

## **4.0 IMPACT OVERVIEW**

This chapter provides an overview of the environmental effects of the proposed project, including significant unavoidable adverse impacts, impacts not found to be significant, cumulative impacts, significant irreversible environmental changes, and growth-inducing impacts. Cross-references are made throughout this chapter to other sections in this EIR where more detailed discussions of the impacts of the proposed project can be found.

### **4.1 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS**

This section is prepared in accordance with Section 15126.2(b) of the CEQA Guidelines, which requires the discussion of any significant environmental effects that cannot be avoided if a project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less than significant level (Cal. Code Regs., Title 14, Section 15162.2(b)). An analysis of environmental impacts caused by the proposed project has been conducted and is contained in this EIR. Seven issue areas were analyzed in detail in Chapter 3.0. No significant and unavoidable impacts would occur from implementation of the proposed project. The EIR identifies significant impacts requiring mitigation for Biological Resources, Hydrology and Water Quality, Noise, and Transportation and Circulation. As discussed in Section 4.3, the proposed project would result in a significant cumulative impact related to global climate change.

### **4.2 EFFECTS NOT FOUND TO BE SIGNIFICANT**

Section 15128 of the CEQA Guidelines requires the identification of impacts of a project that were determined not to be significant and that were not discussed in detail in the impact section of the EIR (Cal. Code Regs., Title 14, Section 15128). These issues were eliminated from further review during the Initial Study process (see Appendix A). Therefore, the following section presents a brief discussion of environmental issues that were not found to be significant for this project.

#### **4.2.1 AGRICULTURAL RESOURCES**

The 11.3-acre lease boundary is designated as open space in the County of Los Angeles General Plan Whittier Narrows & South El Monte Land Use Plan (LADRP 1980). The lease boundary was previously used for agricultural purposes before it was purchased by the USACE in 1937 for flood control purposes. The lease boundary has been used for educational and recreational purposes since 1958. No agricultural activities currently occur on-site. There is no designated farmland within the lease boundary; therefore, no impacts to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur (California Department of Conservation 2006). Similarly, no conflicts with existing zoning for agricultural uses would occur.

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### 4.2.2 GEOLOGY AND SOILS

The lease boundary is not located within an area identified by the California Geological Survey as having the potential for landslides, or slope instability. As with most of Southern California, the lease boundary is located in a seismically active region that would be subject to strong seismic ground shaking. However, it is not located within an Alquist-Priolo special studies zone and no active faults cross the project site. The lease boundary is not located within a designated liquefaction zone (California Geological Survey 2006; LADRP 1990). As with all projects in the vicinity, the proposed project would be designed and constructed in accordance with the California Building Code and all other applicable local, state, federal codes relative to seismic safety. Compliance with existing regulations would ensure a less than significant impact to people or structures from seismic ground shaking, liquefaction, subsidence, and expansive soils. Soil erosion and loss of topsoil is discussed in Chapter 3.5, Hydrology and Water Quality of this EIR.

### 4.2.3 HAZARDS AND HAZARDOUS MATERIALS

The lease boundary is not included on a list of hazardous materials sites (DTSC 2006; EPA 2006a and 2006b). Construction and operation of the proposed project would not require extensive or on-going use of acutely hazardous materials or substances. The occasional use of hazardous materials could include paints, aerosol cans, cleaning agents (solvents), automotive supplies (bi-products), and pesticides and herbicides. These types of materials are not considered acutely hazardous and would be used in small quantities. All hazardous materials used at the project site would be used, stored, handled, and disposed of in accordance with County, state, and federal laws that protect public safety. Due to the age of the existing structures, they could contain lead-based paint and asbestos-containing materials. In accordance with the Department of Toxic Substances Control (DTSC) requirements, these building would be evaluated for asbestos-containing materials and lead-based paint prior to the start of construction. All lead-based paint and asbestos-containing materials would be removed prior to the start of construction. Compliance with existing regulations would ensure a less than significant impact.

Construction and operation of the proposed project would not require extensive or on-going use of acutely hazardous materials or substances. Construction activities would be short-term and one-time in nature, and would involve the limited transport, storage, use, or disposal of hazardous materials. Some examples of hazardous materials handling include fueling and servicing construction equipment on-site, and the transport of fuels, lubricating fluids, and solvents. These types of materials, however, are not acutely hazardous, and all storage, handling, and disposal of these materials is regulated by DTSC, the EPA, Occupational Safety & Health Administration, Los Angeles County Fire Department, and Los Angeles County Health Department. Adherence to the regulations set forth by County, state, and federal agencies would reduce the potential for hazardous materials impacts to a less than significant level and would not pose a safety hazard to students and staff at South El Monte High School.

#### **4.2.4 LAND USE AND PLANNING**

The lease boundary is designated open space in the Los Angeles County General Plan Whittier Narrows & South El Monte Land Use Plan (LADRP 1980). Development of the proposed project would be consistent with the adopted use in the General Plan and with the current use of the site as the WNNC. There are no residential uses within the lease boundary and no roadways would be closed as a result of the proposed project. Accordingly, no communities would be physically divided as a result of the proposed project. No impact would occur.

#### **4.2.5 MINERAL RESOURCES**

There are no known mineral deposits of economic importance underlying the lease boundary (LADRP 2006). Development of the proposed project would not result in the loss of availability of a known mineral resource. No impact would occur.

#### **4.2.6 POPULATION AND HOUSING**

The lease boundary is currently developed with the WNNC, associated facilities, and trails. There is no residential development within the lease boundary. No housing units or persons would be displaced as a result of the proposed project, nor would the proposed project necessitate construction of replacement housing elsewhere. Construction of the proposed project would not generate a substantial number of new jobs, construct housing, or otherwise induce substantial population growth in the surrounding area. No impact to population and housing would occur.

#### **4.2.7 PUBLIC SERVICES**

The proposed project is expected to increase the number of visitors to the site per year from approximately 60,400 visitors per year currently to approximately 100,000 to 120,000 visitors per year with the proposed project. Police protection services would continue to be provided by the County Office of Public Safety from a County Police Substation located in the within the Natural Area. Construction of the proposed project would not generate a substantial number of new jobs, construct housing, or otherwise induce substantial population growth in the surrounding area. However, the proposed project would increase the number of visitors to the site, which could increase service calls. The lease boundary would continue to be patrolled by County Police, as under existing conditions. Although additional County Police may be required to patrol the lease boundary, this is within their service capacities and would not cause a need to construct a new facility. However, the existing substation would be displaced by the proposed project. As such, the County Police would be relocated somewhere within their service area. It not currently known if the County Police would rent space, use existing County facilities, or build a new facility. Should it be necessary to construct a new substation, a separate environmental review process will be undertaken at that time.

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Fire service would continue to be provided by the Los Angeles County Fire Department from Fire Station 90 in Pico Rivera. Fire sprinklers would be installed in the interpretive center and all site features would be constructed in accordance with Los Angeles County Fire Department requirements. Although the number of emergency calls for fire protection services may increase as a result of the proposed project, the current staffing at the Pico Rivera Station can accommodate the new demand. As such, no new fire stations would be constructed or expanded as a result of the proposed project. The impact would be less than significant.

No increase in school age children would occur from construction and operation of the proposed project. As such, no new or expanded school facilities would be required. The impact would be less than significant.

### **4.2.8 PARKS AND RECREATION**

The proposed project would address a community need for enhanced educational and recreational facilities. The proposed project would result in the continuing use of the lease boundary for passive recreational opportunities. As such, improvements to the recreational facilities have been planned as part of the proposed project such that substantial physical deterioration of the project site would not occur. The impact would be less than significant.

### **4.2.9 UTILITIES AND SERVICE SYSTEMS**

The interpretive center would be designed, constructed, and operated in accordance with the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) platinum level standards. This design approach increases the efficiency of energy, water, and buildings material use on-site. Water efficiency on the project site would increase by 40 percent compared to a similarly sized facility that was not constructed to LEED standards. This efficiency would be accomplished through the installation and use of low-flow fixtures and the reuse of water for landscape irrigation and other purposes that can use non-potable water. Although water consumption and wastewater discharge at the lease boundary would increase compared to the existing facility, the anticipated new demand can be accommodated by existing County water supplies. Upgraded water infrastructure is required to support the proposed project. This includes a new 8-inch concrete sewer line installed in Durfee Avenue and a new 3-inch domestic water line. With these upgrades, the proposed project infrastructure would not exceed the capacity of existing facilities. Construction materials would be recycled to the maximum extent feasible. Further, in accordance with County regulations, the proposed project would meet the requirements for recycling space and provide an easily accessible area serving the interpretive center that is dedicated to the separation, collection, and storage of materials for recycling. Although the amount of trash generated on-site would increase compared to existing conditions, it would not exceed the capacity of area landfills. The impact would be less than significant impact.

## **4.2.10 ENERGY**

The existing buildings would be deconstructed to provide reuse of 10 percent of the building components within the interpretive center, and to provide salvage of an additional 50 percent of the demolished building materials for use outside the proposed project. Five cooling towers, one per bay, would be used to actively cool the interpretive center. The cool water for the chilled beams that runs through the towers is provided by a night sky radiation system. This system would operate at night by spraying water onto the roof and exposing it to the sky. As the water runs down the roof, it cools and is then collected in a storage tank for use during the day. A conventional chiller would provide back-up cooling for this water supply in case of insufficient natural cooling. In the meeting rooms and classrooms, where occupant loads can be high and vary greatly throughout the day, cold water would be supplied through the concrete floor slabs to chill them. Conversely, warm water would be run through the concrete slabs in winter to warm them. Overhangs and shaded louvers on windows would protect the interior from the sun and reduce energy costs during the summer months. Other energy saving strategies include the use of natural light from skylights (clerestories at the roof level) to illuminate exhibits. A photovoltaic power system would be installed to provide back-up power to the interpretive center. All interior light fixtures would be fitted with energy saving lamps and energy saving protected electronic ballasts. Occupancy sensors would be used to automatically turn off lights when meeting rooms, offices, and restrooms are not in use. Light sensors would control dim lighting based on ambient light levels in the exhibit areas, hallways, etc. The building envelope would exceed the requirements of the California Energy Code for minimum thickness of roof and wall insulation. Windows would be glazed with double pane Low-E type and low solar gain coefficient glazing. Bike racks would be provided on-site and most visitors to the site would be school children traveling on buses. Visitors would be encouraged to use nearby bus lines. With implementation of these design features and operational strategies, energy consumption (electricity and natural gas) at the project site would be reduced by 50 percent compared to a similarly sized non-LEED building. In addition, the proposed project would exceed Title 24 energy standards related to building envelope, outdoor lighting and signs, mechanical systems, performance approach, indoor lighting, and acceptance requirements (defined as the application of targeted inspection checks and testing to determine whether specific building systems conform to the criteria set forth in the standards and to plans or specifications) (Thomas Hacker Associates 2006). Although energy consumption would increase compared to the WNNC, the proposed project would not exceed the capacity of local and regional utilities to supply natural gas and electricity. Further, the proposed project would exceed California and County energy standards and sharply reduce consumption compared a traditional building of this size. As such, construction and operation of the proposed project would not create a significant energy impact.

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### 4.3 CUMULATIVE IMPACTS

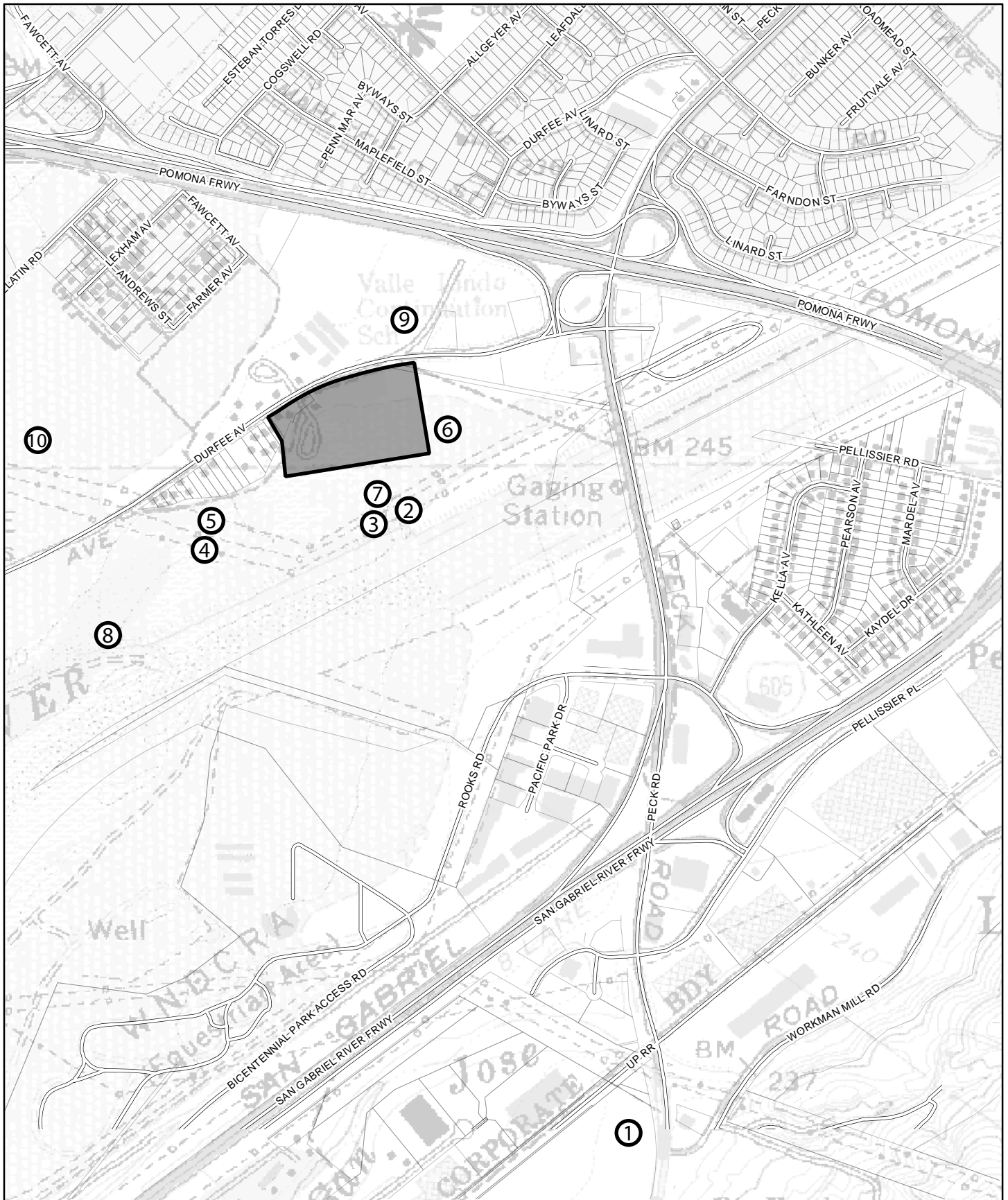
According to Section 15355 of the CEQA Guidelines, cumulative impacts refer to:

“Two or more individual effects which, when considered together are considerable or which compound or increase other environmental effects. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

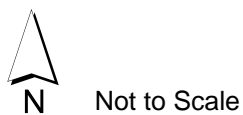
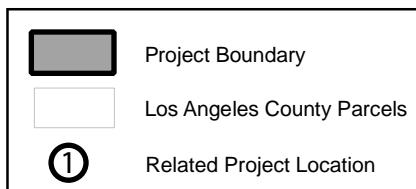
Section 15130(a) of the CEQA Guidelines states that:

“An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable.... When the combined cumulative impact associated with the project’s incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR.... An EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project’s contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.”

According to Section 15130 (b)(1)(A) of the CEQA Guidelines, a list of past, present, and probable future projects producing related or cumulative impacts may be used as the basis of the cumulative impacts analysis. The “list” approach was used for the cumulative impacts discussion in this EIR. The scale or geographic scope of related projects varies for each impact category. For instance, cumulative geology and soils or aesthetics impacts are considered localized, while cumulative traffic and transportation and air quality impacts are considered regionally. Table 4-1 includes all of the approved, under construction, or reasonably foreseeable development projects within a two-mile radius of the lease boundary. The list of development projects is derived from lists provided by the City of South El Monte and LACDPW Traffic and Lighting Division (Iteris, Inc. 2008). In addition, the cumulative discussion takes into consideration other approved, under construction, or reasonably foreseeable development projects within the Natural Area (Thomas Hacker Associates 2006). The locations of the following projects are shown on Figure 4-1.



Source: Los Angeles County Office of the Assessor, 2006; USGS El Monte Quad, 1994



**Figure 4-1**  
**Related Project Locations**

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**TABLE 4-1 RELATED PROJECTS**

No.	Location	Description
1	1000 Workman Mill Road	352,000 sf warehouse expansion project.
2	Lario Creek (Zone 1 Ditch) Realignment	LADPW proposes to alter the alignment of Lario Creek through the Natural Area while increasing the ability of the channel to divert water for groundwater replenishment. The project would involve stream bank restoration and stabilization, and creation of a wetland between the WNNC and the river. The current alignment conflicts with proposed project and is conceptual only.
3	River Overlook at Whittier Narrows	Amigo de los Rios is proposing to construct an overlook where Lario Creek diverges from the San Gabriel River.
4	Southern California Edison (SCE) Easement	SCE is proposing to upgrade its two existing 220 kV electric power transmission lines that traverse the Natural Area with double-circuit 500 kV electric power transmission lines.
5	Natural Area west of Discovery Center	The Tongva Village feature is associated with the Lario Creek Realignment project. The exhibit would recreate a demonstration Tongva summer camp. There is currently no project proponent or funding sources.
6	Natural Area east of proposed Discovery Center parking lot	A native plant nursery was proposed beneath the SCE power lines north of the river and west of the Robert S. Joe Commemorative Ditch. The project would involve planting low growing native habitat in accordance with SCE requirements. There is currently no project proponent or funding sources
7	Natural Area south of Discovery Center	A wetland project was proposed by the City of Industry as mitigation for another project. The proposal was rejected by the USACE and is no longer under consideration.
8	Natural Area west of Discovery Center	USACE 1135 project is intended to restore habitat areas in the Natural Area by dredging and sediment removal from selected lake areas to increase the open water habitat and to replace non-native vegetation with native species that would provide habitat of higher value to wildlife. This project has been contemplated for years by the USACE. Specific activities and funding sources have not been identified.
9	El Monte Union High School District Bus Garage	Storage and maintenance facility for up to 15 buses.
10	Stakeholder Input to the Whittier Narrows Master Plan	The project is in the early planning stages, which involves gathering input from various stakeholders as to their needs and vision for the Whittier Narrows Recreation Area (Recreation Area). No specific facilities are planned.

It is important to note that the proposed project is located in the Recreation Area, a flood control reservoir behind the Whittier Narrows Dam controlled by the USACE and leased to LADPR for recreational and natural resource purposes. In addition, LADRP designated the Recreation Area as a Significant Ecological Area (SEA). As such, development to the south and far west and north of the project site is limited to development of recreational facilities in accordance with the Whittier Narrows Master Development Plan. Private property outside of the Recreation Area is located immediately to the west. This area is already fully developed with commercial/industrial and multi-family residential uses. Institutional uses are located east of the Robert S. Joe Commemorative Ditch, including the Los Angeles County Assessor's office. Commercial parcels primarily serving the freeway interchange are located farther east. South El Monte High School is located to the north of the project site. There are no current plans to expand this campus. Commercial development is located east of the campus, including a restaurant and a gas station. As such, there is little development in the immediate vicinity of the project site that would contribute to cumulative impacts. The proposed project is part of the San Gabriel River Corridor Master Plan (SGRCMP), which contemplates restoration activities, and recreational and

education features in an approximately 30-acre area south of Durfee Avenue including a portion of the project site. Future development of the SGRCMP is considered too speculative to be included in this EIR, even at the cumulative level, because no proposals, planning efforts, or fundraising activities have been contemplated or undertaken as of this writing.

### **AESTHETICS**

No projects are located within a 0.25-mile radius of the lease boundary which would create a cumulative aesthetic impact. Any project located at a greater distance than 0.25 mile would not have a view of the project site. Four of the related projects are located within a 0.25-mile radius of the project site. These include the SCE easement, Tongva Village, Lario Creek Realignment, and the River Overlook. With the exception of the SCE project, other projects are part of the SGRCMP and are intended to enhance the visual and recreational experience of this portion of the Natural Area. Although these projects may be visible from the project site, they do not involve the construction of intrusive structures and would not be out of keeping with the Natural Area. SCE proposes to upgrade its existing utility lines to 500 kV. The power lines are currently visible from the project site and are a consistent part of the surrounding visual environment. As such, this project would not result in visual impacts which would create a cumulative aesthetic impact when combined with the proposed project. The cumulative impact to the visual character and quality of the area would be less than significant.

### **AIR QUALITY**

Cumulative air quality impacts are considered on a regional basis. As such, Tables 3.2-4 and 3.2-5 are used in the analysis of cumulative air quality impacts.

**Construction.** The related projects list primarily includes the development of additional recreational facilities within the Natural Area, as well as upgrading SCE's existing utility lines and a warehouse expansion project. These related projects are considered relatively minor from a construction air quality perspective. The related projects would be required to comply with SCAQMD Rule 403. Because the proposed project results in a less than significant regional impact during construction, it is anticipated that the related projects (see Table 4-1) would also result in less than significant regional air quality impacts during construction. Therefore, the cumulative regional air quality impact would be less than significant. It is unusual for localized construction emissions to result in a significant cumulative impact because the impact is dependent on simultaneous construction of multiple projects in close proximity to each other. The proposed project would not generate significant localized emissions. Therefore, it is unlikely that construction activity associated with a related project would occur within 1,500 feet of the lease boundary during the brief grading phase when the greatest amount of emissions would be produced. As such, the cumulative localized emissions would be less than significant.

**Operations.** The SCAQMD's approach for assessing cumulative operational impacts is based on the Quality Management Plan forecasts of attainment of ambient air quality standards in accordance with the

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requirements of the federal and state Clean Air Act. The SCAQMD has set forth regional significance thresholds designed to assist in the attainment of ambient air quality thresholds per the State Implementation Plan. The proposed project would not result in a significant VOC, PM<sub>2.5</sub>, PM<sub>10</sub>, NO<sub>x</sub>, or CO impact during operations. Therefore, the proposed project would result in a less than significant regional cumulative operations impact.

### Global Climate Change

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters the Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back to space, but the properties of the radiation have changed from high-frequency solar radiation, to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. This radiation that would have otherwise escaped back to space is now "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Without the Greenhouse Effect, Earth would not be able to support life.

Prominent GHGs contributing to the Greenhouse Effect include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), ozone (O<sub>3</sub>), water vapor, nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs). Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for an enhancement of the Greenhouse Effect, which have led to a trend of unnatural warming of the Earth's climate, known as global warming or global climate change. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Emissions of CO<sub>2</sub> are byproducts of fossil fuel combustion. Methane, a highly potent GHG, results from off-gassing associated with agricultural practices and landfills. Processes that absorb CO<sub>2</sub>, often referred to as sinks, include uptake by vegetation and dissolution into the ocean.

Carbon dioxide-equivalent (CO<sub>2</sub>e) is a value used to account for different GHGs having different potential to retain infrared radiation in the atmosphere and contribute to the Greenhouse Effect. This is known as the Global Warming Potential of a GHG, and is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, as described in Appendix C, "Calculation Referenced," of the General Reporting Protocol of the California Climate Action Registry, one ton of CH<sub>4</sub> has the same contribution to the Greenhouse Effect as approximately 23 tons of CO<sub>2</sub>. Therefore, CH<sub>4</sub> is a much more potent GHG than CO<sub>2</sub>. Expressing emissions in carbon-dioxide equivalents takes the Greenhouse Effect contribution of all GHG emissions and converts them to a single unit equivalent to the affect if all emissions were CO<sub>2</sub>.

As discussed in Chapter 3.2, Air Quality, an increase in the generation and emission of GHGs is not itself an adverse environmental effect. Climate change is a global problem, and GHGs are global pollutants,

unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. The strong majority of the scientific community concurs that global warming will lead to adverse climate change effects around the globe and that the phenomenon is anthropogenic, i.e., caused by humans. Thus, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change that causes adverse environmental effects.

In 2004, California produced 492 million gross metric tons of CO<sub>2</sub> gases. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. Fossil fuel consumption in the transportation sector was the single largest source of California's GHG emissions in 2004, accounting for 40.7 percent of total GHG emissions in the state. This category was followed by the electric power sector (including both in-state and out-of-state sources) (22.2 percent) and the industrial sector (20.5 percent).

### Regulatory Setting

**Federal.** The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts et al v. EPA*, (549 U.S. 497 (2007)) that CO<sub>2</sub> is an air pollutant as defined under the Clean Air Act, and that EPA has the authority to regulate emissions of GHGs. According to the EPA, “the United States government has established a comprehensive policy to address climate change” that includes slowing the growth of emissions; strengthening science, technology and institutions; and enhancing international cooperation. To implement this policy, “the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science.” The federal government's goal is to reduce the GHG intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, EPA administers multiple programs that encourage voluntary GHG reductions, including ENERGY STAR, Climate Leaders, and Methane Voluntary Programs.

**State.** Various local and statewide initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way and there is a real potential for severe adverse environmental, social, and economic effects over the long term. Because every nation is an emitter of GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help slow or stop human-caused increase in average global temperatures and associated changes in climatic conditions.

In September 2006, Governor Schwarzenegger signed Assembly Bill 32 (Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006, which enacted Sections 38500–38599 of the California Health and Safety Code. Assembly Bill 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. Assembly Bill 32 requires reduction of statewide GHG emissions to 1990 levels by 2020 (an approximately 25 percent reduction in existing statewide GHG emissions). This reduction will be

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accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, Assembly Bill 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. Assembly Bill 32 specifies that regulations adopted in response to Assembly Bill 1493 should be used to address GHG emissions from vehicles. However, Assembly Bill 32 also includes language stating that if the Assembly Bill 1493 regulations cannot be implemented, then ARB should develop new regulations to control GHG emissions from vehicles under the authorization of Assembly Bill 32. Assembly Bill 32 requires ARB to 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 the reductions in GHG emissions necessary to meet the cap. Assembly Bill 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.

Senate Bill 97, signed in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency by July 1, 2009, guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA. The California Resources Agency is required to certify and adopt those guidelines by January 1, 2010. This bill also removes, both retroactively and prospectively, as legitimate causes of action in litigation any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006 (Proposition 1B) or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1E). This provision will be repealed by operation of law on January 1, 2010; at that time such projects, if any remain unapproved, will no longer enjoy protection against litigation claims based on failure to adequately address issues related to climate change. This bill would protect only a handful of public agencies from CEQA challenges on certain types of projects for a few years' time.

Senate Bill 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. Senate Bill 375 requires Metropolitan Planning Organizations to adopt a Sustainable Communities Strategy or Alternative Planning Strategy, which will prescribe land use allocation in that Metropolitan Planning Organization's Regional Transportation Plan. ARB, in consultation with Metropolitan Planning Organizations, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each Metropolitan Planning Organization's Sustainable Communities Strategy or Alternative Planning Strategy for consistency with its assigned targets. If Metropolitan Planning Organizations do not meet the GHG reduction targets, transportation projects will not be eligible for

funding programmed after January 1, 2012. City or County land use policies (including General Plans) are not required to be consistent with the Regional Transportation Plan (and associated Sustainable Communities Strategy or Alternative Planning Strategy). However, new provisions of CEQA would incentivize qualified projects that are consistent with an approved Sustainable Communities Strategy or Alternative Planning Strategy, categorized as “transit priority projects.”

On June 19, 2008, OPR issued a Technical Advisory on addressing climate change impacts of a proposed project under CEQA (OPR Climate Change Advisory). The OPR Climate Change Advisory recommends that lead agencies quantify, determine the significance of, and (as needed) mitigate the cumulative climate change impacts of a proposed project. The OPR Climate Change Advisory identifies that each lead agency is required under CEQA to exercise its own discretion in choosing how to determine significance, in the absence of adopted thresholds or significance guidelines from the state, ARB, or the applicable local air district.

OPR has issued *Preliminary Draft CEQA Guideline Amendments for Greenhouse Gas Emissions* pursuant to Senate Bill 97, which the Resources Agency has not approved. They are designed to be consistent with the existing CEQA framework for environmental analysis, including but not limited to the determination of baseline conditions, determination of significance, and evaluation of mitigation measures. OPR did not identify a specific threshold of significance for greenhouse gas emissions, nor has the OPR prescribed assessment methodologies or specific mitigation measures. The preliminary draft amendments encourage lead agencies to consider many factors in making their own determinations based on substantial evidence.

### **Emissions**

GHG emissions associated with the proposed project would be generated during construction and operation of the Proposed Project. Construction emissions would be associated with vehicle engine exhaust from construction equipment, vendor trips, and employee commute trips. Operational emissions would be associated with area, mobile, and stationary sources. Area-source emissions would be associated with activities such as natural gas use, maintenance of landscaping and grounds, and other sources. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with visitors, employees, and deliveries to the project site. In addition, increases in stationary-source emissions could occur at offsite utility providers associated with electricity generation and water distribution that would supply the proposed project.

GHG emissions generated by the proposed project would predominantly consist of CO<sub>2</sub>. Although emissions of other GHGs such as CH<sub>4</sub> and N<sub>2</sub>O also contribute to global climate change, these GHGs are emitted in much smaller quantities than CO<sub>2</sub>, from the emissions-generating activities associated with the proposed project. This is because mobile sources would be the primary source of GHG emissions associated with the proposed project, and CH<sub>4</sub> and N<sub>2</sub>O represent a negligible portion of the GHGs associated with the burning of gasoline and diesel fuel in mobile sources (CCAR 2009).

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There is no available adopted or widely accepted methodology for evaluating GHG emissions from new development. In the case of the proposed project, CO<sub>2</sub> emissions associated with construction and operations were modeled using URBEMIS 2007, Version 9.2.4. CO<sub>2</sub> emissions were used as a proxy for all GHG emissions associated with the proposed project. Indirect emissions associated with energy and water consumption were estimated using methodology recommended in CCAR's current General Reporting Protocol Version 3.1. GHG emissions were estimated for the baseline, or existing conditions, and the buildout of the proposed project.

California's water infrastructure uses a tremendous amount of energy to collect, move, and treat water; dispose of wastewater; and power the large pumps that move water throughout the state. California consumers also use energy to heat, cool, and pressurize the water they use in their homes and businesses. Together these water-related energy uses annually account for roughly 20 percent of the state's electricity consumption, one-third of non-power plant natural gas consumption, and about 88 million gallons of diesel fuel consumption. The California Energy Commission has reported that the energy intensity of the water use cycle in Southern California is 12,700 kilowatt-hours per million gallons (California Energy Commission 2005).

Construction under the proposed project would generate a finite quantity of approximately 364 metric tons of CO<sub>2</sub>e over the duration of construction activities (estimated between 2011 and 2013). Construction activity would contribute GHG emissions to a much lesser extent than the long-term operation of the proposed project for which emissions occur annually over the lifetime of the project. In addition, the existing buildings would be deconstructed to provide reuse of 10 percent of the building components, and to provide salvage of an additional 50 percent of the demolished building materials further reducing the proposed project's contribution to GHG emissions during construction activities. Construction emissions would be short-term.

Buildout of the proposed project site would add approximately 1,096 net vehicle trips per day to the project area (see Chapter 3.7, Transportation and Traffic). If the total vehicular trips, as well as area-source and offsite stationary-source GHG emissions are considered, operation of the proposed project would generate total GHG emissions of approximately 2,409 metric tons of CO<sub>2</sub>e annually during the lifetime of the project. Table 4-2 shows the estimated GHG emissions due to construction and operation of the proposed project.

The interpretive center would be constructed to meet the U.S. Green Building Council's platinum level LEED standards. LEED is a voluntary, national standard for developing and rating high-performance, sustainable buildings, often referred to as "green" buildings. This design approach increases the efficiency of energy, water, and building material use on-site. Green buildings are designed to reduce the impacts on human health and the environment through better siting, design, construction, operation, maintenance, and removal, considering the complete life cycle. Some of the sustainable design features that would be incorporated into the interpretive center include rammed-earth walls, cooling towers, and use of renewable building materials. In addition, the proposed project site is located along 2 bus routes.

The proposed project would be constructed to exceed Title 24 Energy Efficiency Standards, including the use of energy efficient lighting and appliances, among other provisions. The proposed project would be required to meet County requirements for the separation, collection, and storage of materials for recycling. Although operation of the interpretive center would contribute to GHG emissions, proposed project design features would limit the proposed project's contribution.

In preparing the estimates, the following assumptions were applied:

1. Energy use at the present maintenance building with an area of 826 square feet, would be approximately the same as for the new maintenance building with an area of 1,000 square feet. The change from the present to the future would be very small relative to the overall emissions; these buildings were not included in the calculations.
2. Energy use at the present outbuilding and picnic shelter is very small, and would be approximately the same as energy use at the future outdoor classroom, which would also be very small. The change from the present to the future would be very small relative to the overall emissions; these buildings were not included in the calculations.
3. Although the County Police Substation would be eliminated from the project site, the functions of the police group stationed there would continue elsewhere in the Natural Area; there would be a negligible change in police activity CO<sub>2</sub>e emissions resulting from the proposed project. Further, data on the police activity associated with the WNNC is not readily available.
4. Because of the LEED design, the interpretive center would use 50 percent of the electricity and gas than would be used in a conventional, non-LEED building of the same size.
5. The average one-way trip distance for the WNNC and proposed interpretive center visitors would be 7 miles.
6. The average energy use in the WNNC building would be 8 kilowatt hours per square foot per year.
7. The average water use for the current WNNC building is 14 gallons per minute and the average water use for the proposed interpretive center is 75 gallons per minute.

Results of the calculations are shown in Table 4-2.

## 4.0 Impact Overview

**TABLE 4.2 GREENHOUSE GAS OPERATIONS EMISSIONS**

Source	Estimated Emissions (CO <sub>2</sub> e) <sup>1</sup> (Metric Tons)
<b>Direct Construction Emissions</b>	
2011	56
2012	257
2013	50
<b>Baseline Operational Emissions (2006)</b>	
Area source	1 TPY
Mobile source	558 TPY
Energy consumption onsite <sup>2</sup>	8 TPY
Water consumption (energy for conveyance, treatment, distribution, and wastewater treatment) <sup>3</sup>	34 TPY
<b>Total Baseline GHG Emissions</b>	<b>602 TPY</b>
<b>Proposed Operational Emissions (2013)</b>	
Area source	29 TPY
Mobile source	2,171 TPY
Energy consumption onsite <sup>2</sup>	27 TPY
Water consumption (energy for conveyance, treatment, distribution, and wastewater treatment) <sup>3</sup>	183 TPY
<b>Total Proposed GHG Emissions</b>	<b>2,409 TPY</b>
<i>Net Increase (Project less Baseline)</i>	
<i>1,807 TPY</i>	

Notes:

CO<sub>2</sub>e = carbon dioxide equivalent; TPY = metric tons per year

<sup>1</sup> Emissions were modeled using the URBEMIS 2007 (Version 9.2.4) computer model, based on trip generation rates obtained from Chapter 3.7 of this EIR; proposed land uses identified in Chapter 2.0, "Project Description,"; and default model assumptions where detailed information was not available. URBEMIS accounts for emissions from vehicles and natural gas use. URBEMIS output is in units of tons CO<sub>2</sub>/year, whereas a standard unit for reporting GHG emissions is in metric tons CO<sub>2</sub>e/year. URBEMIS does not include emission factors for CH<sub>4</sub> and N<sub>2</sub>O. Tons were converted to metric tons using the factor of 0.907 metric tons per ton.

<sup>2</sup> Project indirect operational emissions for electricity generation were calculated using GHG emission factors from the California Climate Action Registry (CCAR) General Reporting Protocol, Version 3.1 January 2009, Appendix C.

<sup>3</sup> CCAR emission factors were used to calculate GHG emissions due to water consumption.

Notes: The values presented in this table do not include the full life-cycle of GHG emissions that may occur over the production/transport of materials used during construction of the project or solid waste disposal over the life of the project, end-of-life of the materials and processes that would contribute to GHG emissions that occur as an indirect result of the project, etc. Doing so would require analysis beyond the current capabilities in impact assessment, and would lead to a false and misleading level of precision in reporting of project-related GHG emissions. Further, indirect emissions associated with in-state energy production, solid waste disposal, and wastewater treatment would be regulated under AB 32 at the source or facility that would handle these processes. The emissions associated with offsite facilities in California would be closely controlled, reported, capped, and traded under AB 32 and ARB programs. Therefore, this category of emissions would be consistent with AB 32 requirements.

Refer to Appendix E for detailed assumptions and modeling output files.

It is assumed that the proposed project would be operational in 2013. As shown in Table 4-2, the proposed project would generate approximately 1,807 net new tons per year of CO<sub>2</sub>e emissions than are currently generated by the WNNC. Operational GHG emissions generated by the proposed project represent approximately 0.0003 percent of the statewide emissions in 2004.

CEQA Guidelines Section 15130(b)(5)(c) states that with "some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of

conditions on a project-by-project basis.” The assessment and mitigation of cumulative impacts as they relate to global climate change fall into this category since the causes and effects are worldwide. Accordingly, the only feasible mitigation to address issues related to global warming will be ARB’s adoption of regulations and thresholds pursuant to Assembly Bill 32, which will be implemented by local air quality management agencies (e.g., SCAQMD), to limit GHG emissions in the state. Although the California Global Warming Solutions Act of 2006 provides new regulatory direction towards limiting GHG emissions, at the time of writing no air districts in California, including SCAQMD, have a recommended emission threshold for determining significance associated with GHGs from development projects that are not industrial or stationary in nature. To date there are no local, regional, state, or federal thresholds to determine the cumulative impacts of GHG emissions on global climate change. Therefore, in the absence of established thresholds, the Authority has concluded for the purposes of this project only that if the proposed project would contribute more GHG emissions than were emitted in the baseline scenario, there would be a significant cumulative impact to global climate change. In the absence of further guidance, this determination is thought to be the most conservative, as any increase over baseline is designated as significant. As such, operational emissions of GHG would be significant and contribute to a cumulative global climate change impact. When guidance is issued by ARB, the GHG emission generated by a project of this size may no longer be considered to meet the threshold to contribute to a cumulatively considerable impact.

### **BIOLOGICAL RESOURCES**

The analysis of cumulative biological resources impacts considered the impacts of other developments within the Natural Area. As discussed in Chapter 3.3, indirect impacts would potentially occur to sensitive vegetation communities within the lease boundary and in the surrounding Natural Area. Indirect impacts would include fugitive dust deposition on the native vegetation during construction, increased soil erosion during and after construction, increased runoff into the San Gabriel River, noise impacts during construction, noise generated from site visitors, human trampling, and increased invasion by exotic species due to soil disturbances on-site. Indirect impacts to sensitive habitats would be avoided or minimized through the use of appropriate best management practices and implementation of the environmental commitments listed in the Project Description. Indirect impacts during project operation would occur from the increased number of visitors to the proposed project site, nighttime lighting, and reduction in vegetative cover. Additional development in the Natural Area would attract even more visitors to than the proposed project. This would further intensify disturbance during construction and operation. However, as with the proposed project, the related projects would restore large portions of the Natural Area. Therefore, the proposed project and the related projects would have a long-term beneficial impact on biological resources by establishing suitable habitat that is necessary to support sensitive species. As with the proposed project, short-term impacts to sensitive species would be mitigated to a less than significant level. The cumulative impact would be less than significant.

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### **CULTURAL RESOURCES**

The one-mile cumulative project radius adequately captures the past, present, and probable future projects that would potentially contribute to cumulative cultural resource impacts. The proposed project would not result in cumulative impacts to historic resources in the area. The existing site structures do not qualify for listing as historic resources on either the National Register or the California Register. The project site is not located in a historic district. Thus, removal of these buildings in conjunction with other projects in the area would not create a cumulatively considerable impact to historic resources.

No archaeological sites were discovered or are known to exist within the lease boundary. However, the project site is located in an area likely used by Native Americans at one time. As with the proposed project, all related projects in the vicinity would be required to comply with CEQA Guidelines Section 15064.5 and Section 106 of the National Historic Preservation Act (36 CFR 800). If resources are uncovered during construction activities, all construction would cease until the find is analyzed. As such, the proposed project would not contribute to a significant cumulative impact to archaeological resources.

### **HYDROLOGY AND WATER QUALITY**

The one-mile cumulative project radius adequately captures the past, present, and probable future projects that would potentially contribute to cumulative hydrology and water quality impacts. Impacts to hydrology and water quality from the proposed project would be mitigated to a less than significant level. The proposed project incorporates design features that are intended to reduce the volume and speed of runoff from the proposed project site. These include vegetated swales, bio-swales, a detention basin, and a constructed riparian/wetland area. Although the proposed project would increase the amount of impervious surfaces on-site, no additional runoff would be discharged off-site. The related projects identified in Table 4-1 and other projects within the San Gabriel River Watershed would be required to comply with the Los Angeles Regional Water Quality Control Board Basin Plan, which is intended to develop, achieve, and implement a timely, comprehensive, cost-effective stormwater pollution control program to reduce pollutants to the maximum extent practicable. In addition, the Basin Plan addresses water quality and water supply, flood and sedimentation, land use, and public outreach and education within the watershed. Implementation of NPDES permit requirements established by the EPA and the Los Angeles Regional Water Quality Control Board regional management strategies (i.e., Basin Plan) would address site-specific and watershed-wide issues related to water quality and hydrology for the related projects. Further, all development within the floodplain and below the taking line would be required to comply with USACE standards. Accordingly, the proposed project's impacts would not be cumulatively considerable when analyzed in conjunction with the related projects.

### **NOISE**

Due to the localized nature of noise impacts, the analysis of cumulative noise impacts focuses on the related projects in Table 4-1. Given the distance in space and the timing of the related projects,

concurrent construction activities would not have the potential to contribute to the short-term noise impact. Construction activities associated with the related projects are of sufficient distance from the sensitive noise receptors, and are not planned to occur at the same time. As such, the proposed project would not contribute to a significant cumulative noise impact during construction.

Vibration impacts associated with construction activities are extremely localized because they are groundborne. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As such, ground vibration associated with the proposed project would not be heightened due to the related projects because of the distances between them. In addition, mitigation measures are provided to reduce the groundborne vibration generated at the project site during construction. Consequently, no cumulative impacts from vibration would result.

As discussed in Chapter 3.6, traffic generated by the proposed project would marginally increase traffic noise on adjacent streets, although the increase would be imperceptible. It is assumed that the related projects would generate an increase in the amount of traffic on local roads as well. Thus, the future noise levels described in Chapter 3.6 consider the noise levels produced by ambient growth plus the proposed project's and the related projects' traffic. When considered together, the proposed project and the related projects would not create a significant cumulative impact on permanent ambient noise levels in the vicinity of the project site.

### **TRANSPORTATION/CIRCULATION**

The proposed project, in conjunction with other cumulative projects in the area, would not add a significant amount of traffic to local intersections within a one-mile radius of the proposed project site. Cumulative transportation and circulation impacts are evaluated on a regional scale and the related projects and other regional growth is accounted for in the cumulative impact analysis in Chapter 3.7. As described, the increase in vehicle trips generated by the proposed project combined with ambient growth and the related project would not create significant impacts at any of the study intersections.

## **4.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES**

Section 15126.2(c) of the CEQA Guidelines require that an EIR analyze the extent to which the proposed project's primary and secondary effects would impact the environment and commit nonrenewable resources to uses that future generations would not be able to reverse.

Construction and operation of the proposed project would result in the use of nonrenewable resources during construction, including fossil fuels, natural gas, and water and building materials such as concrete and steel. As described above, as part of the LEED certification process, building materials would be recycled and reused on-site to the maximum extent possible. In addition, the proposed project would be designed to incorporate energy and water efficiency features. The proposed project is not anticipated to consume substantial amounts of energy in a wasteful manner, and it would not result in significant

## 4.0 Impact Overview

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impacts from consumption of utilities. Development of the proposed project would represent a long-term commitment of the site to educational and recreation uses. Although irreversible environmental changes would result from the proposed project, such changes would not be considered significant.

### 4.5 GROWTH-INDUCING IMPACTS

According to Section 15126.2 (d) of the CEQA Guidelines, growth-inducing impacts of the proposed project shall be discussed in the EIR. Growth-inducing impacts are those effects of the proposed project that might foster economic or population growth or the construction of new housing, either directly or indirectly, in the surrounding environment. According to CEQA, increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place without the implementation of the proposed project. Typically, the growth-inducing potential of a project would be considered significant if it results in growth or population concentration that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities. However, the creation of growth-inducing potential does not automatically lead to growth, whether it would be below or in exceedance of a projected level.

The environmental effects of induced growth are secondary or indirect impacts of the proposed project. Secondary effects of growth could result in significant, adverse environmental impacts, which could include increased demand on community or public services, increased traffic and noise, degradation of air and water quality, and conversion of agricultural land and open space to developed uses.

Implementation of the proposed project is not considered growth inducing because the proposed project would meet a community need for enhanced educational and recreational facilities. The proposed project would improve upon the existing WNNC by constructing a new LEED certified interpretive center that would accommodate larger groups and reach a broader audience with modern exhibits. The proposed project would not create new housing or residential land uses that would cause an increase in population, nor would it require the extension of new utilities or services to an unserved area. The proposed project would not change development patterns in the proposed project vicinity since the surrounding areas are already developed or designated open space as part of the Natural Area.