

# Executive Summary

## S.1 Introduction

This Program Environmental Impact Report (PEIR; State Clearinghouse House [SCH] No. 2023070463) has been prepared consistent with Section 15168 of the California Environmental Quality Act (CEQA) Guidelines, to address potential environmental effects associated with implementation of the City of Irvine (City) 2045 General Plan Update (project).

As described in Section 15168 of the CEQA Guidelines, program-level environmental review documents are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria. The project that is the subject of this PEIR consists of a comprehensive update to the existing General Plan and updates to the City's Land Use Map that will provide long-term policy documents guiding future development. The purpose of this program-level EIR is intended to inform decision-makers and the public of the potential significant environmental impacts of the project. This PEIR also considers the availability of mitigation measures as required by Section 15100 of the CEQA Guidelines to minimize the project's significant impacts and evaluates reasonable alternatives to the project that may reduce or avoid one or more significant environmental effects.

A brief overview of each PEIR chapter is provided below:

**Executive Summary:** Summarizes the PEIR by providing an overview of the project, analysis of the potentially significant environmental impacts that could result from the project, a list of mitigation measures identified to reduce or avoid such impacts, a review of the alternatives to the project, including the identification of an environmentally superior alternative to the project.

**1.0 Introduction:** Provides an overview of the applicable legal authority, introduces the purpose for the PEIR and explains the PEIR process and the intended uses of the PEIR.

**2.0 Environmental Setting:** Provides a description of the project's regional context, location, and existing physical characteristics and land use within the City. More detailed descriptions of the environmental context pertaining to specific environmental topics are provided in each section of Chapter 4.0, Environmental Analysis.

**3.0 Project Description:** Provides a detailed description of the project, including the purpose and objectives of the project and descriptions of each component of the project.

**4.0 Environmental Analysis.** Analyzes the environmental impacts of the project. Impacts are organized by the following topic areas:

- 4.1 Aesthetics
- 4.2 Air Quality
- 4.3 Biological Resources
- 4.4 Cultural and Tribal Cultural Resources

- 4.5 Geology/Soils
- 4.6 Greenhouse Gas Emissions
- 4.7 Hazards and Hazardous Materials
- 4.8 Hydrology/Water Quality
- 4.9 Land Use/Planning
- 4.10 Noise
- 4.11 Population and Housing
- 4.12 Public Services and Recreation
- 4.13 Transportation
- 4.14 Utilities/Service Systems
- 4.15 Wildfire

Each topic area respectively provides a contextual description of the project's environmental setting, significance criteria, methodology, and potential impacts (project-level and cumulative).

**5.0 CEQA Mandated Analysis:** Summarizes the project's significant and unavoidable environmental impacts, significant irreversible environmental changes, and growth-inducing impacts per State CEQA Guidelines Section 15065 Mandatory Findings of Significance.

**6.0 Effects Found Not to be Significant:** Identifies all the issues determined in the scoping and preliminary environmental review process to be not significant based on CEQA criteria, and briefly summarizes the basis for these determinations. These topics include Agricultural and Forestry Resources, Energy, and Mineral Resources.

**7.0 Project Alternatives:** Presents a reasonable range of alternatives to the project and includes the following:

- A discussion of the environmental impacts associated with each alternative,
- A comparison of the relative impacts of each alternative to those of the project,
- A discussion of the relationship of each alternative to the project's objectives, and
- Identification of the environmentally superior alternative.

**8.0 References:** Lists documents and other information sources relied upon in the preparation of the PEIR and identifies the persons and organizations that contributed to the preparation of the PEIR.

**9.0 List of Preparers:** Lists persons involved in the preparation of the PEIR.

Technical appendices, used as a basis for portions of the environmental analysis in the PEIR, have been summarized in the PEIR, and are included as attachments to the PEIR.

## S.2 Project Overview

The City is located within the coastal foothill region of central Orange County in the state of California. Located approximately two miles inland from the Pacific Ocean and 40 miles south of the City of Los Angeles, the City is adjacent to the cities of Newport Beach, Lake Forest, Tustin, Santa Ana, Laguna Hills, Laguna Woods, Costa Mesa, Orange, and Laguna Beach, as well as unincorporated areas of Orange County. The City is generally bounded on the southwest by State Route 73 and on

the northeast by State Route 241. Interstate 5, Interstate 405 and State Route 133 cross through the central portion of the City, and multiple interstates and state routes traverse the City and provide connection to surrounding communities throughout the southern California region. Air travel is available at John Wayne Airport, located immediately adjacent to the Irvine Business Complex (IBC).

California state law requires each city and county to adopt a general plan for its physical development. A general plan is a key tool that addresses a variety of subject areas and expresses the community's development goals related to future land uses in the jurisdiction. Incorporated in 1971, the City adopted the first General Plan in December 1973. The City's General Plan was last comprehensively updated in 2000 and has been updated over the years to address necessary General Plan amendments. Since 2000, the City has continued to grow, as the community has matured and evolved. The purpose of the project is to provide long-term policy direction and communicate the vision, values, and goals for the City's physical development and overall quality of life.

In addition to providing long-term policy direction, the City is required to update the appropriate elements of the General Plan to accommodate the residential site inventory from the 6<sup>th</sup> Cycle Housing Element Update effective 2021 to 2029 (2021-2029 Housing Element) (adopted in May 2022). The 2021-2029 Housing Element Regional Housing Needs Assessment (RHNA) allocation for the City is 23,610 units. To ensure consistency with housing statute, including no-net loss and affirmatively furthering fair housing requirements, the 2021-2029 Housing Element identified adequate sites to accommodate 57,656 new residential units. To implement the 2021-2029 Housing Element, the project would adopt residential and residential mixed-use overlay zones that would allow greater flexibility for property owners and developers proposing residential development projects with affordable housing units. The project also includes updates to the Land Use Element to accommodate the proposed residential and residential mixed-use overlay zones, as well as updates to the Open Space and Conservation, Safety, Circulation (Mobility) and Noise elements to address statutory requirements. The City would also introduce a new Environmental Protection and Climate Action Element. Health and wellness will also be incorporated throughout the updated General Plan.

In addition to the RHNA residential component, the project includes additional non-residential land uses in the Irvine Great Park (Great Park). Phase 1 of the Great Park Framework Plan is in the baseline (no build condition) and the remaining land uses supporting the buildout of the Great Park Framework (200 acres in total) are included as part of the project. Phase 2 (or the remaining buildout of the Great Park) includes the following: a botanical garden, a veteran's memorial garden, a library, a discovery center, two museums, a 65-acre central park area, an accessory restaurant use, three aquatic center pools, an aquatic stadium, an all-wheel park, and pickleball courts.

The project also includes the extension of Ada roadway from its current terminus in the parking lot of the Irvine train station south of the Southern California Railroad Authority railroad tracks is proposed to extend north under the railroad tracks to meet the future Marine Way extension north of the railroad tracks. The Ada roadway extension between the Irvine train station and Marine Way provides multi-modal connectivity to support the residential uses.

As required by State CEQA Guidelines Section 15124(b), this PEIR also includes project objectives, as described in detail in Chapter 3.0, Project Description. These objectives support the implementation of the City's 2021-2029 Housing Element, assist the City in identifying key focus areas, implements

Citywide policy direction, implements the use of overlay zones to allow for greater residential and mixed-used residential development, implements Phase 2 of the Great Park Framework Plan, and extends the key segment of the Ada roadway between Irvine Train Station and Marine Way to better support residential uses and improve multi-modal connectivity.

### S.3 PEIR Process

The Notice of Preparation (NOP) was circulated on July 21, 2023, and a scoping meeting was held virtually via video conferencing on Tuesday, August 1, 2023. The NOP circulated for analysis of the project, related letters received, and comments made during the scoping meeting are included as Appendix A of this PEIR. The Draft PEIR was circulated for public review for a period commencing on Friday, March 15, 2024, through Monday, April 29, 2024 (Public Review Period). The Draft PEIR and all related appendices have been made available for public review and inspection during the Public Review Period at City Hall, located at 1 Civic Center, Irvine, California, and on the City's webpage at:

- <https://www.cityofirvine.org/community-development/current-environmental-reviews>
- <https://www.cityofirvine.org/community-development/events-irvine-2045>

Copies of the Notice of Availability of the Draft PEIR are also available at the City's three public library branches at the following locations:

- Heritage Park, located at 14361 Yale Avenue
- University Park, located at 4512 Sandburg Way
- Katie Wheeler, located at 13109 Old Myford Road

### S.4 Issues to be Resolved by the Decision-Making Body

Issues to be resolved by the decision-making body include how to reduce programmatic significant, unavoidable adverse environmental impacts associated with the project to the maximum extent feasible while achieving project objectives, through adoption of mitigation measures and/or alternatives to the project identified in this PEIR.

### S.5 Project Alternatives

CEQA Guidelines Section 15126.6 requires that the EIR compare the effects of a "reasonable range of alternatives" to the effects of the project. The CEQA Guidelines further specify that the project alternatives selected should attain most of the basic project objectives and avoid or substantially lessen one or more significant effects of the project. The "range of alternatives" is governed by the "rule of reason," which requires the EIR to set forth only those project alternatives necessary to permit an informed and reasoned choice by the City, as the Lead Agency, and to foster meaningful public participation (CEQA Guidelines Section 15126.6[f]). CEQA generally defines "feasible" to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, while also taking into account economic, environmental, social, technological, and legal factors.

Project alternatives are evaluated in Chapter 7.0 of this PEIR. The evaluations analyze the ability of each project alternative to further reduce or avoid the significant environmental effects of the project. Each major environmental topic that was determined to have significant impacts has been given consideration in the alternatives analysis. This PEIR evaluates two project alternatives: the No Project Alternative (continuation of the existing General Plan) and the Reduced Alternative.

### **S.5.1 No Project Alternative**

The No Project Alternative involves the continuation of existing land uses permitted under the City's current General Plan. The No Project Alternative would not identify additional residential sites necessary to meet the City's RHNA allocation, and thereby result in less intensive development within the City. The No Project Alternative would also not include improvements to the Great Park or the proposed Ada roadway extension. Nonetheless, future development under the No Project Alternative would occur consistent with the City's adopted General Plan land use plan and would be subject to implementation of the City's General Plan existing Mitigation Monitoring Requirements. The No Project Alternative would not implement the overlay zone proposed under the project, and therefore would not provide the densities needed to accommodate the region's housing needs or the required levels of affordability.

Under the No Project Alternative, State Housing Law and legislative requirements for implementation of the project's planned goals, objectives, policies and actions aimed at increasing housing (in particular affordable housing) in the City would not occur. This alternative would not satisfy the project objectives because implementation of the No Project Alternative would not facilitate the future development of sufficient residential units needed to meet the City's RHNA allocation and would not satisfy applicable legislative mandates associated with the City's adopted 2021-2029 Housing Element.

### **S.5.2 Reduced Project Alternative**

The City has also developed a Reduced Project Alternative that would accommodate the City's RHNA requirement and implement the 2021-2029 Housing Element utilizing a smaller number of residential sites. Proposed Great Park improvements and the extension of the Ada roadway would be proposed as part of the Reduced Project Alternative, similar to the project.

Compared to the 57,656 units proposed under the project, the Reduced Project Alternative would only propose 42,637 residential units, a difference of 15,019 units. While the number of residential units proposed under the Reduced Project Alternative would be less than the project, this alternative would still exceed the City's RHNA allocation of 23,610 units, and therefore would be consistent with applicable housing statute, including no-net loss and affirmatively furthering fair housing requirements. The proposed number of residential units within Focus Area 3 would remain unchanged under the Reduced Project Alternative. However, the Reduced Project Alternative would decrease the number of proposed residential units within Focus Area 1 from 15,000 units to 11,242 units and in Focus Area 2 from 26,607 units to 19,811 units.

### S.5.3 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires an EIR to identify the environmentally superior alternative. If the No Project Alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from the other alternatives. The project itself may not be identified as the environmentally superior alternative.

The Reduced Project Alternative would be the environmentally superior alternative because it would incrementally reduce significant impacts associated with aesthetics, biological resources, cultural and tribal cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, noise, population and housing, public services and recreation, utilities and services, and wildfire compared to the project. However, none of the potentially significant impacts of the project would be completely avoided.

Compared to the 57,656 units proposed under the project, the Reduced Project Alternative would only propose 42,637 residential units, a difference of 15,019 units. While the number of residential units proposed under the Reduced Project Alternative would be less than the project, this alternative would still exceed the City's RHNA allocation of 23,610 units, and therefore would be consistent with applicable housing statute, including no-net loss and affirmatively furthering fair housing requirements. Therefore, the Reduced Project Alternative would meet all the project's objectives.

## S.6 Summary Table

Table S-1 summarizes the results of the environmental analysis including the potentially significant environmental impacts of the project and proposed mitigation measures to reduce or avoid these impacts. Impacts and mitigation measures are organized by issue in Chapter 4.0, Environmental Analysis.

**Table S-1  
Summary of Environmental Impacts**

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
<b>4.1 Aesthetics</b>				
Would the project have a substantial adverse effect on a scenic vista?	Less than Significant	Although future development and redevelopment would vary in building height, mass, form, and intensity, projects would generally be required to meet a minimum residential density of 50 dwelling units per acre, similar to the average density of recently approved projects within the three focus areas. Furthermore, by concentrating most of the development within the three focus areas, the project would ensure that buildout under the General Plan would not block public views of scenic vistas that are primarily located in undeveloped and open space areas of the City. Similarly, nonresidential growth within the Great Park area and the extension of Ada roadway would occur within areas that are not afforded scenic views of natural resources in the City. Future projects would also be required to comply with PPPs AES-2 and AES-5, which outline development standards guiding the design and character of structures, to further ensure that projects would not impact scenic vistas. Therefore, impacts related to obstruction of a scenic vista would be less than significant.	<ul style="list-style-type: none"> <li>• PPP-AES-2 Compliance with Municipal Code Section 5-9-517 Special Nonresidential Building Provisions</li> <li>• PPP-AES-5 Compliance with Zoning Ordinance Chapter 3-37 Zoning District Land Use Regulations and Development Standards</li> </ul>	Less than Significant
Would the project substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a State Scenic Highway?	Less than Significant	There are no state-designated or eligible scenic highways within the City. The closest eligible State Scenic Highway is a segment of I-405 in Long Beach, approximately 16 miles northwest of the City. This segment of scenic highway does not have distinct views of the Focus Areas. Therefore, future development under the project would not be located within the viewshed of any designated or eligible state scenic highways.	None.	Less than Significant
In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage points)? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant	The project would introduce additional development throughout the City using a residential and residential mixed-use overlay that would allow greater flexibility for property owners and developers. The overlay would promote higher density residential and residential mixed-use in three focus areas. Future development would be consistent with the visual quality and character of these focus areas, given their existing urban character. Additionally, some of underutilized sites within these focus areas consist of aging structures with poor visual quality, and redevelopment of these structures would result in new residential structures developed consistent with the visual requirements of existing PPPs (PPPs AES-1 through AES-8). Furthermore, development of vacant and underutilized sites would be required to adhere to the land use plans that provide supplemental development regulations of	<ul style="list-style-type: none"> <li>• PPP-AES-1 Compliance with FAA requirements regarding the marking of or lighting of structures exceeding an overall height of 200 feet above ground level.</li> <li>• PPP-AES-2 Compliance with Municipal Code Section 5-9-517 Special Nonresidential Building Provisions</li> <li>• PPP-AES-3 Compliance with Zoning Ordinance Chapter 3-16 Lighting</li> <li>• PPP-AES-4 Compliance with Zoning Ordinance Chapter 3-15 Landscaping Standards</li> <li>• PPP-AES-5 Compliance with Zoning Ordinance Chapter 3-37 Zoning District Land Use Regulations and Development Standards</li> <li>• PPP-AES-6 Compliance with Zoning Ordinance Chapter 5-4 Hillside Overlay District</li> <li>• PPP-AES-7 Compliance with Zoning Ordinance Division 7 Signs</li> </ul>	Less than Significant

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		those sites, as well as the requirements of the Municipal Code and Zoning Ordinance. Development outside of the three focus areas is expected to occur on an incremental basis and would be required to occur in compliance with the City's Municipal Code and Zoning Ordinance (PPPs AES-1 through 8). Compliance with the City's code and site-specific review of the design of future projects would ensure their compatibility with the aesthetic character of the area in which they are proposed. Therefore, future development facilitated by the project would not result in the degradation of the existing scenic quality of the City, and impacts would be less than significant.	<ul style="list-style-type: none"> <li>• PPP-AES-8 Compliance with Standard Condition 3.6 Site Lighting Requirements</li> </ul>	
Would the project create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	Less than Significant	New development and increased density in the three focus areas will introduce new sources of light and glare associated with an increase in buildings and vehicles in the areas. However, each of the three focus areas is primarily characterized by an urbanized environment with existing light and glare sources. Therefore, future development would introduce similar sources of light to these areas. Compliance with existing City regulations related to lighting (PPPs AES-1, AES-2, and AES-8) would ensure that all project-related impacts with respect to light and glare would be less than significant.	<ul style="list-style-type: none"> <li>• PPP-AES-1 Compliance with FAA requirements regarding the marking of or lighting of structures exceeding an overall height of 200 feet above ground level.</li> <li>• PPP-AES-3 Compliance with Zoning Ordinance Chapter 3-16 Lighting</li> <li>• PPP-AES-8 Compliance with Standard Condition 3.6 Site Lighting Requirements</li> </ul>	Less than Significant
<b>4.2 Air Quality</b>				
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant	<p>Future development under the project would accommodate increases in population based on the Southern California Association of Governments' (SCAG's) demographic projections, and would therefore not induce unplanned growth. Buildout of the project would result in a decrease in emissions when compared to buildout of the City's adopted General Plan because it would . Therefore, buildout of the project would not exceed the assumptions used to develop the AQMP.</p> <p>The South Coast Air Basin is designated as in nonattainment for 8-hour ozone and 2.5-micron particulate matter (PM<sub>2.5</sub>) standards. Because the proposed General Plan Update involves long-term growth associated with buildout of the City, cumulative emissions generated from operation of individual development projects would exceed the South Coast Air Quality Management District (SCAQMD) regional and localized thresholds. Future development would be required to adhere to the requirements of California Code of Regulations, Title 13, Section 2449 to reduce nonessential</p>	<ul style="list-style-type: none"> <li>• PPP 2-1 Construction activities will be conducted in compliance with California Code of Regulations, Title 13, Section 2449, which requires that nonessential idling of construction equipment be restricted to five minutes or less.</li> <li>• PPP 2-2 Construction activities will be conducted in compliance with any applicable SCAQMD rules and regulations, including but not limited to: <ul style="list-style-type: none"> <li>o Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.</li> <li>o Rule 402, Nuisance, which states that a project shall not "discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."</li> </ul> </li> </ul>	Significant and Unavoidable



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Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>idling (PPP 2-1), the construction requirements of SCAQMD rules and regulations (PPP 2-2), and the requirements of the City's grading code (PPP 2-3).</p> <p>Despite adherence to these policies and compliance with Standard Conditions and PPPs, buildout of the project could contribute to an increase in frequency or severity of air quality violations and delay attainment of the AAQS or interim emission reductions in the AQMP, and emissions generated from buildout would result in a significant air quality impact. Therefore, the General Plan Update would not be consistent with the AQMP under the second criterion and mitigation requiring project-specific air quality analyses is required.</p>	<ul style="list-style-type: none"> <li>o Rule 1113, which limits the volatile organic compound content of architectural coatings.</li> <li>o Rule 1466, Soil Disturbance. Projects that involve earth-moving activities of more than 50 cubic yards of soil with applicable toxic air contaminants are subject to this rule.</li> <li>• PPP 2-3: Compliance with the City of Irvine's Grading Code.</li> <li>• PPP 2-4: Compliance with the City of Irvine's Municipal Code guidance to reduce air pollution from motor vehicles.</li> </ul> <p><b>AQ-1:</b> Applications for future development, wherein the Director of Community Development or their designee has determined a potential for air quality impacts associated with construction, shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the City for review and approval. The Director of Community Development or their designee shall make this determination based on the size of the project, whether the project would require a transportation impact analysis, or other criteria. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. The City shall require that applicants for new development projects with the potential to exceed the SCAQMD's adopted thresholds of significance to incorporate the measures listed below to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City. Mitigation measures to reduce construction-related emissions could include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Require fugitive-dust control measures that exceed SCAQMD's Rule 403 requirements, such as: <ul style="list-style-type: none"> <li>o Use of nontoxic soil stabilizers to reduce wind erosion.</li> <li>o Apply water every four hours to active soil-disturbing activities.</li> <li>o Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.</li> </ul> </li> <li>• Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model</li> </ul>	

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			<p>year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower.</p> <ul style="list-style-type: none"> <li>• Ensure that construction equipment is properly serviced and maintained to the manufacturer’s standards.</li> <li>• Limit nonessential idling of construction equipment to no more than five consecutive minutes.</li> <li>• Limit on-site vehicle travel speeds on unpaved roads to 15 miles per hour.</li> <li>• Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the project area.</li> <li>• Use Super-Compliant VOC paints for coating of architectural surfaces whenever possible. A list of Super-Compliant architectural coating manufactures can be found on the SCAQMD’s website.</li> </ul>	
<p>Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</p>	<p><b>Construction:</b> Potentially Significant</p> <p><b>Operation:</b> Potentially Significant</p>	<p><b>Construction:</b></p> <p>Approval of the project would not specifically permit the construction of an individual project, and no specific development details are available at this program level of analysis. Future development would be required to implement construction Best Management Practices (BMPs) at all construction sites consistent with SCAQMD rules and regulations. Future construction activities would also be required to comply with PPP 2-1, which outlines compliance with California Code of Regulations, Title 13, Section 2449, which itself requires that nonessential idling of construction equipment be restricted to five minutes or less. Future construction activities would also be conducted in compliance with any applicable SCAQMD rules and regulations, as outlined in PPP 2-2.</p> <p>While individual site-specific projects may not exceed the SCAQMD regional significance thresholds, the scale and extent of construction activities associated with buildout of the City may result in some instances where future development would exceed the relevant SCAQMD thresholds. Therefore, construction-related regional air quality impacts would be potentially significant and mitigation requiring project-specific air quality analyses would be required.</p>	<ul style="list-style-type: none"> <li>• PPP 2-1 Construction activities will be conducted in compliance with California Code of Regulations, Title 13, Section 2449, which requires that nonessential idling of construction equipment be restricted to five minutes or less.</li> <li>• PPP 2-2 Construction activities will be conducted in compliance with any applicable SCAQMD rules and regulations, including but not limited to: <ul style="list-style-type: none"> <li>o Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.</li> <li>o Rule 402, Nuisance, which states that a project shall not “discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”</li> <li>o Rule 1113, which limits the volatile organic compound content of architectural coatings.</li> <li>o Rule 1466, Soil Disturbance. Projects that involve earth-moving activities of more than 50 cubic yards of soil with applicable toxic air contaminants are subject to this rule.</li> </ul> </li> <li>• PPP 2-3: Compliance with the City of Irvine’s Grading Code.</li> <li>• PPP 2-4: Compliance with the City of Irvine’s Municipal Code guidance to reduce air pollution from motor vehicles.</li> </ul>	<p><b>Construction:</b> Significant and Unavoidable</p> <p><b>Operation:</b> Significant and Unavoidable</p>

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		<p><b>Operations:</b></p> <p>Buildout of the project would result in a decrease in emissions compared to buildout of the City's adopted General Plan. Most of the future residential growth would occur in the three focus areas that are most suited for new growth and development as they are located near existing job centers, which would reduce VMT and associated vehicle emissions. While individual site-specific projects may not exceed the SCAQMD regional significance thresholds, the scale and extent of emissions associated with buildout of the project may result in some instances where future development would exceed the relevant SCAQMD thresholds. Therefore, operational regional air quality impacts would be potentially significant, and mitigation requiring project-specific air quality analyses would be required.</p>	<p>See AQ-1 above.</p> <p><b>AQ-2:</b> For individual projects that may exceed the daily operational emissions thresholds established by the SCAQMD, the owner/permittee shall conduct an analysis of the project's operational air quality impacts using the latest available CalEEMod mode, or other analytical method determined in conjunction with the City. If such analyses identify potentially significant regional or local air quality impacts, project-level mitigation and/or project design features would be required to reduce operational impacts to less than significant. Mitigation to reduce operational impacts depends on the specific project, but may include measures such as, but not limited to:</p> <ul style="list-style-type: none"> <li>• Demonstrate net zero energy expenditure.</li> <li>• Implementation of transportation demand management measures.</li> <li>• Prohibit the installation of woodstoves, hearths, and fireplaces in new construction facilitated by the General Plan Update.</li> <li>• Expand and facilitate completion of planned networks of active transportation infrastructure.</li> <li>• Implement electric vehicle charging infrastructure beyond requirements set forth in the 2022 CALGreen mandatory measures, such as Tier 2 voluntary measures set forth in 2022 CALGreen (or future more stringent) standards.</li> <li>• Implement traffic demand measures, such as unbundling parking fees from rent/lease options, encouraging/developing a ride-share program for the community, and provide car/bike sharing services, that will reduce daily individual car usage and reduce project VMT.</li> </ul>	
<p>Would the project expose sensitive receptors to substantial pollutant concentrations?</p>	<p>Potentially Significant</p>	<p><b>Localized Carbon Monoxide Hot Spots</b></p> <p>New development adjacent to heavily traveled streets or intersections would not expose sensitive receptors to substantial pollutant concentrations associated with CO hot spots, and impacts would be less than significant. The Level of Service Traffic Study determined that roadway segment and intersection volumes would not exceed 100,000 average daily trips (Iteris 2024). Consequently, the project would not produce the volume of traffic required to generate a CO hot spot either in the context</p>	<ul style="list-style-type: none"> <li>• PPP 2-1 Construction activities will be conducted in compliance with California Code of Regulations, Title 13, Section 2449, which requires that nonessential idling of construction equipment be restricted to five minutes or less.</li> <li>• PPP 2-2 Construction activities will be conducted in compliance with any applicable SCAQMD rules and regulations, including but not limited to: <ul style="list-style-type: none"> <li>o Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.</li> </ul> </li> </ul>	<p>Significant and Unavoidable</p>

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		<p>of the 2003 Los Angeles study or BAAQMD CO threshold considerations. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations associated with CO hot spots, and impacts would be less than significant.</p> <p><b>Toxic Air Emissions</b> <u>Construction</u> Construction of future development and associated infrastructure implemented under the project would result in short-term diesel exhaust emissions from on-site heavy-duty equipment. Such emissions would have the potential to exceed the SCAQMD's LST thresholds. Additionally, construction of future projects would adhere to the requirements of California Code of Regulations, Title 13, Section 2449 to reduce nonessential idling (PPP 2-1), the construction requirements of SCAQMD rules and regulations (PPP 2-2), and the requirements of the City's grading code (PPP 2-3). Considering the highly dispersive nature of DPM, and the fact that construction activities would occur intermittently and at various locations over the lifetime of project buildout, DPM generated by construction is not expected to create conditions where the probability is greater than 10 in 1 million of developing cancer for the Maximally Exposed Individual, or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Therefore, the project would not exceed the SCAQMD LST thresholds or expose sensitive receptors to toxic air emissions during construction of future development within the City, and impacts would be less than significant.</p> <p><u>Stationary Sources</u> The project would not result in the construction and operation of a stationary source of TACs. Although future site-specific development under the project could be located near existing types of facilities, emissions of TACs are regulated by SCAQMD through permitting and monitoring requirements. Therefore, adherence with this regulatory framework would ensure that future development would not expose sensitive receptors to TACs associated with stationary sources within the City, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>o Rule 402, Nuisance, which states that a project shall not "discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."</li> <li>o Rule 1113, which limits the volatile organic compound content of architectural coatings.</li> <li>o Rule 1466, Soil Disturbance. Projects that involve earth-moving activities of more than 50 cubic yards of soil with applicable toxic air contaminants are subject to this rule.</li> <li>• PPP 2-3: Compliance with the City of Irvine's Grading Code.</li> <li>• PPP 2-4: Compliance with the City of Irvine's Municipal Code guidance to reduce air pollution from motor vehicles.</li> </ul> <p><b>AQ-3:</b> For individual projects that may site new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles/day, the applicant shall prepare a Health Risk Assessment (HRA) evaluating the potential for sensitive receptors to be exposed to TACs, which shall be required for such individual projects. The HRA shall be prepared in accordance with the policies and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and the South Coast Air Quality Management District (SCAQMD). If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceed the respective thresholds, as established by the SQAQMD at the time a project is considered (i.e., 10 in one million cancer risk and 1 hazard index), the project applicant will be required to identify and demonstrate that best available control technologies to reduce substantial exposure of sensitive receptors to TACs. Examples may include, but are not limited to, air intakes located away from high-volume roadways and/or truck loading zones unless it can be demonstrated that these are operational limitations and/or heating, ventilation, and air conditioning (HVAC) systems provided with appropriately sized maximum efficiency rating value (MERV) filters. Mitigation measures identified in the HRA shall be incorporated into the site development plan as a component of the proposed project. Air intake and MERV filter requirements shall be noted on all</p>	

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p><u>Mobile Sources</u></p> <p>Portions of the focus areas are located adjacent to these highways and freeways. Although the project itself would not expose sensitive receptors to substantial pollutant concentrations associated with mobile source emissions, the scale and extent of exposure of future development under the amended general plan to mobile sources of TACs cannot be known at this time, and impacts would be potentially significant. Mitigation requiring project- and site-specific Health Risk Assessments (HRAs) would be required.</p>	<p>building plans submitted to the City of Irvine Community Development Department.</p>	
<p>Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?</p>	<p>Less than Significant</p>	<p>Construction of future development would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and impacts would be less than significant, but may involve the use of standard construction equipment that could emanate temporary odors, such as those associated with diesel-powered equipment. These odors would be temporary, intermittent, and not expected to affect a substantial number of people.</p> <p>Future site-specific development under the project would include residential uses, as well as the extension of Ada roadway, and non-residential uses including a botanical garden, a veteran's memorial garden, a library, a discovery center, two museums, a 65-acre central park area, an accessory restaurant use, an aquatic center, an all-wheel park, and pickleball courts, that are generally not a source of objectionable odors. Additionally, with respect to all development under the project, nuisance odors are regulated under SCAQMD Rule 402, which requires abatement of any nuisance generating a verified odor complaint. Therefore, project operation would not result in odors affecting a substantial number of people, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP AQ-1 Construction activities will be conducted in compliance with California Code of Regulations, Title 13, Section 2449, which requires that nonessential idling of construction equipment be restricted to five minutes or less.</li> <li>• PPP AQ-2 Construction activities will be conducted in compliance with any applicable SCAQMD rules and regulations, including but not limited to: <ul style="list-style-type: none"> <li>○ Rule 403, Fugitive Dust, for controlling fugitive dust and avoiding nuisance.</li> <li>○ Rule 402, Nuisance, which states that a project shall not "discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."</li> <li>○ Rule 1113, which limits the volatile organic compound content of architectural coatings.</li> <li>○ Rule 1466, Soil Disturbance. Projects that involve earth-moving activities of more than 50 cubic yards of soil with applicable toxic air contaminants are subject to this rule.</li> </ul> </li> </ul>	<p>Less than Significant</p>
<b>4.3 Biological Resources</b>				
<p>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</p>	<p>Potentially Significant</p>	<p>Buildout of the project would have the potential to directly and/or indirectly impact candidate, sensitive, or special status species. Potential direct impacts would include removal of habitat through future development and redevelopment projects that support sensitive species. While future development would largely occur within the focus areas on developed and/or disturbed land and</p>	<ul style="list-style-type: none"> <li>• PPP BIO-4: Compliance with the MBTA</li> <li>• PPP BIO-6: Compliance with CESA</li> </ul> <p><b>BIO-1:</b> Prior to project approvals, applicants for future development projects with the potential to disturb sensitive biological resources shall include a biological resources survey. The survey</p>	<p>Less than Significant</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
regulations, or by the CDFW or USFWS?		<p>avoid known occurrences of sensitive species, future development may occur throughout the City, including on vacant parcels with habitat types that may support sensitive species. Additionally, future development may result in indirect impacts to sensitive plant or wildlife species due to excess noise, lighting, or runoff generated during construction of projects both within and outside the focus areas. Furthermore, project construction could result in direct impacts to nesting or migratory birds from the removal of mature trees and/or native vegetation within project areas during the typical bird breeding season (January 15 to September 15). All future development would be required to demonstrate compliance with the California Endangered Species Act (CESA) (PPP BIO-6), as well as the requirements of the MBTA for the protection of nesting birds, especially during the breeding season (January 15–September 15). However, at a program level of analysis, it cannot be known with certainty that impacts to sensitive species could be fully avoided, which would be considered a potentially significant impact, and mitigation would be required.</p>	<p>shall be conducted by a qualified biologist. The biological resources survey shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• A search of available literature and biological databases, such as CNDDDB to determine sensitive biological resources that have been reported from the proposed project vicinity.</li> <li>• Mapping vegetation communities on the proposed project site.</li> <li>• A general assessment and mapping of all potential jurisdictional resources (wetlands and riparian habitats).</li> <li>• Evaluating wildlife movement corridors in the vicinity of the proposed project site.</li> </ul> <p><b>BIO-2:</b> If the proposed development project site supports vegetation communities that may provide habitat for special status plant or animal species, a focused habitat assessment shall be conducted by a qualified biologist to determine the potential for special status plant and/or animal species to occur within or adjacent to the proposed development project area.</p> <p><b>BIO-3:</b> If one or more special status species has the potential to occur within the proposed development project area, focused species surveys shall be conducted to determine the presence/absence of these species to adequately evaluate potential direct and/or indirect impacts to these species.</p> <p><b>BIO-4:</b> If construction activities are not initiated immediately after focused surveys have been completed, additional pre-construction special status species surveys may be required to assure impacts are avoided or minimized to the extent feasible. If pre-construction activities are required, a qualified biologist would perform these surveys as required for each special status species that is known to occur or has a potential to occur within or adjacent to the proposed development project area.</p> <p><b>BIO-5:</b> The results of the biological survey shall be presented in a biological survey letter report for proposed development projects with no significant impacts, or in a biological technical report for proposed development projects with significant</p>	

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Summary of Environmental Impacts

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			<p>impacts that require mitigation to reduce the impacts to below a level of significant.</p> <p><b>BIO-6:</b> If sensitive biological resources are identified within or adjacent to the proposed development project area, the construction limits shall be clearly flagged to ensure impacts to sensitive biological resources are avoided or minimized to the extent feasible. Prior to implementing construction activities, a qualified biologist shall verify that the flagging clearly delineates the construction limits and that sensitive resources to be avoided.</p> <p><b>BIO-7:</b> If sensitive biological resources are known to occur within or adjacent to the proposed development project area, a project-specific contractor training program shall be developed and implemented to educate project contractors on the sensitive biological resources within and adjacent to the proposed development project area and measures being implemented to avoid and/or minimize impacts to these species. A qualified biologist shall develop and implement the contractor training program.</p> <p><b>BIO-8:</b> If sensitive biological resources are present within or adjacent to the proposed development project area and impacts may occur from implementation of construction activities, a qualified biological monitor may be required during a portion or all of the construction activities to ensure impacts to the sensitive biological resources are avoided or minimized to the extent feasible. The specific biological monitoring requirements shall be evaluated on a project-by-project basis. The qualified biological monitor shall be approved by the City on a project-by-project basis based on applicable experience with the sensitive biological resources that may be impacted by the proposed development project activities.</p>	
<p>Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS?</p>	<p>Potentially Significant</p>	<p>The project has been designed to minimize impacts to riparian and sensitive habitats by primarily focusing future development and redevelopment within the proposed Focus Areas. However, future development may occur throughout the City as part of the project, including on vacant parcels with riparian and sensitive habitats. These vacant parcels may possess riparian and other sensitive habitats. Future development would be required to demonstrate compliance with the Orange County Central and</p>	<ul style="list-style-type: none"> <li>• PPP BIO-5: Compliance with the Orange County Central and Coastal NCCP/HCP</li> <li>• PPP BIO-6: Compliance with CESA</li> <li>• PPP BIO-9: Compliance with Municipal Code Title 5 (Planning), Division 7 (Sustainability in Landscaping), Chapter 4 (Urban Forestry)</li> <li>• PPP BIO-10: Compliance with Standard Condition 2.20 (Wildlife Habitat Clearance)</li> </ul>	<p>Less than Significant</p>

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Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>Coastal NCCP/HCP (PPP BIO-5) and CESA (PPP BIO-6), as applicable. However, at a program level of analysis, it cannot be known with certainty that impacts to riparian and sensitive habitats could be fully avoided, which would be considered a potentially significant impact and would require mitigation.</p>	<p><b>BIO-9:</b> Prior to project approval, if a proposed project has the potential to affect riparian and sensitive habitats and/or jurisdictional resources, a qualified biologist conduct a jurisdictional delineation following the methods outlined in the 1987 Corps Wetland Delineation Manual (USACE 1987) and the Regional Supplement to the Corps Wetland Delineation Manual: Arid West Region (USACE 2008) to map the extent of wetlands and non-wetland waters, determine jurisdiction, and assess potential impacts. The results of the delineation shall be presented in a wetland delineation letter report and shall be incorporated into the California Environmental Quality Act document(s) required for approval and permitting of the proposed project.</p> <p><b>BIO-10:</b> If the results of mitigation measure BIO-9 above determine that a proposed project would impact riparian and sensitive habitats and/or jurisdictional features, permits and authorizations shall be obtained from the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and/or Regional Water Quality Control Board prior to project approval. The regulatory agency authorization(s) would include specific avoidance, minimization, and mitigation measures for impacts to riparian and sensitive habitats and/or jurisdictional resources, which may include monetary contributions to a mitigation bank or habitat creation, restoration, and/or enhancement.</p>	



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<p>Would the project have a have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p>	<p>Potentially Significant</p>	<p>The project has been designed to minimize impacts to jurisdictional wetlands and waters by primarily focusing future development and redevelopment within the proposed Focus Areas. Therefore, focusing development and redevelopment within these areas that consist primarily of developed and/or disturbed land would minimize adverse impacts to jurisdictional wetlands and waters. However, future development may occur throughout the City, including on vacant parcels with jurisdictional wetlands and waters. Future development would be required to demonstrate compliance with Section 404 of the Clean Water Act (CWA; PPP BIO-1), Section 401 of the CWA (PPP BIO-2), Section 1600 of the California Fish and Game Code (PPP BIO-3), and the Orange County Central and Coastal NCCP/HCP (PPP BIO-5) as applicable. However, at a program level of analysis, it cannot be known with certainty that impacts to jurisdictional wetlands and waters could be fully avoided, which would be considered a potentially significant impact, and would require mitigation.</p>	<ul style="list-style-type: none"> <li>• PPP BIO-1: Compliance with Section 404 of the CWA</li> <li>• PPP BIO-2: Compliance with Section 401 of the CWA</li> <li>• PPP BIO-3: Compliance with Section 1600 of the California Fish and Game Code</li> <li>• PPP BIO-5: Compliance with the Orange County Central and Coastal NCCP/HCP</li> <li>• PPP BIO-9: Compliance with Municipal Code Title 5 (Planning), Division 7 (Sustainability in Landscaping), Chapter 4 (Urban Forestry)</li> <li>• PPP BIO-10: Compliance with Standard Condition 2.20 (Wildlife Habitat Clearance)</li> </ul> <p>See mitigation measures BIO-9 and BIO-10 above.</p>	<p>Less than Significant</p>
<p>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?</p>	<p>Less than Significant</p>	<p>Future development under the project would not be within the Orange County Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) areas, which have been placed over regional and local wildlife corridors. Much of the City's open space has already been reserved or designated as special linkages, including through the Irvine Open Space Initiative. Future development under the project would be required to demonstrate compliance with the Orange County Central and Coastal NCCP/HCP (PPP BIO-5) and CESA (PPP BIO-6), as applicable, including with respect to wildlife movement. Due to the anticipated location of development, combined with existing PPPs, the project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species, or with established native resident migratory wildlife corridors, including linkages identified in the Irvine Open Space Initiative, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP BIO-5: Compliance with the Orange County Central and Coastal NCCP/HCP</li> <li>• PPP BIO-6: Compliance with CESA</li> </ul>	<p>No mitigation is required.</p>
<p>Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p>	<p>Less than Significant</p>	<p>Future development would be required to demonstrate compliance with Section 404 of the CWA (PPP BIO-1), Section 401 of the CWA (PPP BIO-2), Section 1600 of the California Fish and Game Code (PPP BIO-3), and the Orange County Central and Coastal NCCP/HCP (PPP BIO-5) and CESA (PPP BIO-6). Furthermore, Conservation and Open Space Element Goal 2, Objective COS-2 and Goal 5, Objective COS-5 seek to conserve and restore natural resources. These efforts include implementing the NCCP/HCP to ensure long-term ecological sustainability and biodiversity</p>	<ul style="list-style-type: none"> <li>• PPP BIO-1: Compliance with Section 404 of the CWA</li> <li>• PPP BIO-2: Compliance with Section 401 of the CWA</li> <li>• PPP BIO-3: Compliance with Section 1600 of the California Fish and Game Code</li> <li>• PPP BIO-5: Compliance with the Orange County Central and Coastal NCCP/HCP</li> <li>• PPP BIO-6: Compliance with CESA</li> </ul>	<p>Less than Significant</p>

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Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		conservation and requirement future projects to avoid impacts to biological resources.		
Would the project conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP?	Potentially Significant	Future development would be required to demonstrate compliance with Section 404 of the CWA (PPP BIO-1), Section 401 of the CWA (PPP BIO-2), Section 1600 of the California Fish and Game Code (PPP BIO-3), and the Orange County Central and Coastal NCCP/HCP (PPP BIO-5) and CESA (PPP BIO-6).	See mitigation measures BIO-1 through BIO-10 above. <ul style="list-style-type: none"> <li>• PPP BIO-1: Compliance with Section 404 of the CWA</li> <li>• PPP BIO-2: Compliance with Section 401 of the CWA</li> <li>• PPP BIO-3: Compliance with Section 1600 of the California Fish and Game Code</li> <li>• PPP BIO-5: Compliance with the Orange County Central and Coastal NCCP/HCP</li> </ul>	Less than Significant.
<b>4.4 Cultural and Tribal Cultural Resources</b>				
Would the project result in a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	Potentially Significant	Although there are no site-specific plans that would affect an identified historic resource, future developments, both within the focus areas and outside of those areas, may have the potential to affect a historic resource at the project level. Although future projects that would potentially affect historic resources would be required to comply with the National Historic Preservation Act (NHPA) and CEQA (when applicable and required (PPPs CUL-1 and CUL-2), mitigation would be required.	<ul style="list-style-type: none"> <li>• PPP CUL-1: Compliance with the NHPA</li> <li>• PPP CUL-2: Compliance with CEQA</li> </ul> <p><b>CUL-1:</b> The City of Irvine Director of Community Development, or designee, shall require applicants for future proposed projects proposing to renovate, alter, or demolish intact extant building(s) more than 45 years old or otherwise qualifying as a historical resource under CEQA Guidelines Section 15064.5 to provide a historic resource technical study evaluating the significance and data potential of the resource. If significance criteria are met, detailed mitigation recommendations are required as part of the technical study, which must be implemented to reduce impacts on the historical resource(s) to a less than significant level. All work shall be performed by a qualified architectural historian meeting Secretary of the Interior Standards.</p>	Less than Significant
Would the project result in a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; religious uses or tribal cultural resources?	Potentially Significant	Future development would primarily be in urbanized areas that have previously been disturbed, and therefore are unlikely to possess native soil with buried prehistoric resources. Additionally, future development under the project would be required to adhere to Sec.3-4-132 of the City's Municipal Code and applicable state laws, which prohibit the destruction of cultural resources (PPPs CUL-4, CUL-6, and CUL-7). Similarly, Standard Condition 2.5 requires an archaeological monitoring report to be prepared prior to grading permit issuance for projects that are located on land that includes potentially significant archeological resources (PPPs CUL-5). Future projects may also be required to comply with Assembly Bill 52 and Senate Bill 18 related to consultation with Native American representatives and CEQA, when appropriate	<ul style="list-style-type: none"> <li>• PPP CUL-2: Compliance with CEQA</li> <li>• PPP CUL-3: Compliance with AB-52/SB-18</li> <li>• PPP CUL-4: Compliance with Municipal Code Sections 3-4-132 (Protection of Natural, Cultural, Structural and Archaeological Resources) and 9-10-7 (special development standards)</li> <li>• PPP CUL-5: Compliance with Standard Condition 2.5 (construction monitoring)</li> <li>• PPP CUL-6: Compliance with California Health and Safety Code Sections 7050.5, 7051, and 7054</li> <li>• PPP CUL-7: Compliance with Native American Historic Cultural and Sanctified Cemetery Sites (PRC Section 5097 et seq.)</li> </ul>	Less than Significant

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		and necessary, which would further reduce impacts related to tribal cultural resources (PPPs CUL-2 and CUL-3). Nonetheless, construction of future development would have the potential to unearth unknown cultural resources, including religious or sacred uses, particularly within areas that have been categorized as high sensitivity, and mitigation would be required.	<b>CUL-2:</b> Prior to project approval or the issuance of grading permits (whichever is applicable and comes first), the City of Irvine Director of Community Development, or designee, acting in a similar capacity shall require applicants for future proposed ground disturbing projects to either (1) provide a technical cultural resources assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified archaeologist meeting Secretary of the Interior Standards and certified by the County of Orange or (2) agree to full-time monitoring by an archaeologist and a designated representative from the tribe/group(s) who is culturally linked to the site. If resources are known or reasonably anticipated, the applicant shall be required to provide and follow a detailed mitigation plan which shall require monitoring during grading and other earthmoving activities in undisturbed sediments. The plan will provide a treatment plan for potential resources that includes data to be collected, requires professional identification, other special studies as appropriate, and requires curation at a repository for artifacts meeting significance criteria. A comprehensive final mitigation compliance report including a catalog of specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the materials shall be required and shall be submitted to the City.	
Would the project result in the disturbance of any human remains, including those interred outside of formal cemeteries?	Potentially Significant	There are no known burial sites or cemeteries within the focus areas or any other locations within the City. However, future development associated with the project could disturb native soils and therefore could have the potential to encounter human remains, especially within areas that have been categorized as having a high sensitivity for cultural resources. Therefore, although considered unlikely, the project would have the potential to impact human remains. All development in the City must comply with all applicable laws related to the discovery of human remains, including but not limited to Health and Safety Code Section 7050.5 (PPP CUL-6) and Public Safety Code Section 5097.98 (PPP CUL-7). Future projects would also be required to comply with the City's Municipal Code and Standard Condition 2.5 to further avoid impacts to the discovery of human remains (PPP CUL-4 and CUL-5).	<ul style="list-style-type: none"> <li>• PPP CUL-4: Compliance with Municipal Code Sections 3-4-132 (Protection of Natural, Cultural, Structural and Archaeological Resources) and 9-10-7 (special development standards)</li> <li>• PPP CUL-5: Compliance with Standard Condition 2.5 (construction monitoring)</li> <li>• PPP CUL-6: Compliance with California Health and Safety Code Sections 7050.5, 7051, and 7054</li> <li>• PPP CUL-7: Compliance with Native American Historic Cultural and Sanctified Cemetery Sites (PRC Section 5097 et seq.)</li> </ul>	Less than Significant
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, features,	Potentially Significant	Construction of future development associated with the project would have the potential to unearth unknown cultural resources, including religious or sacred uses, particularly within areas that have been categorized as high sensitivity. Where required under	<ul style="list-style-type: none"> <li>• PPP CUL-2: Compliance with CEQA</li> <li>• PPP CUL-3: Compliance with AB-52/SB-18</li> </ul>	Less than Significant

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<p>place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p> <ul style="list-style-type: none"> <li>Listed or eligible for listing in the CRHR, or in a local register or</li> <li>A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set form in subdivision c of PRC Section 5024.1?</li> </ul>		<p>AB 52, future site-specific development under the project would be subject to further consultation and/or CEQA review, which may identify unknown tribal cultural resources that have not been formally recorded during the consultation for the project (PPPs CUL-2 and CUL-3), as well as applicable provisions of the City's Municipal Code, Standard Condition 2.5, and state law regulating the discovery of resources (PPPs CUL-5 through CUL-7). Future projects would also be required to comply with mitigation measure CUL-2, which require site-specific evaluations for culturally significant resources and/or monitoring of ground-disturbing activities.</p>	<ul style="list-style-type: none"> <li>• PPP CUL-4: Compliance with Municipal Code Sections 3-4-132 (Protection of Natural, Cultural, Structural and Archaeological Resources) and 9-10-7 (special development standards)</li> <li>• PPP CUL-5: Compliance with Standard Condition 2.5 (construction monitoring)</li> <li>• PPP CUL-6: Compliance with California Health and Safety Code Sections 7050.5, 7051, and 7054</li> <li>• PPP CUL-7: Compliance with Native American Historic Cultural and Sanctified Cemetery Sites (PRC Section 5097 et seq.)</li> </ul> <p>See mitigation measures CUL-2 above.</p>	
<b>4.5 Geology/Soils</b>				
<p>Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <ul style="list-style-type: none"> <li>• Rupture of a known earthquake fault,</li> <li>• Strong seismic ground shaking,</li> <li>• Seismic-related ground failure, including liquefaction,</li> <li>• Landslides?</li> </ul> <p>or</p> <p>Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</p>	Less than Significant	<p>Future projects introducing new development in the City associated with project approval could expose people to impacts related to seismic ground shaking. These projects would be required to adhere to safety requirements in the Municipal Code requirements related to the City's Building Code, Grading Code, Grading Manual, and site-specific geotechnical studies (PPPs GEO-4, GEO-5, GEO-6, and GEO-8), which would ensure that structures would be designed with the geologic hazards in mind to reduce risks associated with strong seismic ground shaking, seismic-related ground failure, and other geologic hazards such as liquefaction, lateral spreading, subsidence and landslides. Compliance with these regulations would reduce impacts related to seismic shaking to a less than significant level.</p>	<ul style="list-style-type: none"> <li>• PPP-GEO-1 Compliance with General Construction Permit</li> <li>• PPP GEO-4 Compliance with Municipal Code Title 5 (Planning), Division 9 (Building Regulations) California Building Code</li> <li>• PPP GEO-5 Compliance with Municipal Code Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code)</li> <li>• PPP GEO-6 Compliance with the City's Grading Manual</li> <li>• PPP GEO-7 Compliance with the Local Hazard Mitigation Plan</li> <li>• PPP GEO-8 Compliance with Standard Condition 2.6 Site Specific Geotechnical Study</li> <li>• PPP GEO-9 Compliance with Standard Condition 3.3 Disclosure Statements</li> </ul>	Less than Significant
<p>Would the project result in substantial soil erosion or the loss of topsoil?</p>	Less than Significant	<p>Future development under the project would have the potential to result in increased erosion both on- and off-site during construction and operation of future development. The statewide General Construction Permit (PPP HYD-1; SWRCB 2022) requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for projects that would disturb one or more acres and include construction or demolition activity,</p>	<ul style="list-style-type: none"> <li>• PPP-GEO-1 Compliance with General Construction Permit</li> <li>• PPP-GEO-3 Compliance with South Coast Air Quality Management District Rules 402 (Dust Suppression) and 403 (Fugitive Dust)</li> <li>• PPP GEO-4 Compliance with Municipal Code Title 5 (Planning), Division 9 (Building Regulations) California Building Code</li> </ul>	Less than Significant

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Summary of Environmental Impacts**

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>including, but not limited to, clearing, grading, grubbing, or excavation, or any other activity that results in a land disturbance of equal to or greater than one acre (SWRCB 2022). The SWPPP would provide construction related BMPs to reduce erosion, resulting from construction associated with future development.</p> <p>Post-construction erosion resulting from increased runoff would also generally be avoided or reduced through site design and hydromodification control BMPs as required per PPP's, including those related to compliance with rules managing construction dust, grading activities, etc..</p> <p>Therefore, with implementation of the PPPs, impacts related to soil erosion would be reduced to a less than significant level.</p>	<ul style="list-style-type: none"> <li>• PPP GEO-5 Compliance with Municipal Code Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code)</li> <li>• PPP GEO-6 Compliance with the City's Grading Manual</li> <li>• PPP GEO-8 Compliance with Standard Condition 2.6 Site Specific Geotechnical Study</li> </ul>	
<p>Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?</p>	<p>Less than Significant</p>	<p>As noted by the City's 2020 Local Hazard Mitigation Plan (LHMP), although expansive soils exist, the City requires compliance with the California Building Code (PPP GEO-4), which is intended to mitigate hazards associated with this condition through professional consideration of foundation types and design criteria, including bearing capacity, for structures to be developed in the City to minimize the effects of expansive soils.</p> <p>Future development under the project would be required to adhere to safety requirements in the City's Municipal Code requirements related to the City's Building Code (PPP GEO-4), Grading Code (PPP GEO-5), Grading Manual (PPP GEO-6), and Standard Condition 2.6 Site Specific Geotechnical Study (PPP GEO-8) which would reduce impacts related expansive soils to a less than significant level.</p> <p>Compliance with these regulations would ensure that the project would not result in any impacts related to expansive soils, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP-GEO-1 Compliance with General Construction Permit</li> <li>• PPP-GEO-2 Compliance with California Public Resources Code Section 5097.5(a) regarding paleontological resources</li> <li>• PPP GEO-4 Compliance with Municipal Code Title 5 (Planning), Division 9 (Building Regulations) California Building Code</li> <li>• PPP GEO-5 Compliance with Municipal Code Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code)</li> <li>• PPP GEO-6 Compliance with the City's Grading Manual</li> <li>• PPP GEO-7 Compliance with the Local Hazard Mitigation Plan</li> <li>• PPP GEO-8 Compliance with Standard Condition 2.6 Site Specific Geotechnical Study</li> <li>• PPP GEO-9 Compliance with Standard Condition 3.3 Disclosure Statements</li> </ul>	<p>Less than Significant</p>
<p>Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?</p>	<p>No Impact</p>	<p>The project does not propose the use of septic tanks or alternative wastewater disposal systems. All future development under the project would be served by wastewater utility providers. Therefore, the project would not result in impacts related to soils incapable of supporting septic tanks or alternative wastewater disposal systems.</p>	<p>None.</p>	<p>No Impact</p>

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Summary of Environmental Impacts**

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	Future development within areas with high and moderate sensitivity would have the potential to disturb native soils, and therefore may impact paleontological resources. Per Standard Condition 2.5 (PPP-GEO-10), prior to the issuance of the first preliminary or precise grading permit for a project that is located on land that includes potentially significant archaeological and/or paleontological sites, and for any subsequent permit involving excavation to increased depth, the applicant must provide letters stating that a qualified archaeologist and paleontologist would be on-site during ground disturbing activities and would provide procedures for cultural/scientific resource surveillance. Despite compliance with Standard Condition 2.5, impacts would remain potentially significant and mitigation requiring a site-specific paleontological assessment and/or monitoring for all soils below 5 feet would be required (mitigation measure GEO-1).	<ul style="list-style-type: none"> <li>• PPP-GEO-2 Compliance with California Public Resources Code Section 5097.5(a) regarding paleontological resources</li> <li>• PPP-GEO-10 Compliance with Standard Condition 2.5 Archaeologist/Paleontologist</li> </ul> <p><b>GEO-1:</b> Prior to issuance of grading permits, applicants for future proposed ground disturbing projects in undisturbed sediments ranked moderate or above shall be required to either (1) provide a technical paleontological assessment consisting of a record search, survey, background context and project specific recommendations performed by a qualified paleontologist (with a graduate degree and a specialization in vertebrate paleontology) to the City of Irvine Department of Community Development or (2) agree to monitoring all excavations below five feet. If resources are known or reasonably anticipated the recommendations shall provide a detailed mitigation plan requiring monitoring during grading and other earthmoving activities in undisturbed sediments. The plan will establish a fossil recovery protocol that includes data to be collected, requires professional identification, radiocarbon dates and other special studies as appropriate, requires curation at local curation facility such as the John D. Cooper Center operated by the County of Orange for fossils meeting significance criteria. A comprehensive final mitigation compliance report including a catalog of fossil specimens with museum numbers and an appendix containing a letter from the museum stating that they are in possession of the fossils shall be required.</p>	
<b>4.6 Greenhouse Gas Emissions</b>				
Would the project result in GHG emissions that may have a significant impact on the environment?	Potentially Significant	Future projects associated with buildout of the General Plan Update would be required to comply with Title 24, South Coast Air Quality Management District (SCAQMD) regulations, and City regulations pertaining to GHG emissions (PPPs GHG-1 through GHG-5). The updated General Plan also includes policy recommendations that would support GHG emission reductions and implementation of the General Plan land use plan would be supportive overall of an efficient land use and transportation, supporting GHG emissions reductions from mobile sources; however, buildout of the General Plan may still result in emissions that are not consistent with state GHG reduction goals. Furthermore, the City does not currently have an adopted CAAP. The CAAP that is currently being prepared is intended to	<ul style="list-style-type: none"> <li>• PPP GHG-1: Compliance with Title 24, Part 6 – Energy Code</li> <li>• PPP GHG-2: Compliance with Title 24, Part 11 – California Green Building Standards Code</li> <li>• PPP GHG-3: Compliance with SCAQMD Regulations</li> <li>• PPP GHG-4: Compliance with SCAQMD CEQA Thresholds</li> <li>• PPP GHG-5: Compliance with Irvine Sustainable Community Initiative</li> </ul> <p><b>GHG-1:</b> Applications for future development, wherein the Director of Community Development or their designee has determined a potential for GHG impacts the City shall evaluate the project to identify the potential for GHG emissions to exceed the SCAQMD thresholds detailed below. If a project may exceed the thresholds, the City shall require a technical assessment</p>	Significant and Unavoidable

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>demonstrate how the City will reduce GHG emissions. As a result, at this program-level review, impacts related to GHG emissions resulting from General Plan buildout are considered significant and would require mitigation.</p>	<p>evaluating potential project GHG impacts to the City for review and approval. The significance of project-level GHG impacts shall be evaluated using one of the following criteria:</p> <ol style="list-style-type: none"> <li>1. In the absence of a City plan to reduce GHG emissions, the evaluation shall be prepared in conformance with SCAQMD methodology for assessing GHG impacts, which consists of the following tiered approach:               <ol style="list-style-type: none"> <li>a. Tier 1 – The project is exempt from the California Environmental Quality Act (CEQA).</li> <li>b. Tier 2 – The project is consistent with an applicable regional GHG emissions reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.</li> <li>c. Tier 3 – Project GHG emissions represent an incremental increase below or mitigated to less than a 3,000 MT CO<sub>2</sub>E screening level.</li> <li>d. Tier 4 – The project achieves performance standards, where performance standards may include a percent emission reduction target or an efficiency target per service population.</li> <li>e. Tier 5 – Offsets along or in combination with the above target Significance Screening Level. Offsets must be provided for a 30-year project life, unless the project life is limited by permit, lease, or other legally binding condition.</li> </ol> </li> </ol> <p>If GHG emissions are determined to have the potential to exceed the SCAQMD’s recommended thresholds, the City shall require that applicants for new development projects incorporate features to reduce GHG emissions. These identified measures shall be incorporated into all appropriate documents submitted to the City and shall be verified by the City.</p>	
<p>Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs.</p>	<p>Potentially Significant</p>	<p>Although the General Plan policy framework includes various objectives and implementation measures that would supports GHG emission reductions, the City is not able to demonstrate whether the policy framework would be sufficient to meet state GHG emission reduction goals despite compliance with existing regulations (PPPs GHG-1 through GHG-5) aimed at minimizing GHG emissions. Impacts related to conflicts with an applicable</p>	<ul style="list-style-type: none"> <li>• PPP GHG-1: Compliance with Title 24, Part 6 – Energy Code</li> <li>• PPP GHG-2: Compliance with Title 24, Part 11 – California Green Building Standards Code</li> <li>• PPP GHG-3: Compliance with SCAQMD Regulations</li> <li>• PPP GHG-4: Compliance with SCAQMD CEQA Thresholds</li> <li>• PPP GHG-5: Compliance with Irvine Sustainable Community Initiative</li> </ul>	<p>Significant and Unavoidable</p>

Table S-1  
Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs would be considered significant and would require mitigation to identify potential measures that would reduce GHG emissions below the applicable SCAQMD thresholds.</p>	<p><b>GHG-1:</b> Applications for future development, wherein the Director of Community Development or their designee has determined a potential for GHG impacts the City shall evaluate the project to identify the potential for GHG emissions to exceed the SCAQMD thresholds detailed below. If a project may exceed the thresholds, the City shall require a technical assessment evaluating potential project GHG impacts to the City for review and approval. The significance of project-level GHG impacts shall be evaluated using one of the following criteria:</p> <ol style="list-style-type: none"> <li>1. In the absence of a City plan to reduce GHG emissions, the evaluation shall be prepared in conformance with SCAQMD methodology for assessing GHG impacts, which consists of the following tiered approach:               <ol style="list-style-type: none"> <li>a. Tier 1 – The project is exempt from the California Environmental Quality Act (CEQA).</li> <li>b. Tier 2 – The project is consistent with an applicable regional GHG emissions reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.</li> <li>c. Tier 3 – Project GHG emissions represent an incremental increase below or mitigated to less than a 3,000 MT CO<sub>2</sub>E screening level.</li> <li>d. Tier 4 – The project achieves performance standards, where performance standards may include a percent emission reduction target or an efficiency target per service population.</li> <li>e. Tier 5 – Offsets along or in combination with the above target Significance Screening Level. Offsets must be provided for a 30-year project life, unless the project life is limited by permit, lease, or other legally binding condition.</li> </ol> </li> </ol> <p>If GHG emissions are determined to have the potential to exceed the SCAQMD’s recommended thresholds, the City shall require that applicants for new development projects incorporate features to reduce GHG emissions. These identified measures shall be incorporated into all appropriate documents submitted to the City and shall be verified by the City.</p>	



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Summary of Environmental Impacts**

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
<b>4.7 Hazards and Hazardous Materials</b>				
<p>Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</p> <p>or</p> <p>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?</p> <p>or</p> <p>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?</p>	Less than Significant	<p>Construction activities associated with this development would likely require the transport, temporary storage, and use of asphalt fuels, oils, paints, and solvents during construction. However, these materials are not acutely hazardous, and use of these common hazardous materials in small quantities would not represent a significant hazard to the public or environment. Project construction would adhere to typical Best Management Practices regarding the use of hazardous materials, such as proper labeling and storage, removal of materials once completed, and offsite vehicle maintenance.</p> <p>Operation of the future project would likely include the use and storage of cleaning supplies, motor oil, building maintenance supplies, paints and solvents, pesticides, or other similar materials. However, these materials are not acutely hazardous, and the limited quantities and use of such products would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. As such, the project does not propose any development that is likely to generate or use acutely hazardous materials.</p> <p>Furthermore, the project would not allow for development of any uses that would generate or store substantial amounts of hazardous materials. Existing uses that handle hazardous materials independent of the project would continue to be subject to the requirements of CCR, Title 22, Division 4.5 regarding hazardous waste generators, transporters, treatment, storage, and disposal facilities, requirements of the California Hazardous Materials Management Act to prepare a HMBEP for management of hazardous materials and written procedures for response to an accidental release, as well as requirements of the California HWCL for the proper management of hazardous materials.</p>	<ul style="list-style-type: none"> <li>• PPP HAZ-1: Compliance with the Certified Union Program Agency for Orange County (hazardous materials)</li> </ul>	Less than Significant
<p>Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?</p>	Less than Significant	<p>There are a total of 41 hazardous materials sites located throughout the City. Specifically, 18 sites are in Focus Area 1, one site is in Focus Area 2, 14 sites are in Focus Area 3, and the remaining 8 are located outside of the Focus Areas. In accordance with federal, state, regional, and local requirements, any new development or redevelopment that involves contaminated property would necessitate the clean-up and/or remediation of the property in accordance with applicable requirements and</p>	<ul style="list-style-type: none"> <li>• PPP HAZ-1: Compliance with the Certified Union Program Agency for Orange County (hazardous materials)</li> </ul>	Less than Significant

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>regulations. Therefore, adherence to applicable clean-up and/or remediation requirements and regulations, would ensure that the project would not create a significant hazard associated with known hazardous materials sites, and impacts would be less than significant.</p>		
<p>Would the project be 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, result in a safety hazard or excessive noise for people residing or working in the project area?</p>	<p>Less than Significant</p>	<p>All areas slated for future development as part of the project are outside of the area regulated by the John Wayne Airport Environs Land Use Plan (AELUP; PPP HAZ-5), with the exception of portions of Planning Areas 29 (University of California, Irvine- North Campus) and 36 (Irvine Business Complex), which are located within the John Wayne Airport safety zones, as well as the 70 community noise equivalent level (CNEL), 65 CNEL, and 60 CNEL John Wayne Airport noise contours.</p> <p>Future development within these planning areas would be subject to the land use restrictions for each of the compatibility zones, which provide development limitations to minimize potential incidents of off-airport accidents to persons and property on the ground. Proposed land use maps and zoning within these planning areas were developed with consideration to airport safety and Federal Aviation Regulation height limitations, and the residential and residential mixed-use overlay zones developed under the project would adhere to the same requirements. Through compliance with the regulatory requirements described above, the project would not result in a safety hazard or excessive noise for people residing or working in the project area, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP HAZ-5: Compliance with Orange County Airport Land Use Compatibility Plan (ALUCP) safety and noise compatibility standards for John Wayne Airport.</li> </ul>	<p>Less than Significant</p>
<p>Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</p>	<p>Less than Significant</p>	<p>The extension of Ada roadway is not anticipated to interfere with emergency response activities or plans, but rather would likely improve emergency responses by improving connectivity within this area of the City. Additionally, future development facilitated by the project, including new residential uses, the continuation of nonresidential uses at the same intensities permitted by the current General Plan, and nonresidential development within the Great Park area would be designed consistent with the requirements of the City's LHMP (PPP HAZ-2), the City's EOP (PPP HAZ-3), Municipal Code Title 4 (Public Safety), Division 9 (Emergency Services) (PPP HAZ-4), and Standard Condition 3.17 (Emergency Access Plan) (PPP HAZ-9). Therefore, the project would not impair implementation of or physically interfere with an</p>	<ul style="list-style-type: none"> <li>• PPP HAZ-2: Compliance with the City's LHMP</li> <li>• PPP HAZ-3: Compliance with the City's Emergency Operations Plan (EOP)</li> <li>• PPP HAZ-4: Compliance with Municipal Code Title 4 (Public Safety), Division 9 (Emergency Services)</li> <li>• PPP HAZ-9: Compliance with Standard Condition 3.17 (Emergency Access Plan)</li> </ul>	<p>Less than Significant</p>

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		adopted emergency response plan or emergency evacuation plan, and impacts would be less than significant.		
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	Less than Significant	Approximately 1,875 acres of land located in Focus Area 3 is designated as Very High fire severity zone. However, future housing development and proposed improvements to the Great Park are not likely to be located within the segment of Focus Area 3 designated as Very High fire severity zone, and any development near this area would be designed consistent with all applicable fire safety requirements. Future development and redevelopment could also occur outside of the proposed focus areas, which may be located along the City boundaries adjacent to land identified as having Moderate, High, or Very High fire severity zone designations. All new development and redevelopment in these areas would be required to prepare a fuel modification plan before approval of tentative maps and grading permits, per City Standard Condition 2.19 Open Space Fuel Modification (PPP HAZ-7) and Standard Condition 3.14 HOA/Fuel Modification (PPP HAZ-8). Adherence to these requirements would ensure that the project would not expose project occupants to significant risks involving wildfires or the uncontrolled spread of a wildfire, and impacts would be less than significant.	<ul style="list-style-type: none"> <li>• PPP HAZ-7: Compliance with Standard Condition 2.19 (Open Space Fuel Modification)</li> <li>• PPP HAZ-8: Compliance with Standard Condition 3.14 (HOA/Fuel Modification)</li> </ul>	Less than Significant
<b>4.8 Hydrology/Water Quality</b>				
Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.  or	Less than Significant	Construction activities associated with future development would likely involve grading, paving, utility installation, building construction, and landscaping installation, which could result in the generation of potential water quality pollutants such as silt, debris, chemicals, paints, and other pollutants with the potential to affect water quality. In addition, refueling and parking of construction vehicles and other construction equipment may result in oil, grease, or other related pollutant leaks and/or spills that may discharge into the storm drain system. Adherence to these PPP requirements during construction would ensure that all potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged. Therefore, construction impacts associated with future developments are anticipated to be less than significant.	<ul style="list-style-type: none"> <li>• PPP HYD-1 Compliance with General Construction Permit</li> <li>• PPP-HYD-10 Compliance with Municipal Code Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code)</li> <li>• PPP-HYD-12 Compliance with the City Grading Manual</li> </ul>	Less than Significant

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		<p>Future priority development projects would be required to prepare Water Quality Management Plans (WQMPs) in accordance with the Model WQMP and to incorporate LID principles (PPP HYD-16). Furthermore, drainage patterns would largely be maintained and would utilize existing drainage facilities within the right-of-way. Because the City is primarily developed and because the three focus areas are largely urban in nature, new development would likely be development under buildout conditions. Therefore, overall operational impacts relating to stormwater quality would be less than significant.</p>		
<p>Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.</p>	<p>Less than Significant</p>	<p>The project has been designed to minimize the increase in impervious surfaces by primarily focusing future development and redevelopment within the proposed focus areas (which are existing urbanized areas), thereby reducing the amount of conversion of permeable land to impermeable surfaces which would otherwise occur with more development concentrated outside of the focus areas. Additionally, future development both inside and outside of the focus areas under the project would be required to comply with federal, state, regional and local plans, programs, and policies pertaining to groundwater. All future site-specific projects would be required to comply with the Orange County Water District groundwater management plan (PPP HYD-4). Adherence to the applicable laws, standards, and requirements (including PPP HYD-4 and HYD-13) would prevent the project from substantially depleting groundwater supplies and interfering substantially with groundwater recharge, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP-HYD-4 Compliance with the OCWD groundwater management plan</li> <li>• PPP-HYD-13 Compliance with City Standard Condition 2.7 Groundwater Survey</li> <li>• PPP-HYD-16 City Standard Condition 2.13 Water Quality Management Plan</li> </ul>	<p>Less than Significant</p>
<p>Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:</p> <ul style="list-style-type: none"> <li>i) result in a substantial erosion or siltation on- or off-site;</li> <li>ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;</li> </ul>	<p>Less than Significant</p>	<p><b>Erosion</b></p> <p>Future development under the project would have the potential to result in increased erosion or siltation both on- and off-site during construction and operation of future development. The alteration of drainage patterns and increase in runoff associated with the addition of impervious surfaces and structures can increase the frequency and amount of flooding which in turn could potentially result in an accelerated rate of erosion and siltation through the watershed.</p>	<ul style="list-style-type: none"> <li>• PPP HYD-1 Compliance with General Construction Permit</li> <li>• PPP-HYD-2 Compliance with Section 303(d) of the federal Clean Water Act</li> <li>• PPP-HYD-3 Compliance with the Santa Ana RWQCB Regional Water Quality Control Plan</li> <li>• PPP-HYD-4 Compliance with the OCWD groundwater management plan</li> <li>• PPP-HYD-5 Compliance with Orange County Municipal Water Stormwater Permit and Orange County Drainage Area Management Plan (DAMP)</li> </ul>	<p>Less than Significant</p>

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Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
<p>iii) 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; or iv) impede or redirect flood flows.</p>		<p>Operation of future development under the project, both within the focus areas and throughout the City, would have the potential to increase surface runoff and change stream-flow velocities or quantities. Although future site-specific development would be located primarily in the three focus areas, which are urbanized areas, the potential exists to affect downstream properties if drainage patterns are changed.</p> <p>Construction and operation of future projects facilitated by project approval would be required to comply with applicable state, regional, and local regulations (PPPs HYD-1 through HYD-16). Compliance with these regulations would ensure that the project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces. Therefore, impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP-HYD-6 Compliance with the OCFCD San Diego Creek 19999 Regional Flood Control Master Plan</li> <li>• PPP-HYD-7 Compliance with the IRWD Water Resources Master Plan</li> <li>• PPP-HYD-8 Compliance with the IRWD Urban Water Management Plan (UWMP)</li> <li>• PPP-HYD-9 Compliance with the City of Irvine Local Hazard Mitigation Plan</li> <li>• PPP-HYD-10 Compliance with Municipal Code Title 5 (Planning), Division 10 (Grading Code and Encroachment Regulations), Chapter 1 (Grading Code)</li> <li>• PPP-HYD-11 Compliance with Municipal Code Title 6 (Public Works), Division 8 (Pollution), Chapter 3 (Stormwater/Urban Runoff)</li> <li>• PPP-HYD-12 Compliance with the City Grading Manual</li> <li>• PPP-HYD-13 Compliance with City Standard Condition 2.7 Groundwater Survey</li> <li>• PPP-HYD-14 Compliance with City Standard Condition 2.11 Special Flood Hazard Area</li> <li>• -PPP-HYD-15 Compliance with City Standard Condition 2.12 Water Quality – Notice of Intent</li> <li>• PPP-HYD-16 City Standard Condition 2.13 Water Quality Management Plan</li> </ul>	
<p>In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation.</p>	<p>Less than Significant</p>	<p>The project is not located within a tsunami or seiche zone. Therefore, there are no potential impacts related to tsunamis. Hazardous conditions related to a seiche within North Lake or South Lake in the Woodbridge community are unlikely given the small size of the lakes and the height of the banks surrounding the lakes. No other enclosed waterbodies where a seiche could occur exist within the City .</p> <p>Future development within areas mapped as flood zones would be required to comply with compliance measures as specified by City Planning Commission Resolution No. 09-2968 with respect to Special Flood Hazard Areas (PPP-HYD-14). Therefore, compliance with applicable regulations would ensure that project impacts related to flood hazard, tsunami, or seiche zones would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP-HYD-5 Compliance with Orange County Municipal Water Stormwater Permit and Orange County Drainage Area Management Plan (DAMP)</li> <li>• PPP-HYD-6 Compliance with the OCFCD San Diego Creek 19999 Regional Flood Control Master Plan</li> <li>• PPP-HYD-9 Compliance with the City of Irvine Local Hazard Mitigation Plan</li> <li>• PPP-HYD-14 Compliance with City Standard Condition 2.11 Special Flood Hazard Area</li> <li>• PPP-HYD-18 City Standard Condition 3.4 Special Flood Hazard Area</li> <li>• PPP-HYD-19 City Standard Condition 4.5 Special Flood Hazard Area</li> <li>• PPP-HYD-21 Compliance with sustainability in Landscaping Guideline Manual</li> </ul>	<p>Less than Significant</p>
<p>Would the project conflict with or obstruct implementation of a water</p>	<p>Less than Significant</p>	<p>Future development associated with the project has been designed to minimize the increase in impervious surfaces by primarily focusing future development and redevelopment within</p>	<ul style="list-style-type: none"> <li>• PPP HYD-1 Compliance with General Construction Permit</li> <li>• PPP-HYD-2 Compliance with Section 303(d) of the federal Clean Water Act</li> </ul>	<p>Less than Significant</p>

**Table S-1  
Summary of Environmental Impacts**

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
quality control plan or sustainable groundwater management plan?		the proposed focus areas which are existing urbanized areas, thereby reducing the amount conversion of permeable land to impermeable surfaces. Additionally, future development under the project would be required to comply with federal, state, regional and local plans, programs, and policies pertaining to groundwater. Construction and operation of the project would comply with PPPs HYD-1 through HYD-5, PPP HYD-7 through HYD-9, PPP HYD-11 through HYD-17, and PPP-HYD-20, which require compliance and implementation of existing water quality control plans and sustainable groundwater management plans. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan, and impacts would be less than significant.	<ul style="list-style-type: none"> <li>• PPP-HYD-3 Compliance with the Santa Ana RWQCB Regional Water Quality Control Plan</li> <li>• PPP-HYD-4 Compliance with the OCWD groundwater management plan</li> <li>• PPP-HYD-5 Compliance with Orange County Municipal Water Stormwater Permit and Orange County Drainage Area Management Plan (DAMP)</li> <li>• PPP-HYD-6 Compliance with the OCFCD San Diego Creek 19999 Regional Flood Control Master Plan</li> <li>• PPP-HYD-7 Compliance with the IRWD Water Resources Master Plan</li> <li>• PPP-HYD-8 Compliance with the IRWD Urban Water Management Plan (UWMP)</li> <li>• PPP-HYD-9 Compliance with the City of Irvine Local Hazard Mitigation Plan</li> <li>• PPP-HYD-11 Compliance with Municipal Code Title 6 (Public Works), Division 8 (Pollution), Chapter 3 (Stormwater/Urban Runoff)</li> <li>• PPP-HYD-12 Compliance with the City Grading Manual</li> <li>• PPP-HYD-13 Compliance with City Standard Condition 2.7 Groundwater Survey</li> <li>• -PPP-HYD-15 Compliance with City Standard Condition 2.12 Water Quality – Notice of Intent</li> <li>• PPP-HYD-16 City Standard Condition 2.13 Water Quality Management Plan</li> <li>• PPP-HYD-17 City Standard Condition 3.3 Disclosure Statements</li> <li>• PPP-HYD-20 Compliance with Local Implementation Plan (LIP)</li> </ul>	
<b>4.9 Land Use and Planning</b>				
Would the project physically divide an established community?	Less than Significant	Implementation of the project would not include new major infrastructure, such as a freeway, that could physically divide an established community. The project would also strategically direct future development to the three focus areas to retain the existing character of more established residential communities in the central area of the City and concentrate higher-density development in more urban areas. The project also encourages the preservation of existing residential communities through infill development facilitated by the Residential and Residential Mixed-Use Overlay, which would reduce potential conflicts between contrasting land uses and would enhance existing neighborhoods by responsibly integrating new development into existing communities. Additionally, the proposed project includes non-residential improvements to the Great Park area and an extension to Ada, a local roadway. All Great Park improvements are	<ul style="list-style-type: none"> <li>• PPP LU-4: Compliance with Zoning Ordinance</li> </ul>	Less than Significant

Table S-1  
Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		intended to serve visitors of the park and would occur within an area slated for buildout of a regionally serving park. Therefore, implementation of the project would ensure the development of cohesive neighborhoods without physically dividing existing communities.		
Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact?	Potentially Significant	<p><b>General Plan and Municipal Code:</b> Future development would be reviewed to consider consistency with all applicable plans, including the City’s General Plan, Municipal Code, and Zoning Ordinance. Therefore, land use consistency impacts associated with adoption of the General Plan Update would be less than significant.</p> <p><b>SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS):</b> The project would serve as an important action towards implementing the City’s 6<sup>th</sup> Cycle 2021-2029 Housing Element and the associated RHNA allocation of 23,610 units. Because the housing assessment in the RHNA is determined by SCAG, any future development of vacant and/or developed sites would accommodate planned increases in population based on SCAG’s demographic projections. Future housing developed under the project would provide housing necessary to meet the City’s RHNA allocation of 23,610 units, as well as accommodate future population growth and housing needs accounted for in SCAG’s growth projections.</p> <p>Therefore, land use consistency impacts related to conflicts with SCAG would be less than significant.</p> <p><b>John Wayne Airport Environs Land Use Plan (AELUP):</b> Future development in the area of the City subject to the AELUP would be required to comply with height, use and noise limitations designated in the AELUP. Additionally, future projects would be required to file for a consistency determination with ALUC as specified in Section 4.7 of the AELUP (PPP-LU-1). As with future projects, the proposed project (the General Plan Update) is required to be reviewed by ALUC for a consistency determination with the AELUP. If ALUC determines that the project is inconsistent with the AELUP, ALUC is required to notify the City. Therefore, land use compatibility impacts related to conflicts with the AELUP would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP LU-1: Compliance with the Airport Environs Land Use Plan for John Wayne Airport</li> <li>• PPP LU-2: Compliance with the Orange County Central and Coastal Natural Community Conservation Plan (NCCP)</li> <li>• PPP LU-3: Compliance with the City Local Coastal Program and Zoning Ordinance Chapter 2-7 Coastal Zone Regulations for Developments Located in Coastal Zone</li> <li>• PPP LU-4: Compliance with Zoning Ordinance</li> <li>• PPP LU-5: Compliance with the City Parks Master Plan</li> <li>• PPP LU-6: Compliance with the UCI LDRP</li> </ul> <p>Refer to mitigation measures BIO-1 through BIO-10 above and in Section 4.3, Biological Resources.</p>	Less than Significant

Table S-1  
Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Polices [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p><b>Orange County Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP):</b> Future development resulting from implementation of the project would be required to comply with the NCCP/HCP. As part of the project approval process, each future proposed project with the potential to impact biological resources would be required to conduct an initial site assessment to determine if sensitive biological resources could be present within and/or adjacent to the proposed development project (refer to mitigation measure BIO-1). Individual projects would also be assessed for compliance with the NCCP/HCP depending on whether the project site lies inside the NCCP/HCP Reserve System (including the Irvine Open Space Preserve of the Irvine Open Space Initiative) or Special Linkage Areas. Therefore, land use compatibility impacts related to conflicts with the NCCP would be less than significant with mitigation incorporated.</p> <p><b>Local Coastal Plan (LCP):</b> The proposed project would require an amendment to the City's Local Coastal Program to ensure consistency between the land use updates included as part of the project and the Local Coastal Program. The Local Coastal Program amendment is required to be reviewed and processed by the California Coastal Commission, a process that would start immediately following project approval. Once approved, any future development under the project that would be located within the coastal zone would be required to comply with development standards and applicable policies in the City's Local Coastal Program (PPP LU-3). Therefore, land use compatibility impacts related to conflicts with the City's Local Coastal Program would be less than significant.</p> <p><b>Zoning Ordinance:</b> Future development under the project would be required to comply with land use regulations and development standards set forth in the City's Zoning Ordinance (PPP LU-4). Additionally, development within the City's Focus Areas would be required to adhere to the land use plans that provide supplemental development regulations for those areas, as well as applicable regulations in the Municipal Code that serve to reduce or avoid environmental impacts (PPP LU-3). Therefore, land use compatibility impacts related to conflicts with the City's Zoning Ordinance would be less than significant.</p>		



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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p><b>Parks Master Plan:</b> New development under the project would be consistent with this plan as it would implement or fund the implementation of the City Parks Master Plan (PPP LU-5). Therefore, land use compatibility impacts related to conflicts with the City's Parks Master Plan would be less than significant.</p> <p><b>UCI LDRP:</b> Future development within the UCI campus would be subject to review with the UCI Long Range Development Plan (LDRP) (PPP LU-6) by UCI for consistency with the general types of campus development and land uses proposed through the plan horizon year of 2025-26. Therefore, land use compatibility impacts related to conflicts with the UCI's LRDP would be less than significant.</p>		
<b>4.10 Noise</b>				
<p>Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</p>	<p><b>Traffic Noise:</b> Potentially Significant <b>Railroad Noise:</b> Potentially Significant <b>Stationary Noise:</b> Potentially Significant <b>Construction Noise:</b> Potentially Significant</p>	<p><b>Traffic Noise:</b> <u>Ambient Noise</u></p> <p>Under buildout of the adopted General Plan, off-site traffic noise level impacts would exceed noise level increase thresholds along 86 segments. Future development would be required to prepare noise studies in accordance with the City's environmental review procedure for all projects that are not "clearly compatible" with the future noise level at the site. These studies are required to identify all measures necessary to reduce noise levels to meet the City's interior and exterior noise compatibility standards and Single Event Noise Standard. Through implementation of these policies, noise levels at new noise-sensitive land uses would be evaluated and noise reduction techniques would be implemented to reduce noise exposure. However, the increase in ambient noise levels adjacent to the roadway segments specified in the Noise analysis would likely remain at levels that would expose existing noise-sensitive receptors to a significant increase in ambient noise levels, and impacts would be significant.</p> <p><u>Land Use Compatibility</u></p> <p>Future development would be required to prepare noise studies in accordance with the City's environmental review procedure for all projects that are not "clearly compatible" with the future noise level at the site. These studies are required to identify all measures necessary to reduce noise levels to meet the City's interior and exterior noise compatibility standards and Single Event Noise</p>	<ul style="list-style-type: none"> <li>• PPP NOS-1: Compliance with the California Code of Regulations interior noise standards.</li> <li>• PPP NOS-2: Compliance with Orange County ALUCP noise compatibility standards for John Wayne Airport.</li> <li>• PPP NOS-3: Compliance with the City's Municipal Code.</li> </ul> <p><b>NOI-1:</b> Prior to the issuance of building permits, site-specific exterior noise analyses that demonstrate that the project would not place residential receptors in locations where the exterior existing or future noise levels would exceed the City's noise compatibility standards shall be required as part of the review of future residential development proposals. Noise reduction measures, including but not limited to building noise barriers, increased building setbacks, speed reductions on surrounding roadways, alternative pavement surfaces, or other relevant noise attenuation measures, may be used to achieve the noise compatibility standards. Exact noise mitigation measures and their effectiveness shall be determined by the site-specific exterior noise analyses.</p> <p><b>NOI-2:</b> Prior to the issuance of building permits, site specific interior noise analyses demonstrating compliance with the City's interior noise compatibility standards and other applicable regulations shall be prepared for noise sensitive land uses located in areas where the exterior noise levels exceed the City's noise compatibility standards. Noise control measures, including but</p>	<p><b>Traffic Noise:</b> Significant and Unavoidable <b>Railroad Noise:</b> Less than Significant. <b>Stationary Noise:</b> Less than Significant <b>Construction Noise:</b> Less than Significant</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>Standard. Conditional use permits would be required for noise-sensitive land uses such as hospitals, libraries, churches, and schools located in areas not “clearly compatible” to demonstrate how exterior noise exposure would be minimized, such as building orientation, shielding, or limiting outdoor programs. Additionally, mixed-use and multi-family residential developments are required to demonstrate noise compatibility between uses. However, traffic noise would likely remain at levels that that would exceed exterior and interior standards, and impacts would be significant. However, noise associated with railroad operations would likely remain at levels that would expose existing noise-sensitive receptors to a significant increase in ambient noise levels, and impacts would be significant and would require mitigation.</p> <p><b>Railroad Noise:</b> Focus Areas 2 and 3 are exposed to significant railroad noise level. Noise-sensitive receivers in the vicinity of the railroad tracks could be exposed to noise levels that exceed the compatibility standards and would require mitigation. Noise associated with railroad operations would likely remain at levels that would expose existing noise-sensitive receptors to a significant increase in ambient noise levels. Therefore, because specific project details are not yet known, railroad noise impacts associated with new development would be significant.</p> <p><b>Stationary Noise:</b> While noise-sensitive residential land uses would be exposed to noise associated with the operation of commercial and industrial uses, future development would be required to show compliance with the Municipal Code. However, noise associated with stationary noise would likely remain at levels that would expose existing noise-sensitive receptors to a significant increase in ambient noise levels, and impacts would be significant and would require mitigation.</p> <p><b>Construction Noise:</b> Implementation of the project would increase development capacity within the City. Construction noise levels are variable and depend on specific locations, site plans, and construction details relative to specific projects. Significant noise impacts may occur associated with individual projects which have not yet been developed, particularly if construction techniques (e.g., pile driving) are proposed. However, construction would be localized and would occur intermittently for varying periods of time in</p>	<p>not limited to increasing roof, wall, window, and door sound attenuation ratings, placing HVAC in noise reducing enclosures, or designing buildings so that no windows face freeways or major roadways may be used to achieve the noise compatibility standards. Exact noise mitigation measures and their effectiveness shall be determined by the site specific exterior noise analyses.</p> <p><b>NOI-3:</b> Prior to the issuance of a building permit, a site-specific acoustical/noise analysis of any on-site generated noise sources, including generators, mechanical equipment, and trucks, shall be prepared which identifies all noise-generating equipment, predicts noise levels at property lines from all identified equipment, and recommends mitigation to be implemented (e.g., enclosures, barriers, site orientation), to ensure compliance with the City’s noise standards. Noise reduction measures shall include building noise-attenuating walls, limiting the hours of operation, or other attenuation measures. Additionally, future projects shall be required to buffer sensitive receptors from noise sources through the use of open space and other separation techniques as recommended after thorough analysis by a qualified acoustical engineer. Exact noise mitigation measures and their effectiveness shall be determined by the site specific noise analyses.</p> <p><b>NOI-4:</b> Construction contractors shall implement the following measures for construction activities conducted in the City of Irvine. Construction plans submitted to the City shall identify these measures on demolition, grading, and construction plans submitted to the City:</p> <ul style="list-style-type: none"> <li>• The City of Irvine Community Development Department shall verify that grading, demolition, and/or construction plans submitted to the City include these notations prior to issuance of demolition, grading, and/or building permits.</li> <li>• Construction activity is limited to the hours: Between 7:00 AM to 7:00 PM Monday through Friday and 9:00 a.m. and 6:00 p.m. on Saturdays as prescribed in Municipal Code Section 66-8-205(A). No construction activities shall be permitted outside of these hours or on Sundays and federal holidays, except Columbus Day, unless a temporary waiver is granted by the Chief Building Official or their authorized representative.</li> </ul>	

Table S-1  
Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>accordance with the City’s Municipal Code, Zoning Ordinance, and Noise Element. Because project-level information is not yet available, it is not possible to quantify construction noise impacts at noise-sensitive receptors. In most cases, construction of individual projects would temporarily increase the ambient noise environment, potentially affecting existing and future sensitive receptors. However, because construction activities may occur near noise-sensitive uses and because noise disturbances could occur for prolonged periods of time or during noise-sensitive hours of the day, construction noise impacts associated with future development would be significant and would require mitigation.</p>	<ul style="list-style-type: none"> <li>• During the entire active construction period, equipment and trucks used for project construction shall use the best-available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.</li> <li>• Impact tools (e.g., jack hammers and hoe rams) shall be hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.</li> <li>• Stationary equipment, such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses. <ul style="list-style-type: none"> <li>• Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.</li> </ul> </li> <li>• Construction traffic shall be limited, to the extent feasible, to approved haul routes established by the City of Irvine Community Development Department.</li> <li>• At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City’s and contractor’s authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor’s representative receives a complaint, he/she shall investigate, take appropriate corrective action, and report the action to the City.</li> <li>• Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.</li> <li>• During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.</li> <li>• Erect temporary noise barriers (at least as high as the exhaust of equipment and breaking line-of-sight between noise sources and sensitive receptors), as necessary and feasible, to maintain construction noise levels at or below the performance standard of 80 dBA Leq. Barriers shall be constructed with a solid material that</li> </ul>	

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			has a density of at least 4 pounds per square foot with no gaps from the ground to the top of the barrier.	
Would the project result in generation of excessive groundborne vibration or ground borne noise levels?	<p><b>Construction:</b> Potentially Significant</p> <p><b>Railroad:</b> Potentially Significant</p> <p><b>Stationary Sources:</b> Less than Significant</p>	<p><b>Construction</b> The City limits construction activities to 7:00 a.m. and 7:00 p.m. Mondays through Fridays, and 9:00 a.m. and 6:00 p.m. on Saturdays (PPP NOS-2. However, construction details and equipment for future project-level development is not known. Despite implementation of these policies and implementing actions, future development would result in potentially significant construction vibration impacts requiring mitigation. Mitigation measure NOI-5 requires project-specific measures for projects using construction equipment that could result in elevated vibration levels.</p> <p><b>Railroad:</b> The Metrolink, Amtrak, and BNSF freight trains operate within the City. Construction of vibration-sensitive uses close to railroad tracks can cause rattling windows and vibration of floors. Despite implementation of policies and implementing actions meant to reduce vibrational impacts associated with rail, future development could result in potentially significant railroad vibration impacts. Mitigation measure NOI-6 requires preparation of a groundborne vibration and noise evaluation for projects proposing residential uses within 200 feet of existing railroad lines.</p> <p><b>Stationary Sources:</b> Industrial manufacturing operations occasionally utilize equipment or processes that have a potential to generate groundborne vibration. The project does not propose any industrial manufacturing uses. Therefore, vibration impacts associated with stationary sources would be less than significant.</p>	<ul style="list-style-type: none"> <li>PPP NOS-2: Compliance with the City's Municipal Code.</li> </ul> <p><b>NOI-5:</b> Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures, such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); or a vibratory roller within 25 feet of any structure, the project applicant shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed Federal Transit Administration (FTA) architectural damage thresholds (e.g., 0.12 inches per second [in/sec] peak particle velocity [PPV] for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving and static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure vibration thresholds are not exceeded.</p> <p><b>NOI-6:</b> New residential projects (or other noise-sensitive uses) located within 200 feet of existing railroad lines shall be required to conduct a groundborne vibration and noise evaluation consistent with Federal Transit Administration (FTA)-approved methodologies.</p>	<p><b>Construction:</b> Significant and Unavoidable</p> <p><b>Railroad:</b> Less than significant.</p> <p><b>Stationary Sources</b> Less than Significant</p>
Would the project be located within the vicinity of a private airstrip or 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, and expose people residing or working in the area to excessive noise levels?	Less than Significant	Future development would be required to prepare noise studies in accordance with the City's environmental review procedure for all projects that are not "clearly compatible" with the future noise level at the site. These studies are required to identify all measures necessary to reduce noise levels to meet the City's and State's interior and exterior noise compatibility standards and Single Event Noise Standard (PPPs NOS-1 and NOS-3). Future projects would also be required to comply with noise-related regulations in the Orange County ALUP and AELUP (PPP NOS-3). Therefore,	<ul style="list-style-type: none"> <li>PPP NOS-1: Compliance with the California Code of Regulations interior noise standards.</li> <li>PPP NOS-2: Compliance with Orange County ALUCP noise compatibility standards for John Wayne Airport.</li> <li>PPP NOS-3: Compliance with the City's Municipal Code.</li> </ul>	Less than Significant

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Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		adherence with the noise requirements of the ALUP (PPP NOS-2) would ensure that future development would not expose people to excessive aircraft noise levels, and impacts would be less than significant.		
<b>4.11 Population and Housing</b>				
Would the project induce substantial unplanned population growth in an area, either directly ((for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than Significant	<p>Approval of the project would serve as an important action towards implementing the City's 6<sup>th</sup> Cycle 2021-2029 Housing Element and the associated RHNA allocation of 23,610 units. Because the housing assessment in the RHNA is determined by SCAG, future development under the project would accommodate increases in population based on SCAG's demographic projections. Therefore, the project would accommodate planned growth projected by SCAG. Furthermore, the project would reduce the City's existing jobs/housing imbalance. As such, the project would account for planned population growth, would increase housing within the City, and improve the City's jobs/housing balance.</p> <p>Future development under the project would primarily be in developed areas that are already served by infrastructure, and it is not anticipated that future housing development facilitated by the project would induce unplanned population growth directly or indirectly through extension of roads or other infrastructure or otherwise. Additionally, the 2021-2029 Housing Element includes goals, policies and objectives aimed at managing future growth within the City by updating the land use element and Zoning Ordinance to comply with State law and by ensuring appropriate land use planning to provide adequate infrastructure, services, and facilities to serve residents. The project would implement the vision of the 2021-2029 Housing Element, and future development under the project would not induce substantial unplanned population growth in an area, either directly or indirectly, and impacts would be less than significant.</p>	Refer to goals, policies, and objectives in the adopted 2021-2029 Housing Element and in Section 4.11, Population and Housing.	Less than Significant
Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less than Significant	Although some people may be displaced by a future site-specific redevelopment project, buildout of the project would provide an overall expansion of housing opportunities, and would be required to comply with all laws and regulations related to the displacement of tenants including Government Code §§66300 et seq. Furthermore, the project would exceed the state RHNA allocations assigned to the City, providing a buffer in all income		Less than Significant

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		<p>categories. This exceedance of the City's RHNA allocation would provide additional housing that would accommodate residents displaced by future redevelopment projects, ensuring no net loss of housing, and that displaced residents would be able to find replacement housing. Therefore, displacement of people associated with implementation of the project would be temporary. Through the overall production of more housing and compliance with applicable laws related to the displacement of tenants, the project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, and impacts would be less than significant.</p>		
<b>4.12 Public Services and Recreation</b>				
<p>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:</p> <ul style="list-style-type: none"> <li>• Fire Protection;</li> <li>• Police Protection;</li> <li>• Schools;</li> <li>• Parks/Recreational Facilities</li> <li>• Other Public Facilities?</li> </ul>	<p>Less than Significant</p>	<p><b><u>Fire Protection:</u></b></p> <p>Future development facilitated by the project may necessitate construction of additional fire stations, fire-rescue personnel, equipment, and facilities to protect and serve the public. OCFA has identified potential locations of future fire stations within the City, and future development under the project would be required to pay a development impact fee (DIF) that would be used exclusively for future facility improvements necessary to ensure contribution of its fair share of the cost of facilities and equipment. Payment of the DIF would allow future site-specific development to contribute to its fair share cost of facilities and equipment due to the increased demand for fire protection services. However, future development would occur incrementally through 2045, based on market conditions and other factors, such that fire protection facilities and services are not overburdened at any given time.</p> <p>Staffing levels for fire protection services within the City would continue to be established by the Orange County Fire Authority (OCFA) based on its contract with the City. Development of site-specific future housing would not directly result in sufficient demand to require construction of new fire facilities, since each incremental housing development would pay its fair share toward anticipated fire facility needs. Therefore, the project would not result in the need for new or altered fire protection facilities, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP PS&amp;R-1: Compliance with City Standard Condition 2.19 (Open Space Fuel Modification)</li> <li>• PPP PS&amp;R-2: Compliance with City Standard Condition 3.14 (HOA/Fuel Modification)</li> <li>• PPP PS&amp;R-3: Compliance with City Standard Condition 4.9 (Emergency Access Inspection)</li> <li>• PPP PS&amp;R-4: Compliance with City Standard Condition 4.12 (Phased Occupancy of Multi-Building Residential Development) Police Protection</li> <li>• PPP PS&amp;R-5: Compliance with City Standard Condition 3.6 (Site Lighting Requirement)</li> <li>• PPP PS&amp;R-6: Compliance with City Standard Condition 3.17 (Emergency Access Plan)</li> <li>• PPP PS&amp;R-7: Compliance with City Standard Condition 3.18 (Wayfinding (Directional) Plan)</li> <li>• PPP PS&amp;R-8: Compliance with City Standard Condition 3.20 (Construction Site Security Plan)</li> <li>• PPP PS&amp;R-9: Compliance with City Standard Condition 4.9 (Emergency Access Inspection)</li> </ul>	<p>Less than Significant</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p><b><u>Police Protection:</u></b></p> <p>Future site-specific development could potentially increase demand for police protection facilities. Actual needs and potential locations would be determined in the future as development occurs, but increases in demand would be greatest in all three focus areas since the majority of new housing would be located there.</p> <p>Future development would occur incrementally through 2045, based on market conditions and other factors, such that police protection facilities and services are not overburdened at any given time. Additionally, development site-specific future housing would not directly result in sufficient demand to require construction of new police facilities, since each incremental housing development would pay its fair share toward anticipated facility needs.</p> <p>Therefore, the project would not result in substantial adverse impacts associated with the need for new or altered police protection facilities, and impacts would be less than significant.</p> <p><b><u>Schools:</u></b></p> <p>Future site-specific residential development could potentially increase demand for additional school facilities. Actual needs and potential locations would be determined in the future as development occurs, but increases in demand would be greatest in all three focus areas since the majority of new housing would be located there. However, future development would occur incrementally through 2045, based on market conditions and other factors, such that school services are not overburdened at any given time. Pursuant to California Government Code Section 65995, the individual applicants shall pay developer fees to the appropriate school districts at the time building permits are issued; payment of the adopted fees would provide full and complete mitigation of school impacts. Per AB 2626 and SB 50, school districts may impose a fee in conjunction with the construction of new commercial or residential buildings and for those projects that are adding square footage to an existing commercial or residential building. In addition to Measure E,</p>		

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>school funding consists of a contribution of local funding through a Community Facilities District (CFD), State funding, and/or other forms of mitigation negotiated with developers.</p> <p>Development of site-specific future housing would not directly result in sufficient demand to require construction of new school facilities, since each incremental housing development would pay its fair share toward anticipated facility needs. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, and impacts would be less than significant.</p> <p><b><u>Parks/Recreational Facilities:</u></b></p> <p>See issue below.</p> <p><b><u>Other Public Facilities:</u></b></p> <p>Development of future site-specific housing would not directly result in sufficient demand to require construction or expansion of additional public facilities (including libraries), since each incremental housing development would pay its fair share toward anticipated needs. Based on the incremental increase in demand and the payment of DIF to address increased demand on public facilities, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities, and impacts would be less than significant.</p>		
<p>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?</p> <p>or</p> <p>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?</p>	<p>Less than Significant</p>	<p>Future site-specific residential development could potentially increase the use of existing neighborhood and regional parks or other recreational facilities. The existing and projected deficit in population-based parks and recreation facilities would remain upon implementation of the project. However, future development would occur incrementally through 2045, based on market conditions and other factors, such that parks are not overburdened at any given time. As such, there would not be a sudden 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. Future development under the project would also be subject to the requirements of the Quimby Act and the fee schedule established by the City for the payment of development impact fees to support the provision of new recreational facilities and the</p>	<ul style="list-style-type: none"> <li>• PPP PS&amp;R-10: Compliance with City Standard Condition 1.10 (Easement for Public Trail)</li> <li>• PPP PS&amp;R-11: Compliance with City Standard Condition 1.11 (Open Space Irrevocable Offer)</li> <li>• PPP PS&amp;R-12: Compliance with City Standard Condition 1.12 (Public Park Dedication)</li> <li>• PPP PS&amp;R-13: Compliance with City Standard Condition 2.15 (Private Trail Reservation)</li> <li>• PPP PS&amp;R-14: Compliance with City Standard Condition 2.16 (Public Trail Dedication)</li> <li>• PPP PS&amp;R-15: Compliance with City Standard Condition 2.17 (Public Park Dedication)</li> <li>• PPP PS&amp;R-16: Compliance with City Standard Condition 2.18 (Park Construction Phasing)</li> </ul>	<p>Less than Significant</p>



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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>rehabilitation of existing neighborhood parks or recreational facilities. Development of future site-specific housing would not directly result in sufficient demand to require construction of new parks, since each incremental housing development would pay its fair share toward anticipated park needs through the payment of fees.</p> <p>Therefore, based on the incremental demand that would occur project buildout for park facilities and compliance with applicable regulations (such as the City’s parkland standards), the project would not 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 and would not have adverse physical effect on the environment caused by expansion or construction of recreational facilities, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP PS&amp;R-17: Compliance with City Standard Condition 3.11 (Park Design Consistency)</li> <li>• PPP PS&amp;R-18: Compliance with City Standard Condition 3.12 (Private Park Reservation)</li> </ul>	
<b>4.13 Transportation</b>				
<p>Would the project conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?</p>	<p>Less than Significant</p>	<p><b>Roadway System:</b> The updated Circulation Element includes objectives and policies aimed at improving the existing roadway network. The proposed project would also be consistent with the Complete Streets Act because it aims to prioritize multimodal transportation options, with a specific emphasis on reducing vehicle miles travelled through bikeway and/or pedestrian infrastructure improvements. Therefore, the project would not conflict with a plan, ordinance, or policy addressing roadway circulation, and impacts would be less than significant.</p> <p><b>Public Transit System:</b> Increased development within the City is likely to increase demand for public transportation. Future site-specific development under the project may be required to provide bus bays, bus stops and bus shelters adjacent to roads and streets traversing or bounding the development, as requested by the City consistent with the requirements of Municipal Code Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities) (PPP TRA-1). Overall, the proposed project prioritizes multimodal transportation systems, supports first/last mile connectivity to transit, supports complete street improvements, which is consistent with regional transportation planning efforts. Therefore, the project would not conflict with a plan, ordinance, or</p>	<ul style="list-style-type: none"> <li>• PPP TRA-1 Compliance with Municipal Code Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities)</li> <li>• PPP TRA-2: Compliance with Standard Condition 6.4 (Privacy Gates– Vehicle Stacking)</li> <li>• PPP TRA-3: Compliance with Standard Condition 3.17 (Emergency Access Plan)</li> <li>• PPP TRA-4: Compliance with Standard Condition 4.9 (Emergency Access Inspection)</li> <li>• PPP TRA-5: Compliance with Standard Condition 3.27 (Construction Phasing Plan)</li> </ul>	<p>Less than Significant</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>policy addressing pedestrian and public transportation, and impacts would be less than significant.</p> <p><b>Pedestrian and Bicycle System:</b></p> <p>The proposed project incorporates policies that support pedestrian and bicycle facilities. These include prioritizing multimodal systems, maintaining a network of complete streets to provide mobility opportunities for all users, promoting development of mixed-use projects (particularly within proximity villages within the three Focus Areas) to create pedestrian- and bicyclist-friendly areas, maintaining the existing bicycle and pedestrian network, and promoting pedestrian and bicyclist safety. Therefore, the project would not conflict with a plan, ordinance, or policy addressing pedestrian and bicycle travel, and impacts would be less than significant.</p>		
<p>Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?</p>	<p>Potentially Significant</p>	<p>Buildout of the project would generate a VMT per service population value of 24.94, which would require a 3.5 percent reduction in VMT to meet the significance threshold of 24.06.. Therefore, projected VMT generated under buildout of the project would be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). This would be considered a potentially significant impact, and mitigation requiring on-site infrastructure improvements and TDM strategies would be required.</p>	<ul style="list-style-type: none"> <li>PPP TRA-1 Compliance with Municipal Code Title 6 (Public Works), Division 3 (Transportation), Chapter 6 (Trip Reduction Facilities)</li> </ul> <p><b>TRA-1:</b> On-Site Infrastructure</p> <p>The City of Irvine Director of Community Development, or designee, shall require applicants for future proposed projects that exceed VMT thresholds to incorporate on-site connectivity into site design in order to achieve a reduction of 2.5 percent VMT rate. Site design measures to achieve this VMT reduction would include promotion of bicycle activity (i.e., bike facilities) and pedestrian walkability (i.e., connected sidewalks from building entrances to public streets).</p> <p><b>TRA-2</b> On-Site Transportation Demand Management</p> <p>The City of Irvine Director of Community Development, or designee, shall require applicants for future proposed projects that exceed VMT thresholds to incorporate a TDM program to achieve a reduction of up to 5 percent VMT rate. While TDM programs in the past have typically focused on employer sites, they can also be implemented to new residential developments with measures such as bike share or car share programs.</p>	<p>Significant and Unavoidable</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Polices [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
<p>Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</p>	<p>Less than Significant</p>	<p>The General Plan Update includes several policies aimed at improving the City’s circulation network that are aimed at reducing existing and potential transportation hazards. Future site-specific development under the project would be subject to the appropriate entitlement application review process as well as design and engineering review to ensure roads and access is configured consistent with established roadway design standards. Furthermore, future site-specific development under the project (including residential projects, Great Park improvements, and the Ada extension) would be subject to both a design and engineering review (and likely a review by the Orange County Fire Authority) to ensure roads and access is configured consistent with established roadway design standards. Future projects would also be required to comply Standard Condition 6.4, (PPP TRA-2) which outlines procedures to be followed should vehicle stacking result from the operation of residential privacy gates associated with residential development projects. Therefore, implementation of the project would not result in hazardous conditions, create conflicting uses, or cause a detriment to emergency vehicle access. Impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP TRA-2: Compliance with Standard Condition 6.4 (Privacy Gates– Vehicle Stacking)</li> </ul>	<p>Less than Significant</p>
<p>Would the project result in inadequate emergency access?</p>	<p>Less than Significant</p>	<p>Future projects would be subject to the City’s design requirements regarding emergency access per Planning Commission Resolution No. 09.2968. City Standard Condition 3.17 (Emergency Access Plan)(PPP TRA-3) requires an applicant to submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers per the Irvine Uniform Security Code requirements. Similarly, City Standard Condition 4.9 (Emergency Access Inspection)(PPP TRA-4) requires an applicant to pass an inspection, to be performed by the Police Department and the Orange County Fire Authority, to ensure compliance with the Emergency Access Plan requirements. The inspector shall verify test acceptance and locations of all Knox boxes, key switches and Click2Enter devices as depicted on the approved plan. Prior to construction, future development would prepare a construction phasing plan (PPP TRA-5) that would include measures to maintain emergency access. Therefore, compliance with these regulations would ensure that impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP TRA-3: Compliance with Standard Condition 3.17 (Emergency Access Plan)</li> <li>• PPP TRA-4: Compliance with Standard Condition 4.9 (Emergency Access Inspection)</li> <li>• PPP TRA-5: Compliance with Standard Condition 3.27 (Construction Phasing Plan)</li> </ul>	<p>Less than Significant</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
<b>4.14 Utilities and Service Systems</b>				
<p>Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</p>	<p>Less than Significant</p>	<p><b>Water</b> Total project-related water demand would be within Irvine Ranch Water District capacity to serve the project. Future infrastructure improvement would be subject to the requirements of the City's engineering standard plans (PPP UTIL-1), and all construction would be performed in accordance with the Construction General Permit and all associated requirements. When considering impacts resulting from the installation of any required water infrastructure, all impacts are of a relatively short-term duration and would cease to occur once the installation is complete. Therefore, impacts associated with construction of new or expanded water facilities would be less than significant.</p> <p><b>Wastewater</b> Total project-related wastewater demand would be within the Michelson Water Recycling Plant capacity to serve the project. Future infrastructure improvements would also be subject to the requirements of the City's engineering standard plans (PPP UTIL-1), which would ensure that all improvements comply to the City's standard requirements for infrastructure improvements. Therefore, impacts associated with construction of new or expanded wastewater facilities would be less than significant.</p> <p><b>Stormwater</b> Current runoff is captured and conveyed by existing City or County storm drain infrastructure throughout the City before discharging to regional County flood control facilities and channels. The City is primarily built out, and no major changes in storm flows are anticipated. Future infrastructure improvement would be subject to the requirements of the City's engineering standard plans (PPP UTIL-1), and all construction would be performed in accordance with the Construction General Permit and all associated requirements. All impacts would be short-term and would cease to occur once the installation is complete. Therefore, impacts associated with construction of new or expanded stormwater facilities would be less than significant.</p> <p><b>Electric Power, Natural Gas, and Telecommunications</b> Future development would occur incrementally through 2045, based on market conditions and other factors, such that demand for these utility services would not be overburdened at any given</p>	<ul style="list-style-type: none"> <li>• PPP-UTIL-1 Engineering Standard Plans</li> <li>• PPP-UTIL-2 Title 24 Code Cycles: Net-Zero Buildings (Residential &amp; Non-Residential)</li> <li>• PPP-UTIL-3 Irvine Sustainability Community Initiative</li> </ul>	<p>Less than Significant</p>

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Summary of Environmental Impacts

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
		<p>time. Additionally, future development under the project would accommodate increases in population based on SCAG's demographic projections. Therefore, the project would accommodate planned growth, and would not exceed regionally forecasted demand for electric power by Southern California Edison and Orange County Power Authority or natural gas for SoCalGas. Furthermore, future development under the project would connect to the existing telecommunications infrastructure (telephone, internet, wireless services) present within the City. The City currently implements strategies to reduce energy consumption through compliance with the Title 24 Code Cycles: Net-Zero Buildings (Residential &amp; Non-Residential) (PPP UTIL-2) and the Irvine Sustainability Community Initiative (PPP UTIL-3). Future development under the project would also comply with these requirements. Future infrastructure improvement would be subject to the requirements of the City's engineering standard plans (PPP UTIL-1), and all construction would be performed in accordance with the General Construction Permit and all associated requirements. Therefore, impacts associated with construction of new or expanded electric power, natural gas, and telecommunications facilities would be less than significant.</p>		
<p>Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?</p>	<p>Less than Significant</p>	<p>IRWD is projected to have a water supply capacity of 178,727 acre feet per year (AFY) through 2040, which far exceeds IRWD's project water supply demand of 88,023 AFY through 2040. Consequently, IRWD would have a water supply surplus of 90,704 AFY through 2040, which would exceed the project's projected increase in water demand of 2,093 AFY. Furthermore, future development under the project would comply with the requirements to prepare a water supply assessment as applicable (PPP UTIL-4 and PPP UTIL-5) and utilize recycled water (PPP UTIL-6) as applicable. Therefore, sufficient water supplies would be available to serve the project, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP-UTIL-4 California Water Code Section 10912 and California Government Code Section 66473.7</li> <li>• PPP-UTIL-5 Senate Bill 221 (SB 221)</li> <li>• PPP-UTIL-6 Requirement to Use Recycled Water</li> </ul>	<p>Less than Significant</p>
<p>Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition</p>	<p>Less than Significant</p>	<p>MWRP has an existing surplus treatment capacity of 28 MGD. Buildout of the project is anticipated to increase sewer flows by approximately 2.04 MGD, which is well within the remaining treatment capacity of the MWRP. Additionally, the capacity expansion of MWRP through projects like the Phase 2 Expansion in 2014, which added 7 MGD, has ensured that the plant can</p>	<p>None.</p>	<p>Less than Significant</p>

**Table S-1  
Summary of Environmental Impacts**

Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
to the provider's existing commitments?		accommodate additional demand. The MWRP currently operates at an average of 25 MGD, recycling about 9 billion gallons of water annually. OCSD's Plant No. 1, with a treatment capacity of 320 MGD, also remains capable of accommodating the projected increase in sewer flows. Therefore, the project would not exceed existing wastewater treatment capacity, and impacts would be less than significant.		
<p>Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?</p> <p>or</p> <p>Would the project comply with federal, state, or local management and reduction statutes and regulations related to solid waste?</p>	Less than Significant	Future development would be subject to waste reduction measures to divert solid waste from landfills during construction and demolition (a 65 percent diversion rate per the City's C&D Program) and during operations through composting, recycling, and reuse through resource recovery. The City has a waste diversion goal of reducing organic waste disposal 75 percent by 2025. These goals are consistent with state regulations regarding solid waste, composting, and recycling. The City implements policies to reduce generation of solid waste through the City's debris recycling and reuse ordinance (PPP UTIL-7), waste reduction (PPP UTIL-8) and City standard conditions related to solid waste recycling (PPP UTIL-9 and PPP UTIL-10). Therefore, the project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, and impacts would be less than significant.	<ul style="list-style-type: none"> <li>• PPP-UTIL-7 City of Irvine Construction and Demolition (C&amp;D) Debris Recycling and Reuse Ordinance</li> <li>• PPP-UTIL-8 Waste Reduction</li> <li>• PPP-UTIL-9 City Standard Condition 2.24 (Solid Waste Recycling)</li> <li>• PPP-UTIL-10 City Standard Condition 3.7 (Solid Waste Recycling)</li> </ul>	Less than Significant
<b>4.15 Wildfire</b>				
Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less than Significant	<p>The Emergency Evacuation Route Analysis both in the City's adopted LHMP and in the updated Safety Element identify potential vulnerabilities in the City in the event of a wildfire. The results of the analysis indicate that residents closest to the southern, northern, and eastern extents of the City are most vulnerable given the distance and number of roads needed to access an outbound road. However, the City has identified adequate evacuation routes in various wildfire scenarios for the vulnerable residents because of modelling and would continue to identify evacuation locations on site during emergency situations.</p> <p>Prior to construction, future development projects would be required to prepare and submit a plan check to the City for approval of adequate emergency access. Approval of new development throughout the City would be conditioned by Standard Condition 3.17 and Standard Condition 4.9 for review by the Irvine Police Department and OCFA to ensure adequate emergency access and compliance with the Emergency Access</p>	<ul style="list-style-type: none"> <li>• PPP Wildfire-3: Compliance with City Standard Condition 3.17 (Emergency Access Plan)</li> <li>• PPP Wildfire-4: Compliance with City Standard Condition 4.9 (Emergency Access Inspection)</li> </ul>	Less than Significant

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		<p>Plan requirements (see PPPs Wildfire-3 and -4). Future development would also be designed, constructed, and maintained in accordance with applicable standards associated with the EOP and Emergency Access Plan, including vehicular access to ensure that adequate emergency access and evacuation would be maintained. Therefore, because buildout of the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, impacts would be less than significant. No mitigation would be required.</p>		
<p>Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?</p>	<p>Less than Significant</p>	<p>Most of the City consists of urban areas that are not designated as a fire severity zone. There is no land within Focus Areas 1 and 2 that are designated with a fire severity rating. Although approximately 1,875 acres of land located in Focus Area 3 is designated as Very High LRA, future housing development would not be located within this area of Focus Area 3. In the unlikely case that development near this area did occur, it would be designed to be consistent with all applicable fire safety requirements. Future development and redevelopment could also occur outside of the proposed focus areas, which may be located along the City boundaries adjacent to land identified as having Moderate, High, or Very High FHSZ designations. For instance, areas within the northeastern portion of the City, which extends through Orange County and into Riverside County to the east, are designated as Very High FHSZ. However, all new site-specific development in these areas is required to prepare a fuel modification plan (PPP Wildfire-1 and Wildfire-2) before approval of tentative maps and grading permits. Therefore, the project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP Wildfire-1: Compliance with City Standard Condition 2.19 (Open Space Fuel Modification)</li> <li>• PPP Wildfire-2: Compliance with City Standard Condition 3.14 (HOA/Fuel Modification)</li> </ul>	<p>Less than Significant</p>

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Threshold	Level of Significance Before Mitigation	Environmental Impact	Plans, Programs, and Policies [PPPs], Project Design Features, and Mitigation Measures	Significance After Mitigation
<p>Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?</p>	<p>Less than Significant</p>	<p>Utility infrastructure improvements that are anticipated to serve future development facilitated by the General Plan Update and buildout of the Great Park would be available in adjacent roadways. However, all impacts associated with infrastructure improvements, including any required measures to address fire safety, would be evaluated in their respective subsequent environmental documents for discretionary projects, including application of the City’s Municipal Code and existing City building and fire code requirements. All new development would also be subject to review to ensure that adequate defensible space and fuel management zones would be implemented to avoid potential ignition risks around the associated infrastructure, such as power lines or other utilities. Furthermore, the Safety Element Update would include objectives and policies further supporting the City’s goal of ensuring adequate infrastructure with respect to wildfires. Therefore, compliance with applicable PPPs would ensure that installation or maintenance of associated infrastructure associated with the project would not exacerbate fire risk, and impacts would be less than significant.</p>	<ul style="list-style-type: none"> <li>• PPP Wildfire-4: Compliance with City Standard Condition 4.9 (Emergency Access Inspection)</li> </ul>	<p>Less than Significant</p>
<p>Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?</p>	<p>Less than Significant</p>	<p>Future development would be required to demonstrate that site-specific projects would be elevated out of the floodplain and would not affect the conveyance of flood waters through elevated building pads, and/or other compliance measures as specified by FEMA. Local guidance prohibits development within a flood zone unless adequate assurances are provided against flood hazards (see Zoning Ordinance Section 5-2-24 Standards of construction for flood hazard zones). These include anchoring structures, constructing structures with materials and utility equipment resistant to flood damage, constructing the structure above the base flood elevation, and certification by a registered professional engineer or surveyor, and verification by the City’s Chief Building Official. The Safety Element Update also includes objectives and policies that further support the City’s goals related to flood prevention.</p> <p>Future development under the project would be required to adhere to safety requirements in the Municipal Code requirements related to the City’s Building Code, Grading Code, and Grading Manual which would reduce impacts related to</p>	<ul style="list-style-type: none"> <li>• PPP Wildfire-5: Compliance with City Standard Condition 2.11 (Special Flood Hazard Area)</li> <li>• PPP Wildfire-6: Compliance with City Standard Condition 3.4 (Special Flood Hazard Area)</li> <li>• PPP Wildfire-7: Compliance with City Standard Condition 4.5 (Flood Certification for Finished Construction)</li> </ul>	<p>Less than Significant</p>



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		<p>landslide to a level less than significant. Furthermore, the updated Safety Element includes Goal 2, which aims to improve the community's resilience to seismic and geologic hazards with supporting policies aimed at coordination with local water agencies to reduce liquefaction and subsidence events and to strengthen utilities to minimize such impacts to local infrastructure. Compliance with and goals, objectives, and policies in the updated Safety Element would serve to further lessen such impacts.</p> <p>Therefore, compliance with applicable PPPs would ensure that the project would not increase risks associated with post-fire flooding or landslides, and impacts would be less than significant.</p>		