s that address the maintenance and renovation of public facilities in the City. The Land Use Element includes goals and policies to assist agencies in the provision of public services and facilities within the City. The Safety Element includes goals and policies to ensure a high level of fire and police protection services, with an emphasis on prevention and education (City of Arcadia 2010).

City of El Monte General Plan

The City of El Monte's General Plan includes the Land Use and Public Safety and Facilities Element's that both address the need for the provision and maintenance of quality public services and safety along the Emerald Necklace. The Land Use Element contains Policy LU-4.6 which states the following: Support community growth and change through the provision and maintenance of quality public services and facilities, including infrastructure and appropriate funding mechanisms to maintain it in good working order. The Public Safety and Facilities Element's primary goal is to ensure that adequate services public safety, environmental services, community services, and infrastructure are in place to support quality of life in El Monte (City of El Monte 2011).

City of Industry General Plan

The City of Industry's General Plan includes the Housing Element that addresses the need for adequate public services to enhance neighborhood stability. The Housing Element contains policies with the goal of maintaining infrastructure and public services that enhance the safety, appearance, and condition of neighborhoods (City of Industry 2014).

City of Irwindale General Plan

The City of Irwindale's General Plan includes the Housing Element that addresses the need for adequate public services for a growing resident population. The Housing Element contains policies that will ensure the rate of residential growth can be accommodated in light of the City's physical and economic constraints and that this growth can be served by public services and infrastructure (City of Irwindale 2008).

City of Rosemead General Plan

The City of Rosemead's General Plan includes the Resource Management Element and the Public Safety Element which both discuss the need to provide high quality public services within the City. The Resource Management Element includes goals and policies that look to provide high quality parks, recreation, and open space facilities to meet the needs of all City residents. The Public Safety Element contains goals and policies to ensure that an adequate level and quality of services are provided by the County Sherriff and County Fire Department (City of Rosemead 2010).

City of South El Monte General Plan

The City of South El Monte's General Plan includes the Resources Element and the Public Safety Element that discuss the need for public park space and safe environments. The Resources Element contains goals and policies to continue to provide South El Monte residents with access to regional recreation resources. The Public Safety Element contains goals and policies to ensure that a proper level of law enforcement and crime prevention services are provided by the Los Angeles County Sheriff (City of South El Monte 2000).

3.12.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, implementation of the Proposed Project may result in a potentially significant impact if the Proposed Project would cause the following:

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- ◆ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire Protection
 - Police Protection
 - Schools
 - Parks
 - Other Public Facilities

3.12.4 Environmental Impacts

Threshold: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- *Fire Protection?*
- *Police Protection?*
- *Schools?*
- *Parks?*
- *Other Public Facilities?*

The Proposed Project is not anticipated to result in the increase demand of public services or the need for new or physically altered governmental facilities. The Proposed Project does not include residential development. Construction of the Proposed Project would create temporary construction related jobs but would not create a new permanent source of jobs that would induce population growth. The Proposed Project would improve existing recreational trails and construct new trail connections improving trail access for people living in the area. Improving recreational trails is not expected to induce population growth in the project area.

Each policing entity would be responsible for patrolling their respective geographic region encompassed within the project area. Additionally, the San Gabriel River and Rio Hondo Riverways Task Force would continue to provide patrol services to the Emerald Necklace as needed. The Proposed Project would not induce population growth such that services ratios or response times for the LASD, LACoFD, and surrounding city police/fire departments would be affected. Therefore, the Proposed Project would not result in an increase demand for fire and police protection. Impacts would be less than significant.

The Proposed Project would not result in an increase in the regional population of school age children; therefore no impacts to schools are anticipated. It is expected that much of the additional recreational users that would use the proposed facilities would come from the existing regional population; therefore, no significant impacts to city and county libraries are

anticipated. Impacts to public services would be less than significant. Impacts to parks and recreational facilities are addressed in Section 3.14 Recreation of this Draft PEIR.

3.12.5 Mitigation Measures

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

3.12.6 Residual Impacts after Mitigation

Impacts would be less than significant.

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 program level that would result from the Proposed Project, and the mitigation measures that would reduce these impacts.

3.13.1 Environmental Setting

3.13.1.1 Regional Recreational Facilities

There are six recreational facilities of regional significance in the project area, which include the San Gabriel Bicycle Path, Rio Hondo Bicycle Path, Duck Farm Park, Peck Road Water Conservation Park, Santa Fe Dam Recreation Area, and Whittier Narrows Recreation Area.

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). Through the project area the San Gabriel River Trail is located on the west side of the San Gabriel River and on the east side of the Emerald Necklace.

Rio Hondo Bicycle Path. The Rio Hondo Bicycle Path runs 17.5 miles along the Rio Hondo on the western side of the Emerald Necklace. 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). Through the project area the Rio Hondo Bicycle Path is located on the east side of the Rio Hondo and connects to the San Gabriel River Trail through the Whittier Narrows Recreational Area along Siphon Road.

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 ADA accessible meandering interior trail (WCA 2007). Phase I of the Duck Farm is currently under construction and is expected to open in spring 2018.

Peck Road Water Conservation Park. The Peck Road Water Conservation Park is a 5-acre neighborhood park operated by DPR. The 5-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 2016c). The park is located at the northern end for the Rio Hondo Bike Trail in the Quarry Clasp area of the Emerald Necklace.

Santa Fe Dam Recreation Area. The Santa Fe Dam Recreation Area is an 836-acre park operated by 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 2016c). The Santa Fe Dam Recreation Area is located to the northeast of the Quarry Clasp area.

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 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 2016c). The Whittier Narrows Recreation Area is located at the southern end of the Emerald Necklace.

3.13.1.2 Local City Recreational Facilities

City of Arcadia

The City of Arcadia operates 17 parks, representing a total of approximately 154 acres with 120 acres being undeveloped. Park amenities provided include picnic areas, picnic shelters, play areas, barbecues, baseball diamonds, basketball courts, tennis courts, sand volleyball courts, handball courts, multi-purpose fields, skating facilities, nature trails, nature center, fire circle, restrooms, and a dog-play area.

Recreation facilities operated by the City of Arcadia include the Arcadia Community Center/Senior Center, Civic Center Athletic Field, and Par-3 Golf Course. The Arcadia Center/Senior Center is an 18,000-square-foot facility which has offices, kitchen, a meeting and assembly room, and classrooms. The Civic Center Athletic Field has a multi-purpose athletic field which is mainly used for soccer, as well as restrooms. The golfing facility has an 18-hole par-3 golf course, driving range, pro-shop, and a snack bar (City of Arcadia 2010).

City of El Monte

The City of El Monte has 12 parks, which total to approximately 51 acres of recreational space. The parks offer a wide range of amenities such as picnic areas, picnic shelters, play areas, walking trails, playgrounds, wading pools, community centers, amphitheaters, auditoriums, indoor gymnasium, log-cabin-type facilities, play equipment, restrooms, basketball courts, and softball and baseball fields. The cultural center is composed of the Aquatic Center, El Monte Historical Museum, Grace T. Black Auditorium, and the Jack Crippen Senior Center. Community centers are offered at five of the City's local parks: Lambert, Zamora, Pioneer, Mountain View, and Arceo Park (City of El Monte 2016).

City of Industry

As a largely developed business-oriented City with a limited population, the City of Industry does not serve the recreational needs of a residential base. The City of Industry does not maintain developed parks. However, the City has approximately 790 acres of land designated for recreation and open space, including two private golf courses, the Pacific Palms Resort, flood control facilities (including the San Gabriel River), former Duck Farm property, and a privately held open area (former golf course) for the Wildwood Mobile Home Park. The Homestead Museum and school areas represent more traditional recreational resources in the City even though they are designated as institutional uses on the land use plan. With these lands added the available open space and recreation areas in the City is 887 acres (City of Industry 2014).

City of Irwindale

Currently there are four parks operated by the City of Irwindale, which include Irwindale Park, Jardin De Roca Park, Little Park of Irwindale, and El Nido Park. These parks total to approximately 12 acres of recreational space. Park amenities include a swimming pool, playground areas, picnic shelters and tables, tennis courts, basketball courts, and a skate park. Irwindale Park features the Dan Diaz Recreation Center and Alfred F. Herrera Softball Field. Dan Diaz Recreation Center includes an indoor basketball court, game room, weight and cardio room, showers and locker rooms, as well as various rental spaces (City of Irwindale 2016). A large portion of the City's land area, approximately 1,920 acres, is included in the Santa Fe Dam and Recreation Area. This area is owned by the USACE for purposes of flood control and groundwater recharge (City of Irwindale 2008).

City of Rosemead

The City of Rosemead operates ten parks, which equate to approximately 39 acres dedicated to parklands (City of Rosemead 2010). Park amenities include a gymnasium, swimming pool, basketball courts, baseball/softball fields, playgrounds, tennis courts, picnic areas, trails, and restrooms. The City of Rosemead also contains recreation facilities such as the Rosemead Community Recreation Center, Garvey Center, Dinsmoor House, Rosemead Aquatic Center, and Splash Zone at Garvey Park. The Rosemead Community Recreation Center offers space for meetings, workshops, senior activities, preschool, youth and adult classes, and spaces that may be rented by the public for private events. The Dinsmoor House is a cultural museum that offers tours to the public about the history of Rosemead. The Rosemead Aquatic Center features a competitive pool with 13 competition lanes and water polo capabilities. The Splash Zone at Garvey Park is a water park that features two large water slides, a splash play area, and a lesson pool (City of Rosemead 2016). The Garvey Center is a multi-purpose facility that offers space for meetings, workshops, senior activities, preschool, youth and adult classes, and spaces that may be rented by the public for private events.

City of South El Monte

The City of South El Monte operates four parks including Civic Center Park, Mary Van Dyke Park, New Temple Park, and Dean L. Shively Park. These parks total to approximately 23 acres. Park amenities found at these parks include playground areas, t-ball fields, picnic tables and shelters, barbecue grills, handball courts, basketball courts, baseball fields with bleachers,

jogging/walking trails, concession buildings, a dance studio, a boxing gym, an amphitheater, and an aquatic center. Thienes Avenue Pocket Park is located at the confluence of the San Gabriel River and San Jose Creek. This pocket park provides access to the San Gabriel River Trail.

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.

3.13.2.3 Local

County of Los Angeles 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 2015a). 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 provide 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).

Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment

The County Board of Supervisors adopted the Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment (Parks Needs Assessment) in July 2016 (County of Los Angeles 2016e). The Parks Needs Assessment documents existing parks and recreation facilities in cities and unincorporated communities in the County and it uses this data to determine the scope, scale, and location of park needs in the County. Park need is traditionally measured with a single metric, such as the number of acres of park land available to residents, or the percentage of residents living within walking distance of a park. Measuring only a single aspect of need provides a one-dimensional understanding of park need. The Park Needs Assessment instead uses five metrics to measure park needs in each study area and in the County. These five metrics include: park condition; park access; park amenities; park land; and park pressure. A total of 3,023 parks were inventoried and assessed according to the five metrics. The Park Needs Assessment also identifies the top ten local park projects in each study area. Cost estimates were developed for the prioritized projects from each community workshop and for all deferred maintenance projects. The Parks Needs Assessment lays the groundwork for making important planning and funding decisions in Los Angeles County. Most importantly, it provides the County, its jurisdictions, and all residents of Los Angeles County with a wealth of parks-related information and opportunities.

County of Los Angeles Trails Manual

The County of Los Angeles Trails Manual (Trails Manual) was developed by the County of Los Angeles Department of Parks and Recreation (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 areas 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).

San Gabriel River Corridor Master Plan

The San Gabriel River Corridor Master Plan identifies priorities, provides guidance, and coordinates multiple goals of the many jurisdictions and other stakeholders that share the San Gabriel River. The Master Plan goals encompass six aspects of river management: habitat, recreation, open space, flood protection, water quality supply, and economic development. The Master Plan includes goals that focus on encouraging and enhancing safe and diverse recreation systems, while providing for expansion, equitable and sufficient access, balance, and multi-purpose uses. In addition, the Master Plan looks to enhance and protect open space systems through conservation, aesthetics, connectivity, stewardship, and multi-purpose uses (County of Los Angeles 2006).

City of Arcadia General Plan

Parks and recreation services in the City of Arcadia are operated by the Recreation and Community Services Department and the Public Works Services Department. Programs and services are the responsibility of Recreation and Community Services Department while park development, renovation, and maintenance are the responsibility of the Public Works Services Department. In 2007, the City of Arcadia adopted the Parks and Recreation Master Plan. The Parks and Recreation Master Plan consolidates the City's goals and strategies regarding park spaces and recreation programs. In addition to the Parks and Recreation Master Plan, the City's General Plan contains a Parks, Recreation, and Community Resources Element. The City's planning priority regarding parks is to pursue innovative strategies to create new park, recreation, and public spaces, and to provide better access to existing parks by pedestrian, bicycle, and transit linkages (City of Arcadia 2010). The Parks, Recreation, and Community Resources Element include goals and policies to accomplish the City's planning priority.

City of El Monte General Plan

The City of El Monte's General Plan includes a Parks and Recreation Element that lists the City's policies and goals concerning the conservation, preservation, enhancement, and development of the City's parks and recreational resources. Policies are focused on the City's interest in maintaining, developing, and enhancing open space, as well as the development of the Emerald Necklace (City of El Monte 2011).

City of Industry

The City of Industry's General Plan includes a Resource Management Element that covers issues relating to the City's watershed, water quality, air quality, open space and recreation, waste collection and recycling, and historical and cultural resources. The City of Industry's policy regarding open space and recreation resources is to have open space areas that are well maintained, serve the target population, and function as a citywide amenity (City of Industry 2014).

City of Irwindale

The City of Irwindale's General Plan includes a Resource Management Element that lists the City's policies concerning the conservation and preservation of important natural and man-made resources. Policies regarding recreational resources are focused on the City's commitment in maintaining and enhancing open space that may be used for resource preservation and/or recreation. Resource Management Element Policies 5 through 7 directs the City to enhance the recreational and open space resources for the benefit and enjoyment of the existing and future residents (City of Irwindale 2008).

City of Rosemead

The City of Rosemead's General Plan includes a Resources Management section that lists the City's policies concerning the conservation, preservation, development, and improvement of important natural and man-made resources. The City's General Plan lists one goal in the Resources Management Element pertaining to parks, open space, greenbelt, and public art issues. The City's goal regarding recreation is to provide high-quality parks, recreation, and open space facilities to meet the needs of all Rosemead residents (City of Rosemead 2010).

City of South El Monte

The City of South El Monte's General Plan includes a Resources Element that lists the City's goals and policies concerning the improvement, development, and conservation of natural and man-made resources. The City's goal pertaining to recreational resources is to provide a comprehensive recreation program, adequate facilities, and proper maintenance of the parks and recreational facilities in the City (Goal 2.0). The City also recognizes that limited opportunities exist to increase local park resources within South El Monte. Therefore, emphasis will continue to be placed on enhancing existing parks and maintaining joint-use agreements with local schools. Whittier Narrows Recreation Area will also continue to provide open space and recreational opportunities for the community (City of South El Monte 2000).

Amigos de los Rios

Emerald Necklace Vision Plan (2005)

In 2005, Amigos de los Rios introduced the Emerald Necklace Vision Plan, which outlined a detailed strategy for the development of a 17-mile loop of parks and greenways connecting 10 cities and nearly 500,000 residents along the Rio Hondo and San Gabriel Rivers watershed. The plan's parks and greenways provide needed recreational areas for the urban communities in the San Gabriel Valley.

Emerald Necklace Forest to Ocean Expanded Vision Plan (2014)

In 2008, the scope of the Emerald Necklace Vision Plan was expanded to help unify a vast region of Southern California, from the desert through the San Gabriel Mountains to the Pacific Ocean, by linking more than 1,500 acres of parks and open spaces along an interconnected greenway around the Rio Hondo, San Gabriel, and the lower Los Angeles Rivers. This expanded scope is presented in the Emerald Necklace Forest to Ocean Expanded Vision Plan (Amigos de Los Rios 2014).

3.13.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, 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 recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

3.13.4 Environmental Impacts

3.13.4.1 Existing Neighborhood and Regional Parks or Other Recreational Facilities

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?

The Proposed Project outlines 15 projects that would complete a 17-mile loop of bicycle and multi-use trails connecting a series of parks and open spaces along the San Gabriel River and the Rio Hondo known as the Emerald Necklace. In addition to bicycle and multi-use trails, infrastructure projects, such as multi-use bridges, are included in the Proposed Project. These infrastructure projects would improve access to the Emerald Necklace. Communities throughout the Emerald Necklace would benefit from the improved access, particularly the communities on the east side of the San Gabriel River, near San Jose Creek, and the communities on the west side of the Rio Hondo. These communities are currently isolated from recreational facilities because of the lack of safe and formal access across the rivers.

The Proposed Project would not result in the increase of the region's population because it does not include housing and would not 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 improve access to existing recreational facilities which may indirectly result in an increase of recreational users who currently have limited or no access to the facilities. The increase of recreational users can lead to an accelerated physical deterioration of recreational facilities if maintenance activities are not adjusted based on the facilities use. Local cities and the County would continue to operate and maintain the recreational facilities under their jurisdiction in conformance with their operating procedures and regulations such that accelerated physical deterioration of recreational facilities would not occur. Impacts would be less than significant.

3.13.4.2 Recreational Facilities

Threshold: Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

As part of the Proposed Project, the construction and expansion of parks, trails, and other facilities would occur. 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.

3.13.5 Mitigation Measures

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

3.13.6 Residual Impacts After Mitigation

Impacts would be less than significant.

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3.14 TRANSPORTATION/TRAFFIC

This section of the PEIR assesses the potential impacts associated with project-generated traffic on existing and future volumes of the surrounding street system. This section also describes the existing environmental and regulatory settings with regard to transportation. A Traffic Assessment was completed for the Proposed Project (Urban Crossroads, Inc. 2016d). The technical report is provided in Appendix G and summarized below.

The Initial Study prepared for the Proposed Project determined that the El Monte Airport is the closest airport to the project site. It is located northeast of Projects 15 and 16 on the west side of the Emerald Necklace. The Proposed Project would not include the construction of recreational facilities or access structures that would necessitate a change in air traffic patterns or otherwise conflict with the airport. These issues are not discussed further in this section.

3.14.1 Environmental Setting

3.14.1.1 Existing Street System

Major arterials serving the study area include San Gabriel Boulevard, Durfee Avenue, Peck Road, Rosemead Boulevard, Santa Anita Avenue, Garvey Avenue, Valley Boulevard, Ramona Boulevard, and Live Oak Avenue. Regional access through the study area is provided by I-605, SR-60, and I-10. Streets in the study area are listed below.

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.
- ◆ **State Route 60 (SR-60, Pomona Freeway)** is an east/west freeway that extends between Los Angeles and Riverside Counties.
- ◆ **Interstate 10 (I-10, San Bernardino Freeway)** is an east/west freeway that extends from East Los Angeles through the project area to San Bernardino and Riverside Counties.

East/West Streets

- ◆ Durfee Avenue
- ◆ Garvey Avenue
- ◆ Valley Boulevard
- ◆ Ramona Boulevard
- ◆ Live Oak Avenue
- ◆ Lower Azusa Road

North/South Streets

- ◆ Peck Road
- ◆ San Gabriel Boulevard
- ◆ Rosemead Boulevard
- ◆ Santa Anita Avenue

3.14.1.2 Study Analysis Locations

Three study area intersections were selected for the Traffic Assessment because they are adjacent to crossings of the bicycle and multi-use trails across public streets and one future mid-block crossing location (Figure 3.14-1; Table 3.14-1). The majority of the proposed trail connections would be located along flood control channels in the Westside and San Jose Creek project areas and a portion of Whittier Narrows (Projects 8 and 9). The Quarry Clasp and Whittier Narrows project areas are the only portions of the Proposed Project that contain at grade crossings of a roadway as listed in Table 3.14-1.

Table 3.14-1. Intersection Analysis Locations

ID	INTERSECTION LOCATION	JURISDICTION
1	E. Lincoln Avenue / San Gabriel Boulevard	County of Los Angeles; City of Montebello
2	Rosemead Boulevard / San Gabriel Boulevard	County of Los Angeles; Caltrans
3	Rosemead Boulevard / SCE Easement – Future Crossing	County of Los Angeles; Caltrans
4	Peck Road / Foothill Transit Driveway	City of Arcadia

Figure 3.14-1 illustrates the study area and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.14.1.3 Existing (2016) Traffic Volumes

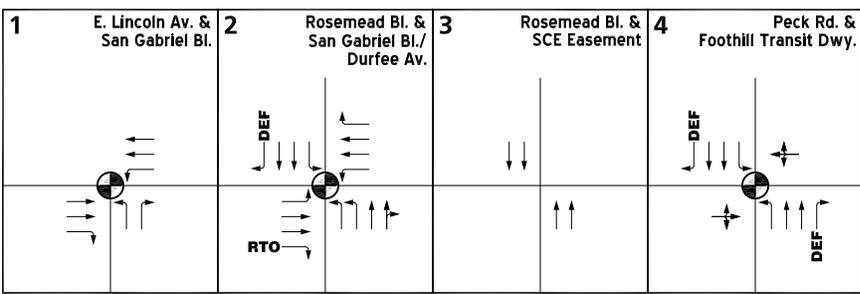
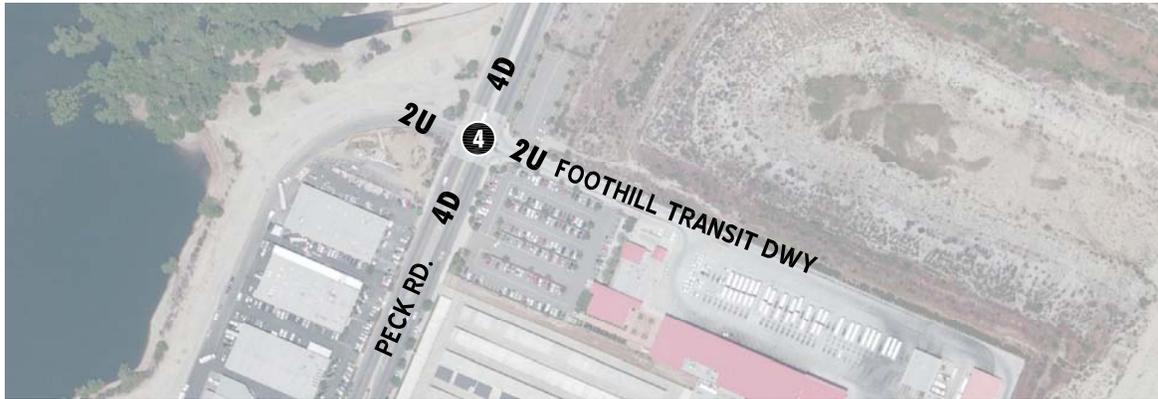
Peak hour turning movement counts were conducted at the study area intersections in April 2016. Given the uses of trails, weekday PM peak hour (4 PM to 6 PM) and Saturday morning peak (7 AM to 9 AM) turning movement counts were collected. Existing (2016) AM and PM peak hour intersection volumes are shown on Figure 3.14-2.

In addition, 24-hour directional volume counts were collected on Rosemead Boulevard near the proposed mid-block crossing near the Southern California Edison (SCE) easement. The 24-hour counts showed an average daily traffic (ADT) count of 27,071 on a weekday and 24,603 on a Saturday. The weekday peak hour volume on Rosemead Boulevard is 2,273 vehicles per hour (vph) and the Saturday peak hour volume is 1,782 vph.

3.14.1.4 Intersection Capacity Analysis

The definitions of level of service (LOS) for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 2010 Highway Capacity Manual (HCM) methodology was used for the study intersections. Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 3.14-2.

Location: N:\2012\2012-096 Emerald Necklace Program EIR\WAPS\Borders\Existing Lanes Border.mxd (AA)-mapping_guest_8/5/2016



- LEGEND:**
- TRAFFIC SIGNAL
 - 4** - NUMBER OF LANES
 - D** - DIVIDED
 - U** - UNDIVIDED
 - RTO** - RIGHT TURN OVERLAP
 - DEF** - DEFACTO RIGHT TURN
 - SPEED LIMIT (MPH)

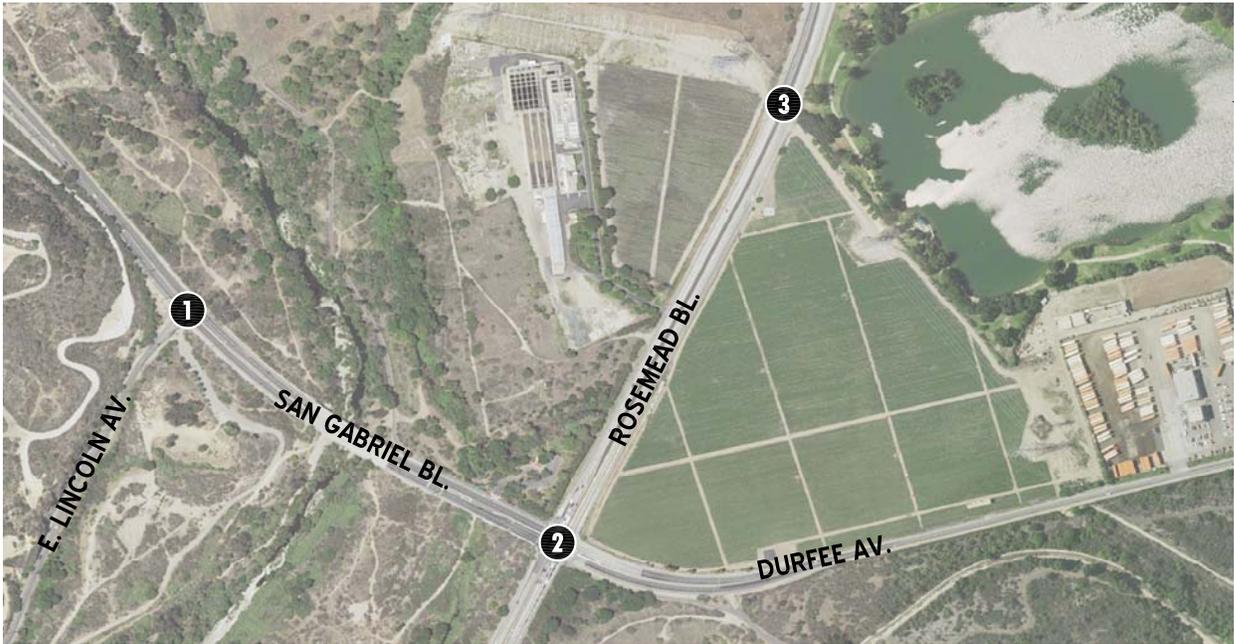


Map Date: 8/5/2016
 Photo Source: Urban Crossroads 2016

Figure 3.14-1 Existing Number of Through Lanes
 2016-132 Emerald Necklace Implementation Plan - Phase I Program EIR

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Location: N:\2012\2012-096 Emerald Necklace Program EIR\MAPS\Borders\Existing Traffic Volumes v2.mxd (44)-mapping_guest_8/5/2016



1	E. Lincoln Av. & San Gabriel Bl.	2	Rosemead Bl. & San Gabriel Bl./ Durfee Av.	3	Rosemead Bl. & SCE Easement	4	Peck Rd. & Foothill Transit Dwy.
	<p>← 530/255</p> <p>← 174/59</p> <p>1344/287 →</p> <p>153/48 →</p> <p>80/71 →</p> <p>309/97 →</p>	<p>109/44</p> <p>1110/377</p> <p>76/29</p> <p>32/32</p> <p>177/77</p> <p>210/106</p> <p>135/80 →</p> <p>729/97 →</p> <p>789/207 →</p> <p>418/193</p> <p>903/554 →</p> <p>309/121 →</p>				<p>5/1</p> <p>915/382</p> <p>14/10</p> <p>13/8</p> <p>0/0</p> <p>13/6</p> <p>17/0</p> <p>0/0</p> <p>13/2</p> <p>1/3</p> <p>994/563 →</p> <p>10/9</p>	
				Future Intersection			

LEGEND:

10(10) ■ WEEKDAY/SATURDAY PEAK HOUR INTERSECTION VOLUMES



Map Date: 8/5/2016
Photo Source: Urban Crossroads 2016

**EMERALD NECKLACE IMPLEMENTATION PLAN – PHASE I
DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT**

Table 3.14-2. Signalized Intersection HCM 2010 LOS Thresholds

DESCRIPTION	AVERAGE CONTROL DELAY (SECONDS), V/C ≤ 1.0	LEVEL OF SERVICE, V/C ≤ 1.0	LEVEL OF SERVICE, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: HCM 2010, Chapter 18

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions. The City of Arcadia, City of Montebello, County of Los Angeles, and Caltrans have all set the goal for acceptable LOS as LOS "D" or better, for study area intersections. In some instances, LOS below D will be deemed acceptable by the County in order to further other General Plan goals and policies, such as those that protect environmentally sensitive areas, promote active transportation, and encourage infill development .

Existing (2016) peak hour traffic operations have been evaluated for the study area intersections based on HCM 2010 methodology. The intersection operations analysis results are summarized in Table 3.14-3 which indicates that the existing study area intersections are currently operating at acceptable LOS (i.e., LOS "D" or better) during the peak hours.

**EMERALD NECKLACE IMPLEMENTATION PLAN – PHASE I
DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT**

Table 3.14-3. Intersection Analysis for Existing (2016) Conditions

#	INTERSECTION	TRAFFIC CONTROL	INTERSECTION APPROACH LANES ¹				DELAY ² (SECS.)		LEVEL OF SVC		ACCEPT-ABLE LOS								
			NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND							
			L	T	R	L	T	R	L	T		R	L	T	R				
1	E. Lincoln Avenue/ San Gabriel Boulevard	Traffic Signal	1	0	1	0	0	0	0	2	1	1	2	0	12.4	6.5	B	A	D
2	Rosemead Blvd./San Gabriel Boulevard/ Durfee Avenue	Traffic Signal	2	2	0	1	2	d	1	2	1>	1	2	1	49.1	38.3	D	D	D
4	Peck Road/Foothill Transit Dwy.	Traffic Signal	1	2	d	1	2	d	0	1	0	0	1	0	8.4	3.4	A	A	D

¹When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane

²Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

PM = weekday afternoon SAT = Saturday morning

3.14.2 Regulatory Setting

3.14.2.1 Federal

No Federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the Proposed Project.

3.14.2.2 State

California Department of Transportation (Caltrans)

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 2016). Federal highway regulations in California are implemented by Caltrans.

The project area includes three highways that fall under Caltrans' jurisdiction: I-605, SR-60, and I-10.

3.14.2.3 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).

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

The Mobility Element of the Los Angeles County General Plan provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. The Highway Plan and the Bicycle Master Plan are sub-elements of the Mobility Element. The following goals and policies are applicable to the Proposed Project.

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 2.7: Require sidewalks, trails and bikeways to accommodate the existing and projected volume of pedestrian, equestrian and bicycle activity, considering both the paved width and the unobstructed width available for walking.

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.

Parks and Recreation Element

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 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.

City of Arcadia General Plan

The Circulation and Infrastructure Element contains the following goals and policies applicable to the Proposed Project.

Goal CI-1: An efficient roadway system that serves all of Arcadia, supports all transportation modes, and balances the roadway system with planned land uses.

Policy CI-1.2: Implement street design standards on arterial corridors consistent with the Master Plan of Roadways to address bicycle facilities, sidewalks, and on-street parking that are context sensitive to adjacent land uses and districts, and to all roadway users, where appropriate.

Policy CI-1.3: Maintain a maximum Level of Service (LOS) D throughout the City, except that LOS E may be permitted in the following circumstances:

- Intersections/roadways at, or adjacent to freeway ramps
- Intersections/roadways adjacent to Santa Anita Park during racing season
- Intersections/roadways at or adjacent to designated Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts

Goal CI-4: Connected, balanced, and integrated bicycle and pedestrian networks that provide viable alternatives to use of the car.

Policy CI-4.10: Coordinate the provision of the bicycle and pedestrian networks with adjacent jurisdictions to maximize connectivity.

City of El Monte General Plan

Parks and Recreation Element

Goal PR-3: An Emerald Necklace that encircles the community with parks and multiuse biking, walking, equestrian trails; restores open space and habitat; protects the watershed; and provides multiple recreational and health benefits.

Policy PR-3.3: Trails. Develop an interconnected network of multiuse trails and related facilities for horseback riding, bicycling, hiking, and jogging in the washes and along the rivers of the Emerald Necklace.

Goal PR-4: A lush network of greenways, linear parks, and a community forest that enhances property values, public health, aesthetics, and quality of life.

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- Policy PR-4.1: Location. Place green infrastructure along freeways, utility corridors, major roadways, public rights-of-way, near schools, in neighborhoods, and along the Emerald Necklace.
- Policy PR-4.2: Connecting People. Create green infrastructure along residential streets and arterials that link residents to schools, parks, neighborhoods, the downtown, and other destinations.
- Policy PR-4.3: Linear Parks. Create linear parks along the Emerald Necklace and its tributaries through the acquisition, improvement, conversion, and restoration of land along the rivers and washes.

Goal PR-5: A comprehensive system of walking, hiking, biking, and equestrian paths and trails that are accessible, safe, and connect to homes, residences, parks, and other community destinations.

- Policy PR-5.2: Bicycle Paths. Create a bicycle path network that is consistent with the Circulation Element, and Emerald Necklace Vision, and supports the MTA bicycle hub concept.
- Policy PR-5.4: Equestrian. Preserve areas suitable for horseback riding, including the Emerald Necklace, and consider additional public easements for the development of equestrian trails.
- Policy PR-5.8: Sites for New Trails. Seek to develop trails and related facilities for horseback riding, bicycling, hiking, and jogging along the washes that interconnect with open spaces and recreation areas.

Circulation Element

Goal C-2: Provide and maintain an efficient roadway system that supports multimodal transportation, serving all parts of El Monte.

Goal C-5: A connected, balanced, and integrated system of walking, biking, and equestrian paths and trails that is accessible and safe and connect to homes, residences, parks, and other community destinations.

- Policy C-5.2: Regional Coordination. Coordinate development of the City's bike network with adjacent jurisdictions, LACMTA (and its Bicycle Transportation Strategic Plan), Los Angeles County, and the Emerald Necklace, to maximize system connectivity.
- Policy C-5.7: Equestrian Trails. Provide equestrian trails and/or paths in the northeast and southeast areas of the City where feasible and where equestrian ownership, use, and demand warrant. Such improvements should facilitate access to the San Gabriel River.

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.

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- 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.

City of Irwindale General Plan

This Infrastructure Element of the City of Irwindale General Plan includes the Circulation Element. This Element guides the ongoing development of the City's roadway system in a manner that is compatible with the Community Development Element. The purpose of the Element is to promote the maintenance of a safe and efficient circulation system for the City. The Infrastructure Element describes the roadway system needed to serve traffic generated by the various land uses permitted under the Community Development Element. The Infrastructure Element is also responsive to regional transportation plans, such as the CMP and includes policies and programs to improve circulation and traffic within the City (City of Irwindale 2008).

City of Rosemead General Plan

Circulation Element

- Policy 1.3: Assure that traffic studies for individual developments, and traffic studies conducted for sectors of the community and specific plans by the City, make every effort to provide LOS D operations or better on arterial roadways and collector roadways if a nexus to the project exists.
- Policy 2.8: Include safe and convenient bicycle and pedestrian access in all transportation improvement projects. Ensure that nonmotorized transportation systems are connected and not interrupted by impassable barriers, such as freeways and include amenities such as secure bicycle parking.

Resources Management Element

Goal 1: Provide high-quality parks, recreation, and open space facilities to meet the needs of all Rosemead residents.

Policy 1.2: Develop pedestrian/bicycle trail systems in the City.

City of South El Monte General Plan

Circulation Element

Policy 1.4: Maintain service levels at intersections along arterial highways at Level of Service "D" or better during morning and evening peak travel periods.

Goal 4.0: Accommodate alternative modes of transit in land use and circulation system planning.

Policy 4.2: Provide local bicycle path link to the Whittier Narrows Recreation Area.

Policy 1.3: Continue to provide South El Monte residents with access to regional recreation resources.

3.14.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, 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 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 county congestion management agency 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.
- ◆ Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.14.3.1 Congestion Management Plan Significant Traffic Impact Criteria

The 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.

3.14.4 Environmental Impacts

3.14.4.1 Conflicts with Plans, Policies, and Ordinances

<i>Threshold:</i>	<i>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?</i>
<i>Threshold:</i>	<i>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.</i>

Project Trip Generation

Trip generation represents the amount of traffic which is both attracted to and produced by a development. The Proposed Project would consist of approximately 24.33 acres of passive park and trail uses. Although only a five acre park is proposed as part of the Proposed Project, the total area of all the proposed multi-use trails have been added for the purposes of trip generation calculation to provide a conservative estimate. Traffic generation rates for the Proposed Project have been derived from the (Not So) Brief Guide of Vehicular Traffic General Rates for the San Diego Region (April 2002) published by San Diego Association of Governments (SANDAG). The rates published by SANDAG are more conservative compared to rates in the ITE Trip Generation Manual. As such, trip generation rates published by SANDAG have been used to provide a conservative estimate for Project trips.

A summary of the Proposed Project's trip generation is shown in Table 3.14-4. The Proposed Project is anticipated to generate a total of 487 trips per day with approximately 19 AM peak hour trips and 39 PM peak hour trips. The estimated peak hour vehicular Project trips on study area roadways and intersections are nominal. The addition of Project trips is not expected to have significant impacts on study area roadways and intersections. Therefore, the focus of this traffic analysis is to evaluate the existing operations.

Table 3.14-4. Project Trip Generation Summary

LAND USE	QTY	UNITS ²	AM PEAK HOUR			PM PEAK HOUR			DAILY
			IN	OUT	TOTAL	IN	OUT	TOTAL	
PROJECT TRIP GENERATION SUMMARY									
Park	24.33	AC (acres)	10	10	19	19	19	39	487

The potential increase in number of pedestrian and bicycle crossings at the crosswalks at study area intersections is unknown. However, based on review of existing delay and LOS at the study area intersections, it appears the potential increase in pedestrian and bicycle crossings will not have a significant impact on delay and LOS with the completion of the Proposed Project. The study area intersections are anticipated to continue to operate at acceptable LOS with the Proposed Project. A less than significant impact would occur.

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The Proposed Project would not conflict with applicable plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system. The Proposed Project would improve access to the Emerald Necklace recreation system by building, modifying, or extending recreational facilities and access infrastructure. The proposed trails, connections, and park would help meet the goals of the local jurisdictions of providing alternatives means of transportation for pedestrians, bicyclists, and equestrians. A beneficial impact would occur.

3.14.4.2 Congestion Management Program

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 county congestion management agency for designated roads or highways?

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. 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. The Proposed Project is anticipated to generate a total of 487 trips per day with approximately 19 AM peak hour trips and 39 PM peak hour trips. 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 no impact would occur.

3.14.4.3 Hazards due to a Design Feature/Incompatible Use

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)?

At-grade Trail Crossings

The Project proposes at-grade pedestrian, bicycle and/or equestrian crossings at the following locations:

- ◆ Peck Road at Foothill Transit Driveway
- ◆ Durfee Avenue/San Gabriel Avenue at Rosemead Boulevard
- ◆ San Gabriel Avenue at Lincoln Avenue
- ◆ Rosemead Boulevard at SCE Easement trail (mid-block crosswalk)

Based on information from the Federal Highway Administration (FHWA) Safety Program, marked crosswalks serve two purposes: they tell the pedestrian the best place to cross and they clarify that a legal crosswalk exists at a particular location. Marked crosswalks are one tool to get pedestrians safely across the street. The objective of adding a marked crosswalk is to channel pedestrians and bicyclists to safer crossing points. It should be understood, however,

that pedestrian crossing behavior may be difficult to control merely by the addition of marked crosswalks. On many roadways, particularly multi-lane and high-speed crossing locations, more substantial improvements are often needed for safer pedestrian crossings.

The proposed trail crossings on Peck Road at Foothill Transit, San Gabriel Avenue/Durfee Avenue at Rosemead Boulevard, and San Gabriel Avenue at Lincoln Avenue are proposed at existing signalized intersections with pedestrian crosswalks. The Proposed Project includes the modification of the existing lighted intersections to add pedestrian, equestrian, bicycle detection, and to comply with Americans with Disabilities Act (ADA) requirements. With these modifications, hazards to trail users would be less than significant. Project specific design for the crossings are described below.

San Gabriel Avenue Crossing at Lincoln Avenue (Project 6). Widened waiting areas would be provided in addition to signage and improved striping and pavement markings.

Peck Road Crossing (Project 3). Crossing elements include safety pads behind the curbs that would accommodate an equestrian waiting area, the installation of push button signal actuators for equestrians, bicyclists, and pedestrians on each side of the Peck Road. Project features include the addition of standard traffic and regulatory signs, re-construction of the street curb and gutter, installation of textured accessible ramps, median modification to accommodate a wider safe crossing for equestrians, crossing striping, and street paint stencils. The crossings would be designed per the Manual on Uniform Traffic Control Devices, FHWA, U.S. Department of Transportation, and the U.S. Forest Service recommendations for equestrian crossings. The crossing would be coordinated with existing and planned traffic signal synchronization improvements administered by the County of Los Angeles Department of Public Works (DPW).

Rosemead Boulevard Mid-block Crosswalk (Project 7)

The proposed mid-block crosswalk on Rosemead Boulevard at the SCE easement trail would utilize the more visible “piano key” configuration of longitudinal stripes. This is consistent with guidance in the 2014 California Manual on Uniform Traffic Control Devices (2014 CA MUTCD), which states that this type of marking should be used at locations where a crosswalk might not be expected. The 2014 CA MUTCD states that safety must be considered when evaluating whether to install a mid-block pedestrian crossing. Recognizing the safety concerns associated with mid-block pedestrian crossings, the project’s mid-block crosswalk design concept is supplemented with local and advance warning systems and signage such as the mid-block pedestrian/bicycle signal, pedestrian actuated pedestrian hybrid beacon or rectangular rapid flash beacon (RRFB), flashing beacons, and speed feedback sign consistent with the 2014 CA MUTCD criteria.

The 2014 CA MUTCD criteria are based on peak hour traffic volumes and also take the volume of pedestrians/cyclists using the crossing into consideration, as well as the length of the crossing. The warrants for pedestrian traffic signal was evaluated based on Figure 4C-8 from the 2014 CA MUTCD and warrants for the pedestrian hybrid beacon was evaluated based on Figure 4F-2 from the 2014 CA MUTCD. The vehicular volumes on Rosemead Boulevard (2,273 vph on weekday and 1,782 vph on Saturday) result in the warrants being satisfied based on the minimum threshold crossing volumes of 20 pedestrians/cyclists for a pedestrian hybrid beacon or 93 pedestrians/cyclists for a mid-block pedestrian signal.

No explicit projections of the number of pedestrians/cyclists that would use each crossing are available (and as the crossings do not exist, it is not possible to collect existing counts). However, existing pedestrian and bicycle counts at the nearby intersection of Rosemead Boulevard and San Gabriel Avenue/Durfee Avenue shows approximately 26 pedestrians and 79 bicyclists crossing Rosemead Boulevard during Saturday AM peak period, which indicates mid-block pedestrian/bicycle signal warrant threshold would be satisfied.

The proposed mid-block signalized pedestrian crossing on Rosemead Boulevard would be designed and constructed per Caltrans design standards. The lighted, pedestrian activated crosswalk from the east edge of the SCE easement area across to Legg Lake would require modifications to the roadbed, median, and shoulders of Rosemead Boulevard including striping, new curbing, concrete landing pads, ADA ramping, signage, and height clearances. Rosemead Boulevard would receive new metal traffic warning signage indicating a lighted pedestrian crossing ahead in both directions per Caltrans standards. The crossing would require the installation of traffic lights, highway warning signs, street striping, and construction of a total of 800 lineal feet of landscaped medians (400 feet each side) to calm traffic as it approaches the new signalized crossing. With these design features in place the Proposed Project would result in less than significant impacts.

3.14.4.4 Emergency Access

<i>Threshold: Would the project result in inadequate emergency access?</i>
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The Proposed Project would improve regional and local access to the Emerald Necklace recreation system by building, modifying, or extending recreational facilities and access infrastructure. During the construction and operation of the Proposed Project adequate emergency access would be maintained. The proposed bridges over the San Gabriel River and San Jose Creek would provide a safe crossing for trail users, some who currently cross the river through the water. These bridges may also be used by emergency personnel to access these areas in case of an emergency. Impacts would be less than significant.

In the case of a park visitor or trail user emergency, first responders from the respective municipalities with emergency facilities would be able to access the project areas. The Proposed Project would be served by the local city police and fire stations and the Los Angeles County Sheriff's Department (LASD)'s Parks Bureau and Los Angeles County Fire Department (LACoFD). 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.

3.14.5 Mitigation Measures

The Proposed Project would result in less than significant impacts to the circulation system. No mitigation measures are required.

3.14.6 Residual Impacts After Mitigation

Impacts to transportation/traffic would be less than significant.

3.15 UTILITIES AND SERVICE SYSTEMS

This section describes the environmental setting for utilities and service systems, including the existing site conditions, regulatory setting, 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.

The Emerald Necklace Implementation Plan – Phase I Initial Study determined that the Proposed Project would not produce a significant amount of wastewater because the Proposed Project would primarily build transportation infrastructure (bicycle and multi-use trails, bridges, and access ramps). These issues are not discussed further in this section.

3.15.1 Environmental Setting

The Proposed Project includes 15 different projects located in multiple cities in Los Angeles County. These cities include the cities of Arcadia, Irwindale, Industry, Rosemead, South El Monte, El Monte, and unincorporated areas of Los Angeles County.

Wastewater Services

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 cities of Industry, Irwindale, Rosemead, and South El Monte.

The Sanitation Districts of Los Angeles County (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. The Sanitation Districts operates two water reclamation plants within the vicinity of the Proposed Project. The San Jose Creek Water Reclamation Plant (SJCWRP) is located in unincorporated Los Angeles County, near the City of Industry. The Whittier Narrows Water Reclamation Plant (WNWRP) is located in the City of El Monte, and was the first reclamation plant built by the Sanitation Districts (Sanitation Districts 2016a).

The City of Arcadia provides sewer services to the residents and facilities located in the City. The City owns and operates its water distribution system and the Public Works Services Department maintains and operates the system. While residents are responsible for their home sewer connection repairs and maintenance from the home to the main City line, the City of Arcadia also cleans and maintains the main sewer line (City of Arcadia 2016).

The City of El Monte is one of the jurisdictions under the JOS. The wastewater collection facilities that serve the City of El Monte are owned, operated, and maintained by the City Public Works Department. The Sanitation Districts then treats the wastewater at the WNWRP (City of El Monte 2011).

Stormwater Services

The Proposed Project consists of 15 different projects along the Rio Hondo and San Gabriel River. The eastern portion of the Emerald Necklace project is located within the San Gabriel River Watershed, while the western portion of the Proposed Project, including Whittier Narrows Recreation Area, is located within the Los Angeles River Watershed. Both the San Gabriel River Watershed and the Los Angeles River Watershed are located within Los Angeles County.

Within the project area the San Gabriel River remains a natural channel bottom stream with engineered modifications, such as dams and levees, to provide flood protection for the surrounding urban development. Major flood control and water resources management facilities located along the San Gabriel River include Cogswell Dam, San Gabriel Dam, Morris Dam, Santa Fe Dam, and Whittier Narrows Dam.

The Rio Hondo is a tributary to the Los Angeles River and a distributary to the San Gabriel River. The Rio Hondo branches from the San Gabriel River just below the Santa Fe Dam and flows westward to the Whittier Narrows area. Within most of the project area the Rio Hondo has been transformed to a concrete lined channel except within the Whittier Narrows Recreation Area where it remains a natural stream. The Whittier Narrows area is a low point between the Puente and Merced Hills, which form the southern boundary of the San Gabriel Valley. At the Whittier Narrows portions of the San Gabriel River flows are conveyed to the Rio Hondo by a manmade channel known as Lario Creek or Zone 1 Ditch. The six major tributaries to the Rio Hondo are the Alhambra, Rubio, Eaton, Arcadia, Santa Anita, and Sawpit Washes.

Water Services

The San Gabriel Valley Water Company (SGVWC) provides water services to most of the Emerald Necklace project area. The SGVWC service area covers 45 square miles and includes the cities of Arcadia, Industry, Irwindale, Rosemead, South El Monte and unincorporated areas of Los Angeles County (SGVWC 2010). The SGVWC also serves portions of El Monte. The SGVWC's water supply consists mainly of groundwater from the Main San Gabriel Valley and Central Groundwater Basins.

The City of El Monte is one of three cities, where individual projects are located, that are not completely serviced by the SGVWC. The City of El Monte currently owns and operates a water system which encompasses the central business district and parts of the northwestern and southern portions of the City. The rest of the City of El Monte is serviced by one of eight other water purveyors who service the area: California American Water, San Gabriel Valley Water, Golden State Water, Champion Mutual Water, Del Rio Mutual Water, Hemlock Mutual Water, Rurban Homes Mutual, and Sterling Mutual Water (City of El Monte 2010).

The City of Industry uses five water purveyors, including the previously mentioned SGVWC. The other four are Suburban Water Systems, Rowland Water District, La Puente Valley Water District, and Walnut Valley Water District (City of Industry 2011).

The City of Irwindale uses many water purveyors to service the area. The City of Azusa Water Department provides service to the largest portion of Irwindale, with Valley County Water District, and California-American Water Company, and The Southern California Water Company

servicing most of the rest of Irwindale. SGVWC services about 50 homes in the City of Irwindale (City of Irwindale 2008).

Solid Waste Disposal Services

While most cities contract solid waste collection through different waste disposal companies, the Sanitation Districts is responsible for implementation of the Countywide Integrated Waste Management Plan (CIWMP) and managing solid waste on a regional basis. All of the Emerald Necklace is located within the Puente Hills Materials Recovery Facility (MRF) service area. The Puente Hills MRF is located east of the Emerald Necklace near the I-605 and SR-60 interchange at the closed Puente Hills Landfill. 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 2016b).

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 acre feet (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 SGMA:

- ◆ 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 Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse 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 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 2016f).

County of Los Angeles Integrated Waste Management Plan

AB 939, also known as the California Integrated Waste Management Act (CIWMA) of 1989, mandates local jurisdictions to meet a diversion goal of 50 percent by 2000, and thereafter. In

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addition, each county is required to prepare and administer a countywide IWMP. This plan is comprised of the County's and the cities' solid waste reduction planning documents, plus an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element (CSE). In order to assess a local jurisdiction's compliance with AB 939, the Disposal Reporting System was established to measure the amount of disposal from each local jurisdiction and determine if it has met the goals.

For the County of Los Angeles, DPW is responsible for preparing and administering the Summary Plan and the CSE. These documents were approved by the County, a majority of the cities containing a majority of the cities' population, the Board of Supervisors, and CalRecycle.

The existing Summary Plan, approved by CalRecycle on June 23, 1999, describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated. The existing CSE, approved by CalRecycle on June 24, 1998, identifies how, for a 15-year planning period, the County and the cities would meet their long-term disposal capacity needs to safely handle solid waste generated that cannot be reduced, recycled, or composted.

In addition, DPW prepares an annual report to summarize the changes that have taken place since the approval of the existing Summary Plan and the existing CSE by the jurisdictions and CalRecycle.

The 2012 Annual Report includes in-depth assessments of the County's disposal capacity needs, detailed updates on the remaining permitted in-County disposal capacity, and the County's strategy for maintaining adequate disposal capacity through 2027. Provided certain assumptions are met, the 2012 Annual Report demonstrates that the County would meet the disposal capacity requirements of AB 939 through a multi-pronged approach, which includes successfully permitting and developing proposed in-County landfill expansions, utilizing available or planned out-of-County disposal capacity, developing necessary infrastructure to facilitate exportation of waste to out-of-County landfills, and developing conversion and other alternative technologies. Additionally, by continuing to enhance diversion programs and increasing the countywide diversion rate, local jurisdictions in Los Angeles County may further ensure adequate disposal capacity is available to serve the needs of the residents and businesses through the planning period (County of Los Angeles 2015d).

City of Arcadia General Plan

The City of Arcadia's General Plan sets forth goals and policies related to utilities and service systems in the Circulation and Infrastructure Element (Chapter 4) and the Resource Sustainability Element (Chapter 6) (City of Arcadia 2010).

The following goals from the Circulation and Infrastructure Element are applicable to the Proposed Project:

Goal CI-11: Storm drain infrastructure that minimizes regional and localized flood hazards.

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Goal CI-12: Waste management practices that provide efficient and cost-effective services to Arcadia residents, businesses, and institutions, and that include an emphasis on waste reduction and recycling.

The following goals from the Resource Sustainability Element are applicable to the Proposed Project:

Goal RS-4 Wise and sustainable water use practices that respond to and support the needs of City residents and businesses.

Goal RS-6 A higher level of waste reduction and recycling city-wide relative to 2009 achievements.

City of El Monte General Plan

The City of El Monte's General Plan sets forth goals and policies related to utilities and service systems that would be applicable to the Proposed Project in the Public Services and Facilities Element (City of El Monte 2011). The following goals from this element are applicable to the Proposed Project:

Goal PSF-3: High quality service levels for waste management, stormwater, wastewater, and water production in El Monte, sufficient to serve current and future residents, visitors, and the business community.

City of Industry General Plan

The City of Industry's General Plan sets forth goals and policies related to utilities and service systems in the Resource Management Element (City of Industry 2014). The following goals from this element are applicable to the Proposed Project:

Goal RM1: A reliable system that enables the City to efficiently and cost-effectively manage its water resources and needs.

Goal RM4: Cost effective, integrated waste management system that meets or exceeds state and federal recycling and waste diversion mandates.

City of Irwindale General Plan

The City of Irwindale's General Plan sets forth goals and policies related to utilities and service systems in the Infrastructure Element (City of Irwindale 2008). The following policy from this element is applicable to the Proposed Project:

Policy 2: The City will continue to cooperate with those utility providers in the City to ensure that sufficient infrastructure capacity is available to meet current and future service demands.

City of Rosemead General Plan

The City of Rosemead's General Plan sets forth goals related to utilities and service systems that would be applicable to the Proposed Project in the Resource Management Element. The

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Resource Management Element's purpose is to guide and set policy framework for existing and future open space uses for use by residents (City of Rosemead 2010). The following goal from this element is applicable to the Proposed Project:

Goal 3: Manage the use of and protect water resources that provide supplies to Rosemead residents and businesses.

City of South El Monte General Plan

The City of South El Monte's General Plan sets forth goals related to utilities and service systems that would be applicable to the Proposed Project in the Resources Element. The Resources Element establishes that care must be taken to avoid any further contamination of the San Gabriel groundwater basin associated with past industrial business practices throughout the San Gabriel Valley (City of South El Monte 2000). The following goals from this element are applicable to the Proposed Project:

Goal 3.0: Ensure that City residents and businesses are provided with a reliable, safe domestic water source.

Goal 4.0: Achieve broad-based participation in water conservation programs.

Goal 6.0: Control and reduce the amount of waste generated in the City.

3.15.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would have significant effect on the utilities environment if it would:

- ◆ Require 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;
- ◆ Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- ◆ Need new or expanded water entitlements in order to serve the project; or
- ◆ Exceed the capacity of a landfill in order to accommodate the project's solid waste disposal needs.

3.15.4 Environmental Impacts

3.15.4.1 Water or Wastewater Treatment Facilities

Threshold: Would the project require 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?

The Proposed Project would require water for drinking, restroom facilities, and landscape irrigation. Wastewater would be generated from restroom facilities. Only the Quarry Clasp Park Development (Project 1) would include a drinking fountain and a restroom facility. The

remaining projects would develop transportation infrastructure, including bicycle and multi-use trails, bridges, and access ramps. These types of facilities would not require substantial water, other than water required for landscaping, or generate wastewater. It is anticipated that the existing water and wastewater infrastructure (i.e. water and wastewater treatment plants and conveyance pipelines) have the adequate capacity to meet the additional needs created by the addition of a drinking fountain and restroom facility. Impacts would be less than significant.

3.15.4.2 Stormwater Drainage Facilities

Threshold: Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The proposed new trails and upgraded existing trails run along the Rio Hondo River to the west, and the San Gabriel River to the east. The trails generally stay along the rivers except in the Quarry Clasp and Whittier Narrows areas, where the trails connect the two rivers. The proximity of the trail system to the rivers is very close, and storm water runoff would drain into one of the two rivers. Projects 3, 5, 6, 7, 12, 13, 14, 15, and 16 would drain into the Rio Hondo River and projects 1, 2, 8, 9, 10, and 11 would drain into the San Gabriel River.

The development of recreational facilities and trails would result in the increase of impervious surfaces. This increase in impervious surfaces would change the amount of runoff and the rate at which it flows off the project sites. Drainage plans for the projects would be designed by a registered civil engineer to safely retain, detain, and/or convey stormwater runoff. Construction of new storm water infrastructure would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES). A Storm Water Pollution Prevention Plan (SWPPP) would be prepared for the Proposed Project, listing Best Management Practices (BMPs) to prevent water quality impacts. Incorporation of Mitigation Measure H-1, from Section 3.9 Hydrology and Water Quality, would reduce impacts from the installation and/or upgrade of storm drains to a less than significant level.

3.15.4.3 New or Expanded Water Entitlements

Threshold: Would the project need new or expanded water entitlements in order to serve the project?

The Proposed Project would require water for drinking fountains, restroom facilities, and for landscape irrigation. Only the Quarry Clasp Park Development (Project 1) would include a drinking fountain and a restroom facility. Landscaping is proposed for Projects 1, 2, 5, 7, 13, and 15. New landscaping would primarily comprise of native and drought tolerant plant species that would require minimal water. Although there would be a slight increase in demand for water services, the increased demand within the proposed bathrooms, water fountains, and irrigation would not be substantial. Impacts would be less than significant.

3.15.4.4 Solid Waste

Threshold: Would the project exceed the capacity of a landfill in order to accommodate the project's solid waste disposal needs?

The Proposed Project would generate solid waste during the construction phase and during operation. Trash would be generated gradually as each project is built. It is anticipated that only Project 1 (Quarry Clasp Park Development) would result in an operational waste source from trash generated by park visitors. The remaining 14 projects consist of transportation infrastructure, including bicycle and multi-use trails, bridges, and access ramps. These projects are not anticipated to generate significant amounts of trash during operation. As such, the Proposed Project is not anticipated to exceed the capacity of the local waste collection and disposal operations. A less than significant impact would occur.

3.15.5 Mitigation Measures

Applicable Mitigation Measure H-1, IS discussed in Section 3.9, Hydrology and Water Quality.

3.15.6 Residual Impacts After Mitigation

Impacts would be less than significant after mitigation.

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